

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION**

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**ORDER R7-2011-0020
NPDES NO. CA0104361**

**WASTE DISCHARGE REQUIREMENTS
FOR CITY OF HOLTVILLE,
CITY OF HOLTVILLE MUNICIPAL WASTEWATER TREATMENT PLANT**

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

Table 1. Discharger Information

Discharger	City of Holtville
Name of Facility	City of Holtville Municipal Wastewater Treatment Plant
Facility Address	1250 Kamm Road
	Holtville, CA 92250
	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 City of Holtville Municipal Wastewater Treatment Plant from the discharge point identified below is subject to WDRs as set forth in this Order:

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Secondary Treated Wastewater	32°, 49', 48" N	115 °, 25', 48" W	Pear Drain

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	May 19, 2011
This Order shall become effective on:	June 1, 2011
This Order shall expire on:	May 31, 2016
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 3, 2015

I, Robert Perdue, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Colorado River Basin Region, on May 19, 2011.


 Robert Perdue, Executive Officer

Table of Contents

I.	Facility Information	4
II.	Findings	5
III.	Discharge Prohibitions	11
IV.	Effluent Limitations and Discharge Specifications	12
	A. Effluent Limitations – Discharge Point 001	12
	B. Land Discharge Specifications – Not Applicable	13
	C. Reclamation Specifications – Not Applicable	13
V.	Receiving Water Limitations	13
	A. Surface Water Limitation	13
	B. Groundwater Limitations	14
VI.	Provisions	14
	A. Standard Provisions	14
	B. Monitoring and Reporting Program (MRP) Requirements	17
	C. Special Provisions	17
	1. Reopener Provisions	17
	2. Special Studies, Technical Reports and Additional Monitoring Requirements	18
	3. Best Management Practices and Pollution Prevention	20
	4. Construction, Operation and Maintenance Specifications	21
	5. Special Provisions for Municipal Facilities (POTWs Only)	23
	6. Other Special Provisions	25
	7. Compliance Schedules	26
VII.	Compliance Determination	26
	A. General	27
	B. Multiple Sample Data	27
	C. Average Monthly Effluent Limitation (AMEL)	27
	D. Average Weekly Effluent Limitation (AWEL)	27
	E. Maximum Daily Effluent Limitation (MDEL)	28
	F. Instantaneous Minimum Effluent Limitation	28
	G. Instantaneous Maximum Effluent Limitation	28
	H. Effect of Conducting a Pollutant Minimization Program (PMP)	29
	I. Water Quality-Based Effluent Limitations	29
	J. Mass and Concentration Limitation	29
	K. Percent Removal	30
	L. Chronic Toxicity Narrative Effluent Limitations	30
	M. Bacterial Effluent Limitations	31
	N. Significant Figures	31

List of Tables

Table 1.	Discharger Information	1
Table 2.	Discharge Location	1
Table 3.	Administrative Information	1
Table 4.	Facility Information	4
Table 5.	Basin Plan Beneficial Uses	7
Table 6.	Summary of Final Effluent Limitations	12
Table 7.	Compliance Schedule	26

List of Attachments

Attachment A – Definitions.....	A-1
Attachment B – Map	B-1
Attachment C – Flow Schematic	C-1
Attachment D – Standard Provisions	D-1
Attachment E – Monitoring and Reporting Program	E-1
Attachment F – Fact Sheet	F-1
Attachment G – List of Analytical Methods.....	G-1
Attachment H – List of Priority Pollutants	H-1
Attachment I – State Water Board Minimum Levels	I-1
Attachment J – Summary of WQBELS Calculations	J-1

I. FACILITY INFORMATION

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

Table 4. Facility Information

Discharger	City of Holtville
Name of Facility	City of Holtville Municipal Wastewater Treatment Plant
Facility Address	1250 Kamm Road
	Holtville, CA 92250
	Imperial County
Legally Responsible Official	Laura Fisher, City Manager (760) 356-4574
Facility Contact, Title, and Phone	Frank Cornejo, Chief Plant Operator, (760) 356-3186 James G. "Jack" Holt, City Engineer, (760) 337-3883
Mailing Address	121 West Fifth Street Holtville, CA 92250
Type of Facility	Publicly Owned Treatment Works (POTW)
Facility Design Flow	0.85 million gallons per day (MGD)

II. FINDINGS

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

A. Background. The City of Holtville (hereinafter Discharger) is currently discharging pursuant to Order R7-2006-0050 (amended by Order R7-2009-0016) and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0104361. The Discharger submitted a Report of Waste Discharge (ROWD) dated December 22, 2010, and applied for a NPDES permit renewal discharge of up to 0.85 MGD of secondary treated wastewater from the City of Holtville Municipal Wastewater Treatment Plant, hereinafter Facility. The application was deemed complete on December 29, 2010. A site visit was conducted on October 25, 2010, to observe operations and collect additional data to develop permit limitations and conditions.

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

B. Facility Description. The Discharger owns and operates a municipal wastewater treatment plant. The total design capacity of the wastewater treatment plant is 0.85 MGD. The current wastewater treatment plant consists of a grit chamber, three circular primary clarifiers operated in parallel, a trickling filter, three secondary clarifiers operated in parallel, effluent flow meter, three sand filters, an ultraviolet (UV) disinfection system, an aerobic digester, and three sludge drying beds. The Discharger accepts septic tank and portable waste and introduces the waste prior to primary treatment. Leachate from the sludge drying beds is returned to the plant headworks for treatment. Sludge is pumped to drying beds, dried, and is hauled away annually to Arizona for disposal. Secondary treated wastewater is discharged from Discharge Point 001 (see Table 2 on cover page) to the Pear Drain, a water of the United States, a tributary to the Alamo River, and then 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 Order is issued pursuant to Section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and Chapter 5.5, Division 7 of the California Water Code (commencing with Section 13370). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as WDRs pursuant to Article 4, Chapter 4, Division 7 of the Water Code (commencing with Section 13260).

D. Background and Rationale for Requirements. The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for Order requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through E and G through J are also incorporated into this Order.

- E. California Environmental Quality Act (CEQA).** Pursuant to Water Code 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 regulations at section 122.44, Title 40 of the Code of Federal Regulations¹, require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at Part 133. The Regional Water Board has considered the factors listed in Water Code 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 (including 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 specified in this Order protect existing and potential beneficial uses of the Pear Drain, which are described in Table 5:

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

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Uses
001	Pear Drain (Imperial Valley Drains)	<u>Existing:</u> 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 Water Board; and such substantiation must be provided within a reasonable time frame as approved by the Regional Water Board.

Requirements of this Order implement the Basin Plan.

The immediate receiving water is the Pear Drain, which is a part of the Imperial Valley Drains. The 2006 USEPA CWA Section 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. The Alamo River, to which the Pear Drain is tributary, is listed as impaired by chloropyrifos, DDT, dieldrin, polychlorinated biphenyls (PCBs), selenium, and toxaphene. A sedimentation/siltation Total Maximum Daily Load (TMDL) for the Alamo River was approved by USEPA on June 28, 2002.

The sedimentation/siltation TMDL establishes a numeric target of an annual average in-stream TSS concentration of 200 mg/L. In assigning the waste load allocation (WLA), the TMDL assigned a WLA to the City of Holtville of 77.7 tons per year of suspended solids based on a TSS effluent limit equal to double the TSS effluent limits contained in the City’s NPDES permit. The TSS effluent limits equal to secondary effluent standards as specified in Part 133 for TSS of 30 mg/L as a monthly average and 45 mg/L as a weekly average are applied to this discharge. If the Discharger were to discharge at its maximum design flow rate of 0.85 MGD every day for a year as a concentration equal to the average monthly limit, the Facility would not exceed the WLA of 77.7 tons per year of sediment. The effluent limits established in this Order adequately implement the requirements of the TMDL.

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).

- 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 these objectives to the Pear Drain because agricultural drainage channels do not have a “natural” receiving water temperature.

- 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 Bays, and Estuaries of California (State Implementation Policy or SIP). The SIP became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.
- L. Compliance Schedules and Interim Requirements.** In general, an NPDES permit must include final effluent limitations that are consistent with CWA Section 301 and with section 122.44(d). There are exceptions to this general rule. The State Water Board’s Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits (Compliance Schedule Policy) allows compliance schedules for new, revised, or newly interpreted water quality objectives or criteria, or in accordance with a TMDL. All compliance schedules must be as short as possible, and may not exceed ten years from the effective date of the adoption, revision, or new interpretation of the applicable water quality objective or criterion, unless a TMDL allows a longer schedule. The Regional Water Board, however, is not required to include a compliance schedule, but may issue a Time Schedule Order pursuant to CWC Section 13300 or a Cease and Desist Order pursuant to CWC Section 13301 where it finds that the discharger is violating or threatening to violate the permit. The Regional Water Board will consider the merits of each case in determining whether it is appropriate to include a compliance schedule in a permit, and, consistent with the Compliance Schedule Policy, should consider feasibility of achieving compliance, and must impose a schedule that is as short as possible to achieve compliance with the effluent limit based on the objective or criteria.

The Compliance Schedule Policy and the SIP do not allow compliance schedules for priority pollutants beyond May 18, 2010, except for new or more stringent priority pollutant criteria adopted by USEPA after December 17, 2008.

Where a compliance schedule for a final effluent limitation exceeds one year, the Order must include interim numeric limitations for that constituent or parameter, interim

milestones and compliance reporting within 14 days after each interim milestone. The permit may also include interim requirements to control the pollutant, such as pollutant minimization and source control measures. This Order does not include compliance schedules and interim effluent limitations or discharge specifications.

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 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 biochemical oxygen demand (BOD₅), total suspended solids (TSS), and pH. Restrictions on BOD₅, TSS, and pH are discussed in sections IV.B of the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. These limitations are not more stringent than required by the CWA.

Water quality-based effluent limitations (WQBELs) have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 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 Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

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. 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, Code of Federal Regulations section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. Some effluent limitations in this Order are less stringent than those in the previous Order. The existing Order (R7-2006-0050) contained final effluent limitations for copper, nickel, selenium, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, bis(2-ethylhexyl)phthalate, and chrysene. Amending Order R7-2009-0016 amended the original Order to reflect USEPA approval of application of water quality criteria for the protection of freshwater aquatic life. The Amending Order discontinued the effluent limitations for copper, nickel, and selenium, based on the exclusion of saltwater criteria from applicable water quality criteria. In addition, effluent limitations for benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, and chrysene were discontinued in the Amending Order based on the consideration of new information (i.e., 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 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. sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. 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. Water Code 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 Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this 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 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 Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet of this Order.

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 Order.

THEREFORE, IT IS HEREBY ORDERED, that Order R7-2006-0050 and Amending Order R7-2009-0016 are rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with Section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

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 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 Pear Drain 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 California Water Code.

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 (Attachment E):

Table 6. Summary of Final Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow ¹	MGD	0.85	---	---	---	---
pH	standard units	---	---	---	6.0	9.0
Biochemical Oxygen Demand (BOD) (5 day @ 20 Deg. C)	mg/L	30	45	---	---	---
	lbs/day ¹	210	320	---	---	---
Total Suspended Solids (TSS)	mg/L	30	45	---	---	---
	lbs/day ¹	210	320	---	---	---
Bis(2-ethylhexyl)phthalate	µg/L	5.9	---	12	---	---
	lbs/day ¹	0.042	---	0.085	---	---
Ammonia, Total (as N) ²	mg/L	1.9	---	3.6	---	---
	lbs/day ¹	13	---	26	---	---
Oil and Grease	mg/L	---	---	25	---	---
	lbs/day ¹	---	---	180	---	---

¹ The mass-based effluent limitations are based on a design capacity of 0.85 MGD.

² Cease and Desist Order (CDO) R7-2011-0016 (adopted January 20, 2011), which amends CDO R7-2009-0061 (adopted September 17, 2009) contains interim limits for total ammonia (as N). CDO R7-2011-0016 extends the time period the interim effluent limitations for ammonia are effective, until August 17, 2014.

- b. **Percent Removal:** The average monthly percent removal of BOD 5-day 20°C and total suspended solids (TSS) shall not be less than 85 percent.
- c. **Toxicity:** There shall be no toxicity in the treatment plant effluent nor shall the treatment plant effluent cause any 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 toxicity tests of appropriate duration or other appropriate methods specified by the Regional Water Board.

- d. **Bacteria:** The bacterial density in the wastewater effluent discharged to the Pear Drain shall not exceed the following values, as measured by the following bacterial indicators:
 - i. ***E. Coli.*** The geometric mean bacterial density (based on a minimum of not less than five samples equally spaced over a 30-day period) shall not exceed a Most Probable Number (MPN) of 126 per 100 milliliters, nor shall any sample exceed the maximum allowable bacterial density of a MPN of 400 per 100 milliliters.
 - ii. **Fecal Coliform.** The geometric mean bacterial density (based on a minimum of not less than five samples equally spaced over a 30-day period) shall not exceed a MPN of 200 per 100 milliliters, nor shall more than ten percent of the total samples during any 30-day period exceed a MPN of 400 per 100 milliliters.
- 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 – Not Applicable

B. Land Discharge Specifications – Not Applicable

C. Reclamation Specifications – Not Applicable

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitation

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

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.
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 of 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 altering the natural receiving water temperature that adversely affects 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 Pear Drain to exceed an annual average concentration of 4,000 mg/L or a maximum daily concentration of 4,500 mg/L.

B. Groundwater Limitations

Not applicable.

VI. PROVISIONS

A. Standard Provisions

1. **Federal Standard Provisions.** The Discharger shall comply with all Standard Provisions included in Attachment D of this Order.
2. **Regional Water Board Standard Provisions.** The Discharger shall comply with the following provisions:

- a. The POTW 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 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 waste discharge requirements; or denial of a permit renewal application.
- c. The Discharger shall ensure that all site-operating personnel are familiar with the content of this Order, and shall maintain a copy of this Order at the site.
- d. The Discharger's wastewater treatment plant shall be supervised and operated by persons possessing certification of appropriate grade pursuant to Section 3680, Chapter 26, Division 3, Title 23 of the California Code of Regulations (CCRs). The Discharger shall ensure that all operating personnel are familiar with the contents of this Order.
- e. 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 State 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, 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.
- f. The Discharger shall provide a report to the Regional Water Board upon determining that the treatment plant's monthly average flow rate or solids loading rate for any month exceeds 80 percent of the design treatment or disposal capacity. The report should indicate what steps, if any the Discharger intends to take to provide for the expected wastewater treatment capacity necessary when the plant reaches design capacity.
- g. Prior to any change in ownership or management of this operation, the Discharger shall transmit a copy of this Order to the succeeding owner/operator, and forward a copy of the transmittal letter to the Regional Water Board.
- h. 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.
- i. 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.
- j. This Order does not authorize violation of any federal, state, or local laws or regulations.
- k. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.
- l. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, maximum daily, average weekly, average monthly, instantaneous maximum or instantaneous minimum, or receiving water limitation of this Order, the Discharger shall notify the Regional Water Board by telephone (760) 346-7491 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Regional

Water Board waives confirmation. The written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance and, prevent recurrence including, where applicable, a schedule of implementation. Other noncompliance requires written notification as above at the time of the normal monitoring report.

- m. In accordance with Section 1211 of the California Water Code, the Discharger shall obtain approval from the State Water Board's Division of Water Rights prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse.

B. Monitoring and Reporting Program (MRP) Requirements

The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E of this Order. This MRP may be modified by the Executive Officer at any time during the term of this Order, and may include an increase in the number of parameters to be monitored, the frequency of the monitoring or the number and size of samples to be collected, or minor clarifications on MRP requirements. Any increase in the number of parameters to be monitored, the frequency of the monitoring or the number and size of samples to be collected may be reduced back to the levels specified in the original MRP at the discretion of the Executive Officer.

C. Special Provisions

1. Reopener Provisions

- a. This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated by special conditions included in this Order. These special conditions may be, but are not limited to, fish tissue sampling, whole effluent toxicity, monitoring requirements on internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order as a result of the special condition monitoring data.
- b. This Order may be modified, rescinded and reissued, for cause. The filing of a request by the Discharger for an Order modification, rescission and reissuance, or a notification of planned changes or anticipated noncompliance does not stay any 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 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. In accordance with 40 CFR Parts 122 and 124, this permit may be modified to include effluent limitations or permit conditions to address chronic toxicity in the effluent or receiving waterbody, as a result of the discharge; or to implement new, revised, or newly interpreted water quality standards applicable to chronic toxicity.
- f. If a statewide policy for total residual chlorine is adopted during the term of this Order, this Order may be reopened to include a revised reporting level to determine compliance with effluent limitations for total residual chlorine for low threat discharges consistent with the statewide policy.
- g. TMDLs for dieldrin, DDT, endosulfan, PCBs, chlorpyrifos, polychlorinated biphenyls (PCBs), 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. **Whole Effluent Toxicity Testing.** For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Discharger to conduct 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 Order requires the Discharger to initiate accelerated WET testing. If the Discharge 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. Failure to conduct required toxicity tests or a TRE within a designated period shall result in the establishment of effluent limitations for chronic toxicity in the permit or appropriate enforcement action. 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.
- b. **Toxicity Reduction Evaluation (TRE) Work Plan.** Within 90 days of the effective date of this 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. A description of the investigation and evaluation techniques that would be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.
 - ii. A description of methods for maximizing in-house treatment system efficiency, good housekeeping practices, and a list of all chemicals used in operations at the facility.
 - iii. If a Toxicity Identification Evaluation (TIE) is necessary, an indication of who would conduct the TIEs (i.e., an in-house expert or outside contractor).
 - iv. Specific actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and
 - v. A schedule for these actions.
- c. Translator Study.** Should the Discharger wish to use a translator for 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 selenium.
- d. Total Dissolved Solids Study.** The purpose of this study is to provide more detailed information on the Regional Water Board's development of salinity standards pursuant to Section 303 of the CWA and through the NPDES permitting authority in the regulation of municipal and industrial sources (see section 402 of the Federal Water Pollution Control Act). As part of the Regional Water Board's development of salinity standards, the Regional Water Board required the Discharger to conduct a study and evaluate what programs and actions the Discharger is implementing to reduce TDS discharges into the receiving water body. The Discharger submitted the TDS Study dated December 2010 on December 23, 2010. The Discharger outlined two actions to evaluate further in the summary and recommendation section of the report:
- i. The City will consider implementing an industrial waste ordinance to provide control over future commercial and industrial dischargers to prevent potential salinity problems in the future.

- ii. Following upgrade at the WWTP to produce disinfected filtered tertiary effluent, the City will consider delivering the treated effluent to an industrial development or other recycled water use, in an effort to reduce discharges directly to surface waters.

The Discharger shall continue to evaluate and implement actions to reduce TDS discharges into the receiving water body. The Discharger shall provide an annual update regarding the progress made on its action plan, and a final report shall be submitted to the Regional Water Board's Executive Officer prior to the filing date for re-application. The final report should include revising the original report to update it to the current year, describe the status of the two actions, and provide action items for the next permit cycle.

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 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:

- 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

Enrollment under Water Quality Order 97-03-DWQ, NPDES General Permit CAS000001 for Discharges of Storm Water Associated with Industrial Activities is required for facilities used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility with a design flow of 1 MGD or more or required to have an approved pretreatment program under Part 403.

The Discharger is not required to submit a Notice of Intent to obtain coverage under the Water Quality Order 97-03-DWQ, NPDES General Permit CAS000001 for Discharges of Storm Water Associated with Industrial Activities because the Facility design flow is less than 1 MGD and no pretreatment program is required.

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 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 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 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 Significant Expansion

Discharges from a new or an existing facility that will undergo significant expansion² within the next 5 years shall be required to submit an antidegradation analysis report to the Regional Water Board's Executive Officer for review and approval. The antidegradation analysis report shall be developed in accordance with the State Antidegradation Policy (Resolution No. 68-16) and the Federal Antidegradation Policy (section 131.12). The report shall consider any potential impacts the discharge may have on the receiving water quality and the receiving water body's designated beneficial uses, as defined in the Regional Water Board's Basin Plan. In addition, the report shall include information on the quality of the proposed discharge and evaluate the potential impacts of the discharge; provide CEQA documentation for the proposed project; a summary that identifies whether the proposed discharge will result in degradation of water quality; and a certification that satisfies both the Federal and State antidegradation policies.

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

The Discharger shall update the Spill Response Plan (SRP) and revise if needed within 90 days after the effective date of this 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.

² Where significant expansion shall be considered an increase in permitted design flow of greater than 10% or changes to the Facility and/or changes in the nature and character of the discharge may result in an incremental increase in pollutants discharged to the receiving water body of greater than 10% of the permitted discharge rates, evaluated on a pollutant by pollutant basis.

5. Special Provisions for Municipal Facilities (POTWs Only)

a. Sludge Requirements

i. General Requirements

- (a) All sludge generated at the treatment facility shall be used or disposed of in compliance with the applicable portions of:
 - (1) Part 503: for sludge land applied, placed in surface disposal sites (dedicated land disposal sites, monofill, or sludge-only parcel at municipal landfill), or incineration.
 - (2) Part 258: for sludge disposed in municipal solid waste landfills (with other materials).
 - (3) Part 257: for all sludge use and disposal practices not covered under Parts 503 or 258.
- (b) The Discharger is responsible for assuring that all sludge generated at the treatment facility is used or disposed of in accordance with these rules, whether the Discharger uses or disposes of the sludge itself or transfers the sludge to another party for further treatment and use, or disposal. The Discharger is responsible for informing subsequent preparers, appliers, and disposers of the requirements that they must meet under these rules.
- (c) The Discharger shall assure that haulers transporting sewage sludge from the treatment facility for treatment, storage, use, or disposal take appropriate measures to keep the sludge contained. Trucks hauling sewage sludge that is not Class A as defined in section 503.32(a) shall be tarped.
- (d) Any sludge treatment, disposal, or storage site shall have adequate procedures to restrict public access and access by domestic animals.
- (e) Sludge treatment, disposal or storage sites shall have facilities adequate to divert surface runoff from adjacent areas, to protect the site boundaries from erosion, and to prevent any conditions that would cause drainage from the sludge to escape from the site. Where adequate protection is defined as protection from at least a 100-year storm.
- (f) For sewage sludge that is applied to land in accordance with Part 503 Subpart B, the wastewater treatment facility shall have adequate screening at the plant headworks and/or at the sludge treatment units to ensure that all pieces of metals, plastics, glass, and other inert objects with a diameter of greater than 3/8" are removed.

- (g) Collected screenings, sludge, and other solids removed from liquid wastes shall be disposed of in a manner that is consistent with State Water Board and Integrated Waste Management Board's joint regulations in Title 27 of the CCRs and that is approved by the Regional Water Board's Executive Officer.

ii. Notification and Reporting Requirements

- (a) The Discharger shall provide a plan as to the method, treatment, handling, and disposal of sludge that is consistent with all State and federal laws and regulations and obtain prior written approval from the Regional Water Board specifying location and method of disposal, before disposing of treated or untreated sludge, or similar solid waste materials using an alternative method than that described in the Findings of the Order.
- (b) If sludge generated at the treatment facility is stored for over two years from the time it is generated, the Discharger shall ensure compliance with all the requirements for surface disposal under Part 503 Subpart C, or shall submit written notification in accordance with section 503.20(b) to the USEPA and the Regional Water Board demonstrating the need for longer temporary storage.
- (c) The Discharger shall maintain a permanent log of all solids hauled away from the treatment facility for use/disposal elsewhere and shall provide a summary of the volume, type (screenings, grit, raw sludge, digested sludge), use (agricultural, composting, etc.), and the destination in accordance with the MRP of this Order. The sludge that is stockpiled at the treatment facility shall be sampled and analyzed for those constituents listed in the sludge monitoring section of the MRP of this Order and as required by Part 503. The results of the analyses should be submitted to the Regional Water Board as part of the MRP.

b. Pretreatment

- i. In the event that (i) the facility has a treatment capacity greater than 5 MGD and Industrial Users [40 C.F.R. § 403.3(h)] are discharging pollutants which Pass Through [40 C.F.R. § 403.3(n)] or Interfere [40 C.F.R. § 403.3(i)] with the operation of the wastewater treatment facility or are otherwise subject to National Pretreatment Standards [40 C.F.R. § 403.3(j)], (ii), Section 2233 of title 23 of the CCRs requires the facility to have and enforce an adequate pretreatment program, or (iii) the Regional Water Board or its Executive Officer determines that other circumstances warrant in order to prevent Interference with the wastewater treatment facility or Pass Through, then:
 - (a) The Discharger shall be responsible for the compliance with all pretreatment requirements contained in Part 403, and shall be subject to enforcement actions, penalties, and other remedies by the USEPA, or

the Regional Water Board, as provided in the CWA, as amended (33 USC 1251 et. seq.) (hereafter "Act").

- (b) Within 365 days of the significant industrial wastewaters being discharged to the wastewater treatment plant, the Discharger shall seek a formal approval of its Pretreatment Plan from the Regional Water Board.
- (c) The Discharger must seek approval of its Pretreatment Program from the Regional Water Board subject to Provision VI.C.1.c of this Order in the event a Pretreatment Program is developed.

c. Collection Systems

- i. The Discharger's collection system is part of the system that is subject to this Order. As such, the Discharger must properly operate and maintain its collection system (40 C.F.R. § 122.41(e)). The Discharger must report any non-compliance (40 C.F.R. § 122.41(l)(6) and (7)) and mitigate any discharge from the collection system in violation of this Order (40 C.F.R. § 122.41(d)). See the Order at Standard Provision VI.A.2.e and Attachment D, subsections I.C, I.D, V.E, and V.H.
- ii. To provide a consistent, statewide regulatory approach to address Sanitary Sewer Overflows (SSOs), the State Water Resources Control Board (State Water Board) adopted Statewide General Waste Discharge Requirements (WDRs) for Sanitary Sewer Systems, Water Quality Order No. 2006-0003 (Sanitary Sewer Order) on May 2, 2006. The Sanitary Sewer Order requires public agencies that own or operate sanitary sewer systems to develop and implement sewer system management plans and report all SSOs to the State Water Board's online SSO database. Among other requirements, the Sanitary Sewer Order requires:
 - (a) The Discharger to report all SSOs to the Regional Water Board in accordance with section G of the Sanitary Sewer Order (section D.5); and
 - (b) The Discharger to develop and implement a Sewer System Management Plan (SSMP). Further, section D.13.vii requires the SSMP include a Fats, Oils, and Grease (FOG) Control Program (section D.11).

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 7:

Table 7. Compliance Schedule

Activity	Description	Due Date
Spill Response Plan	The Discharger shall develop a Spill Response Plan (SRP).	Within 90 days of the effective date of this Order.
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 Order
TDS Study	Annual update on status of its programs and activities to reduce TDS discharges into the receiving water body.	Annual updates submitted yearly with a final report submitted with re-application
Sludge Disposal Notification and Plan	The Discharger shall provide a plan as to the method, treatment, handling, and disposal of sludge that is consistent with all State and federal laws and regulations and obtain prior written approval from the Regional Water Board specifying location and method of disposal, before disposing of treated or untreated sludge, or similar solid waste materials using an alternative method than that described in the Findings of the Order.	Prior to disposal of sludge
Antidegradation Analysis and Engineering Report for Significant Expansion	Discharges from a new or an existing facility that will undergo significant expansion within the next 5 years shall be required to submit an antidegradation analysis report to the Regional Water Board's Executive Officer for review and approval. The antidegradation analysis report shall be developed in accordance with the State Antidegradation Policy (Resolution No. 68-16) and the Federal Antidegradation Policy (section 131.12). The report shall consider any potential impacts the discharge may have on the receiving water quality and the receiving water bodies designated beneficial uses, as defined in the Regional Water Board's Basin Plan.	Prior to start of construction of significant changes to the treatment plant
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.	Within 30 days in advance of any discharges from the upgraded treatment plant

VII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in section IV of this 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 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 AMEL, AWEL and MDEL for 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) where no data is available to show compliance. 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.

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 where no data is available to show 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. The analytical result for comparison of the AWELs shall be reported on the ending Saturday of the calendar weeks within the reporting month.

For the beginning of the month, If samples are collected during the calendar week in the previous month and the ending Saturday is in the Calendar Month of reporting, the discharge shall report the results of the samples collected in the previous week and report the analytical result on the ending Saturday of the Calendar Month of reporting.

For the end of the month, if the ending Saturday falls on the following month no analytical result for comparison of the AWEL is required, however, any samples collected during the last calendar week shall be reported.

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.

For multiple samples collected in a calendar day, the maximum daily value is the average of the samples collected in a calendar day, or when applicable, the median as determined by subsection B, above.

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). There are no mass limits are for instantaneous minimum effluent limitations.

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). There are no mass limits for instantaneous maximum effluent limitations.

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 and the Discharger conducts a PMP for the priority pollutant (as described in Provision VI.C.3.a.), the Discharger shall not be deemed out of compliance.

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 and the Discharger conducts a PMP, the Discharger shall not 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. Percent Removal.

Compliance with the secondary treatment standard for monthly average percent removal of biochemical oxygen demand and total suspended solids, pursuant to 40 CFR Part 133, shall be determined separately for each wastewater treatment facility discharging through an outfall. For each wastewater treatment facility, the monthly average percent removal is the average of the calculated daily discharge percent removals only for days on which the constituent concentrations is monitored in both the influent and effluent of the wastewater treatment facility at locations specified in the MRP (Attachment E) within a calendar month.

The percent removal for each day (Daily Percent Removal) shall be calculated according to the following equation:

$$\frac{(DailyInfluentConcentration - DailyEffluentConcentration)}{DailyInfluentConcentration} * 100$$

The percent removal for the month shall be calculated according to the following equation:

$$\frac{(SumoftheDailyPercentRemoval)}{NumberofDailyPercentRemovalValues}$$

L. Chronic Toxicity Narrative Effluent Limitations.

Compliance with narrative effluent limitations established in the Order shall be determined as follows:

Reasonable potential for toxicity has not been determined based on WET tests. No effluent chronic toxicity limit exists for this discharge. However, chronic toxicity triggers exist for this discharge. The chronic toxicity permit triggers are:

1. 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; or
2. Any single concentration toxicity test where statistical significant difference exists between the control and in-stream waste concentration is considered a Fail result. For this discharge, the IWC is 100 percent effluent. A Pass result indicates no toxicity at the IWC, and a Fail result indicates toxicity at the IWC. The Discharger must report either a Pass or a Fail and the percent effect as required in the Monitoring and Reporting Program, section V. If a result is reported as a Fail, the Discharger must follow the requirements in Monitoring and Reporting Program, section V.D., Accelerated Toxicity Testing and TRE/TIE Process. Failure to initiate

an accelerated monitoring schedule or conduct a TRE/TIE may result in appropriate enforcement action.

M. Bacterial Effluent Limitations.

Compliance with the bacterial effluent limitations established in section IV.A.1.d of this Order shall be determined as follows:

1. If the calculated geometric mean bacterial concentrations for E. coli or fecal coliform exceed the 30-day geometric mean effluent limitations summarized in the Effluent Limitations and Discharge Requirements section IV.A.1.d of this Order or if more than ten percent of the bacterial concentrations for fecal coliform exceed 400 MPN per 100 milliliters, this will represent a single violation of the water quality-based effluent limitation for bacteria and the Discharger will be considered out of compliance for the month in which the samples were collected. In this case, E. coli shall be noted as the violation.
2. If the bacterial concentrations for E. coli or fecal coliform exceed the maximum bacterial densities summarized in the Effluent Limitations and Discharge Requirements section IV.A.1.d of this Order for the same sample, this will represent a single violation of the water quality-based effluent limitation for bacteria and the Discharger will be considered out of compliance for the day in which the sample(s) were collected. In this case, E. coli shall be noted as the violation.

N. Significant Figures

The Discharger shall report monitoring and calculation results with regard to significant figures.

1. When adding or subtracting values with different degrees of precision, the last digit retained is determined by the least precise number (i.e., the answer should contain no digits farther to the right of the least precise number). For example:

$$\begin{array}{r} 37.24 \\ +10.3 \\ \hline 47.54 \end{array} \quad \text{is rounded to } 47.5$$

2. When multiplying or dividing values with different degrees of precision, the number of significant figures in the answer equals that of the quantity that has the smallest number of significant figures. For example:

$$113.2 \times 1.43 = 161.876 \quad \text{is rounded to } 162$$

3. Additional Information on significant figures
 - a. All nonzero digits are significant.
 - b. Zeros between nonzero digits are significant (e.g., 1.005 mg has four significant figures).
 - c. When a number ends in zeros to the right of a decimal point, they are significant (0.00500 has three significant figures).

- d. When a number ends in zeros that are not to the right of a decimal point, significant figures are indeterminable (e.g., 10300 kg).
- e. Only measurements have a limited number of significant figures. Given values, constants, etc. are assumed to have an infinite number of significant figures.

In addition, Part 136 specifies for some analytical methods, the number of significant figures to which measurements are made. The Discharger shall ensure laboratory analytical results are consistent with the requirements contained in Part 136 with regard to significant figures.

ATTACHMENT A – DEFINITIONS

Acute Toxicity Test

Acute toxicity test is a test to determine the concentration of effluent or ambient waters that causes an adverse effect (usually mortality) on a group of test organisms during a short-term exposure (e.g., 24, 48, or 96 hours). Acute toxicity is determined using statistical procedures (e.g., point estimates or a t-test).

Ambient Toxicity

Ambient toxicity is measured by a toxicity test on a sample collected from a receiving waterbody.

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:

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

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. For dischargers submitting monitoring reports electronically through the CIWQS program, the Discharger shall report the AMEL value on the last day of the calendar month.

For the AMEL concentration limit, it is the sum of the measured sample values divided by the number of samples for the month.

For the AMEL mass loading limit, it is the sum of the product of the flow rate (mgd) x measured sample value (mg/L) x 8.34 divided by the number of samples for the 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. For dischargers submitting monitoring reports electronically through the CIWQS program, the Discharger shall report the AWEL value on the Saturday of the calendar week.

For the AWEL concentration limit, it is the sum of the measured sample values divided by the number of samples for that calendar week.

For the AWEL mass loading limit, it is the sum of the product of the flow rate (mgd) x measured sample value (mg/L) x 8.34 divided by the number of samples for that calendar 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.

Chronic Toxicity Tests

Chronic toxicity tests measure the sub-lethal effects of a discharge (e.g. reduced growth or reproduction). Certain chronic toxicity tests include an additional measurement of lethality.

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.

Criteria Continuous Concentration (CCC)

Criteria Continuous Concentration equals the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time (e.g., 4 days) without deleterious effects.

Criteria Maximum Concentration (CMC)

Criteria Maximum Concentration equals the highest concentration of a pollutant to which aquatic life can be exposed for a short period of time (e.g., 1 hour) without deleterious effects.

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.

Effect Concentration (EC)

Effect concentration is a point estimate of the toxicant concentration that would cause an observable adverse effect (e.g., mortality, fertilization). EC_{25} is a point estimate of the toxicant concentration that would cause observable 25% adverse effect as compared to the control test organisms.

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

Not Applicable.

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

Not Applicable.

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 = $(C_1 \times C_2 \times \dots \times C_n)^{1/n}$ 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.

*Where effluent limitations for bacterial density are expressed in units of a Most Probable Number per 100 milliliters (MPN/100 ml), this calculation of geometric mean is also applicable and shall be used to determine compliance with bacterial effluent limitations.

Hypothesis Testing

Hypothesis testing is a statistical approach (e.g., Dunnett's procedure) for determining whether a test concentration is statistically different from the control. Endpoints determined from hypothesis testing are no observed effect concentration (NOEC) and lowest observed effect concentration (LOEC).

In-stream Waste Concentration

In-stream waste concentration (IWC) is the concentration of a toxicant or effluent in the receiving water after mixing (the inverse of the dilution factor). A discharge of 100% effluent is considered the IWC for this discharge.

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.

Inhibition Concentration

Inhibition concentration is a point estimate of the toxicant concentration that would cause a given, percent reduction in a non-lethal biological measurement (e.g., reproduction or growth), calculated from a continuous model (i.e., Interpolation Method). For example, IC₂₅ is a point estimate of the toxicant concentration that would cause a 25 percent reduction in a non-lethal biological measurement.

Inland Surface Waters

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

Instantaneous Maximum Effluent Limitation

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

Instantaneous Minimum Effluent Limitation

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

LC50

LC50 (lethal concentration, 50%) is the toxicant or effluent concentration that would cause death to 50 percent of the test organisms.

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.

Lowest Observed Effect Concentration

Lowest observed effect concentration (LOEC) is the lowest concentration of an effluent or toxicant that results in statistically significant adverse effects on the test organisms (i.e., where the values for the observed endpoints are statistically different from the control).

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.

Minimum Significant Difference (MSD)

Minimum significant difference is the magnitude of difference from control where the null hypothesis is rejected in a statistical test comparing a treatment with a control. MSD is based on the number of replicates, control performance, and power of the test.

Mixing Zone

The Colorado River Basin Regional Water Board does not have a mixing zone policy in the Basin Plan, so in order for a mixing zone to be allowed it would be only under a State policy. The State Implementation Policy (SIP) allows the mixing zone for priority pollutants and toxicity so a mixing zone applies to the Colorado River Basin Region under this State policy.

The SIP requires a mixing zone analysis be completed before any dilution credit is granted. Following completion of the mixing zone study, the Regional Water Board must reconsider the receiving water limitations to ensure that they are as stringent as necessary to fully protect the receiving water.

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.

No Observed Effect Concentration (NOEC)

No observed effect concentration is the highest tested concentration of an effluent or toxicant that causes no observable adverse effect on the test organisms (i.e., the highest concentration of toxicant at which the values for the observed responses are not statistically different from the control).

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

Not Applicable.

Percent Effect

The percent effect represents the difference between the response of the species at the IWC (i.e., 100% effluent) and the response in the control sample, relative to the control sample, as a percentage. The percent effect at IWC can be calculated as follows:

$$\frac{(\text{Control Mean Response} - \text{IWC Mean Response})}{\text{Control Mean Response}} * 100$$

Persistent Pollutants

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

Pollutant Minimization Program (PMP)

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

Pollution Prevention

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

Potable Water

Water that is safe for drinking and cooking and is in compliance with the California Department of Public Health or local county health department regulations.

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, 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.

Quality Assurance (QA)

Quality assurance is a practice in toxicity testing that addresses all activities affecting the quality of the final effluent toxicity data. QA includes practices such as effluent sampling and handling, source and condition of test organisms, equipment condition, test conditions, instrument calibration, replication, use of reference toxicants, recordkeeping, and data evaluation.

Quality Control (QC)

Quality control is the set of more focused, routine, day-to-day activities carried out as part of the overall QA program.

Reference Toxicant Test

Reference toxicant test is a check of the sensitivity of the test organisms and the suitability of the test methodology. Reference toxicant data are part of a routine QA/QC program to evaluate the performance of laboratory personnel and the robustness and sensitivity of the test organisms.

Replicate

Replicate is two or more independent organism exposures of the same treatment (i.e., effluent concentration) within a whole effluent toxicity test. Replicates are typically separate test chambers with organisms, each having the same effluent concentration.

Report of Waste Discharge

For the purposes of this General Board Order, references to the Report of Waste Discharge (ROWD) shall include the Notice of Intent and any other application information submitted to the Regional Water Board.

Reporting Level (RL)

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

Sample

Sample is a representative portion of a specific environmental matrix that is used in toxicity testing.

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.

Serious Violation

For discharges of pollutants subject to the State Water Board's "Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California," or the "California Ocean Plan", where the effluent limitation for a pollutant is lower than the applicable Minimum Level, any discharge that: (1) equals or exceeds the Minimum Level; and (2) exceeds the effluent limitation by 40 percent or more for a Group 1 pollutant or by 20 percent or more for a Group 2 pollutant, is a serious violation for the purposes of California Water Code Section 13385(h)(2).

For discharges of pollutants that are not subject to the State Water Board's "Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California," or the California Ocean Plan (e.g., pollutants that are not addressed by the applicable plan) where the effluent limitation for a pollutant is lower than the quantitation limit specified or authorized in the applicable waste discharge requirements or monitoring requirements, any discharge that: (1) equals or exceeds the quantitation limit; and (2) exceeds the effluent limitation by 40 percent or more for a Group 1 pollutant or by 20 percent or more for a Group 2 pollutant, is a serious violation for the purposes of California Water Code section 13385(h)(2).

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).

Significant Difference

Significant difference is a statistically significant difference (e.g., 95 percent confidence level) in the means of two distributions of sampling results.

Source of Drinking Water

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

Standard Deviation (σ)

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

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

where:

x is the observed value;

μ is the arithmetic mean of the observed values; and

n is the number of samples.

State Implementation Policy (SIP)

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

Statistic

Statistic is a computed or estimated quantity such as the mean, standard deviation, or Coefficient of Variation.

Technology-Based Effluent Limitation

A technology-based effluent limitation is a permit limit for a pollutant that is based on the capability of a treatment method to reduce the pollutant to a certain concentration.

Teratogenic

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

Test Acceptability Criteria (TAC)

Test acceptability criteria are test method-specific criteria for determining whether toxicity test results are acceptable. The effluent and reference toxicant must meet specific criteria as defined in the test method (e.g., for the *Ceriodaphnia dubia* survival and reproduction test, the criteria are as follows: the test must achieve at least 80 percent survival and an average of 15 young per surviving female in the control and at least 60% of surviving organisms must have three broods).

t-Test

t-Test (formally Student's t-Test) is a statistical analysis comparing two sets of replicate observations, in the case of WET, only two test concentrations (e.g., a control and IWC). The purpose of this test is to determine if the means of the two sets of observations are different (e.g., if the 100-percent effluent or ambient concentration differs from the control [i.e., the test passes or fails]). The statistical significance (i.e., pass/fail) of a two-sample test can be determined with either a standard t-test (if homogeneity of variance is achieved) or a modified t-test (if homogeneity of variance is not achieved).

Total Maximum Daily Load (TMDL)

A TMDL is the sum of the individual waste load allocations and load allocations for receiving water. A margin of safety is included with the two types of allocations so that any additional loading, regardless of source, would not produce a violation of water quality standards.

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.)

Toxicity Test

Toxicity test is a procedure to determine the toxicity of a chemical or an effluent using living organisms. A toxicity test measures the degree of effect on exposed test organisms of a specific chemical or effluent.

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.

Waste Load Allocation (WLA)

The portion of a receiving water's total maximum daily load that is allocated to one of its existing or future point sources of pollution.

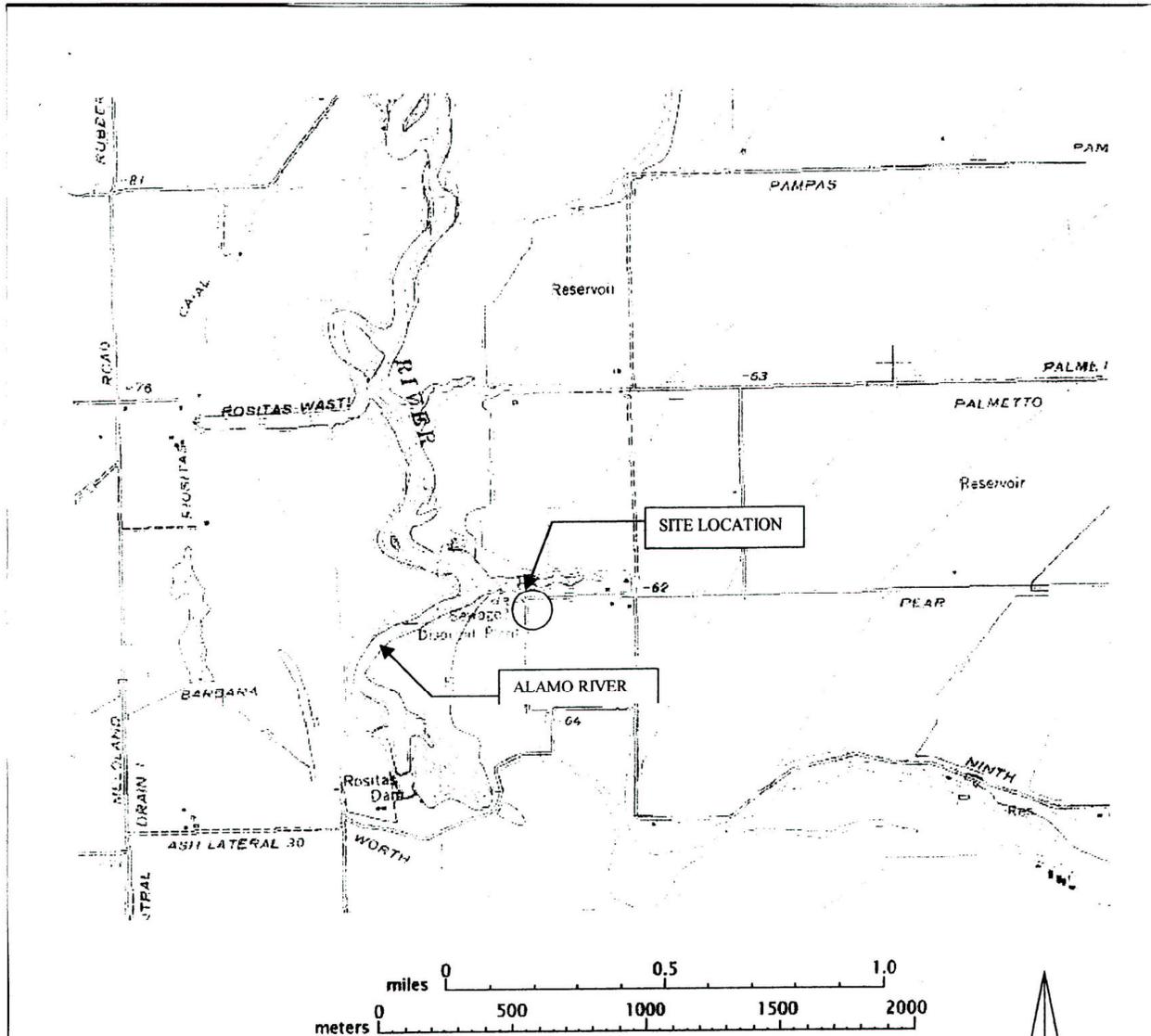
Welch's t-Test

Welch's t-Test is an adaptation of the Student's t-test intended for use with two samples having unequal variances.

Whole Effluent Toxicity (WET)

The aggregate toxic effect of an effluent measured directly by a toxicity test.

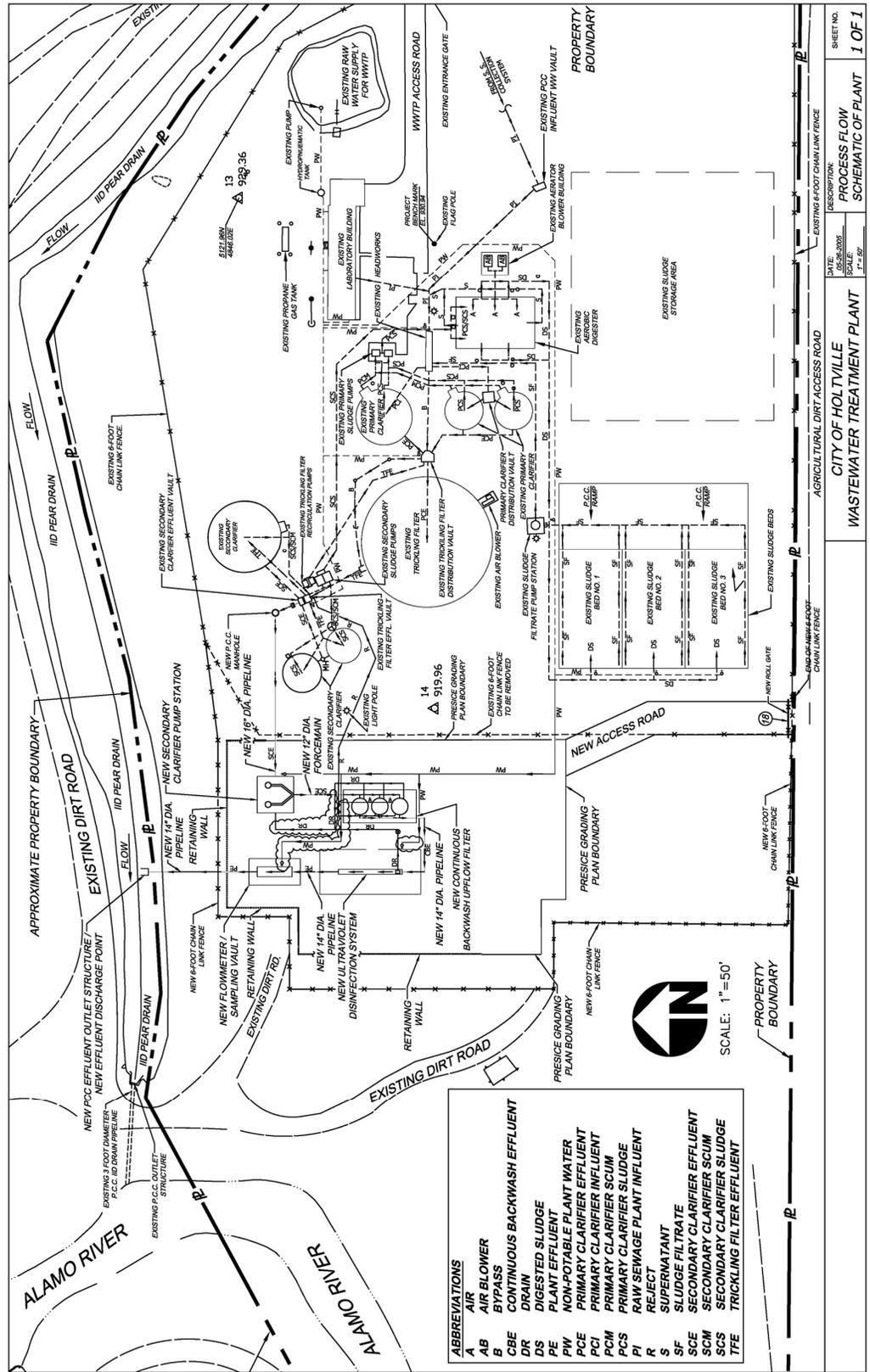
ATTACHMENT B – MAP



SITE MAP

CITY OF HOLTVILLE, OWNER/OPERATOR
WASTEWATER TREATMENT PLANT
Holtville – Imperial County
SW ¼ of Section 21, T15S, R15E, SBB&M
USGS Holtville 1:25,000 Topographic Map

ATTACHMENT C – FLOW SCHEMATIC



ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (40 C.F.R. § 122.41(a).)
2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 C.F.R. § 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 C.F.R. § 122.41(c).)

C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 C.F.R. § 122.41(d).)

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order. (40 C.F.R. § 122.41(e).)

E. Property Rights

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

2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 C.F.R. § 122.5(c).)

F. Inspection and Entry

The Discharger shall allow the Regional Water Board, State Water Board, United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (40 C.F.R. § 122.41(i); 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 Order (40 C.F.R. § 122.41(i)(1));
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (40 C.F.R. § 122.41(i)(2));
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (40 C.F.R. § 122.41(i)(3)); and
4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (40 C.F.R. § 122.41(i)(4).)

G. Bypass

1. Definitions

- a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 122.41(m)(1)(i).)
 - b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 C.F.R. § 122.41(m)(1)(ii).)
2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 C.F.R. § 122.41(m)(2).)

3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless (40 C.F.R. § 122.41(m)(4)(i)):
 - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 122.41(m)(4)(i)(A));
 - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. § 122.41(m)(4)(i)(B)); and
 - c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 C.F.R. § 122.41(m)(4)(C).)
4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 C.F.R. § 122.41(m)(4)(ii).)

5. Notice

- a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. (40 C.F.R. § 122.41(m)(3)(i).)
- b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions – Reporting V.E below (24-hour notice). (40 C.F.R. § 122.41(m)(3)(ii).)

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 C.F.R. § 122.41(n)(1).)

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 C.F.R. § 122.41(n)(2).)

2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 C.F.R. § 122.41(n)(3)):
 - a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));
 - b. The permitted facility was, at the time, being properly operated (40 C.F.R. § 122.41(n)(3)(ii));
 - c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 C.F.R. § 122.41(n)(3)(iii)); and
 - d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 C.F.R. § 122.41(n)(3)(iv).)
3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4).)

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 C.F.R. § 122.41(f).)

B. Duty to Reapply

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

C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 C.F.R. § 122.41(l)(3); § 122.61.)

III. STANDARD PROVISIONS – MONITORING

- A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. § 122.41(j)(1).)
- B. Monitoring results must be conducted according to test procedures under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503 unless other test procedures have been specified in this 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 Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time. (40 C.F.R. § 122.41(j)(2).)

B. Records of monitoring information shall include:

- 1. The date, exact place, and time of sampling or measurements (40 C.F.R. § 122.41(j)(3)(i));
- 2. The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));
- 3. The date(s) analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));
- 4. The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv));
- 5. The analytical techniques or methods used (40 C.F.R. § 122.41(j)(3)(v)); and
- 6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi).)

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

- 1. The name and address of any permit applicant or Discharger (40 C.F.R. § 122.7(b)(1)); and
- 2. Permit applications and attachments, permits and effluent data. (40 C.F.R. § 122.7(b)(2).)

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Regional Water Board, State Water Board, or USEPA within a reasonable time, any information which the Regional Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 C.F.R. § 122.41(h); 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 Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 C.F.R. § 122.22(b)(1));
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and
 - c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 C.F.R. § 122.22(b)(3).)
4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c).)

5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.” (40 C.F.R. § 122.22(d).)

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 C.F.R. § 122.22(l)(4).)
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 C.F.R. § 122.41(l)(4)(i).)
3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board. (40 C.F.R. § 122.41(l)(4)(ii).)
4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 C.F.R. § 122.41(l)(4)(iii).)

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date. (40 C.F.R. § 122.41(l)(5).)

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it

is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 C.F.R. § 122.41(l)(6)(i).)

2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 C.F.R. § 122.41(l)(6)(ii)):
 - a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(A).)
 - b. Any upset that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(B).)
3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 C.F.R. § 122.41(l)(6)(iii).)

F. Planned Changes

The Discharger shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 C.F.R. § 122.41(l)(1)):

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 C.F.R. § 122.41(l)(1)(i)); or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this 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 Order requirements. (40 C.F.R. § 122.41(l)(2).)

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. (40 C.F.R. § 122.41(l)(7).)

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information. (40 C.F.R. § 122.41(l)(8).)

VI. STANDARD PROVISIONS – ENFORCEMENT

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

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Regional Water Board of the following (40 C.F.R. § 122.42(b)):

- 1.** Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to sections 301 or 306 of the CWA if it were directly discharging those pollutants (40 C.F.R. § 122.42(b)(1)); and
- 2.** Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order. (40 C.F.R. § 122.42(b)(2).)
- 3.** Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW. (40 C.F.R. § 122.42(b)(3).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

Table of Contents

- I. General Monitoring Provisions E-2
- II. Monitoring Locations E-5
- III. Influent Monitoring Requirements..... E-6
 - A. Monitoring Location INF-001 E-6
- IV. Effluent Monitoring Requirements E-6
 - A. Monitoring Location EFF-001 E-6
- V. Whole Effluent Toxicity Testing Requirements E-7
 - A. Monitoring Requirements E-7
 - B. Quality Assurance..... E-9
 - C. Chronic Toxicity Definition and Numeric Toxicity Whole Effluent Toxicity (WET) Monitoring Triggers E-10
 - D. Accelerated Toxicity Testing and TRE/TIE Process E-11
 - E. Ammonia, Ionic Imbalance or Elevated TDS Toxicity E-12
 - F. Reporting of Toxicity Monitoring Results E-13
- VI. Land Discharge Monitoring Requirements – Not applicable E-14
- VII. Reclamation Monitoring Requirements – Not Applicable E-14
- VIII. Receiving Water Monitoring Requirements – Surface Water and Groundwater..... E-14
 - A. Monitoring Location RSW-001 E-14
 - B. Monitoring Location RSW-002 E-15
- IX. Other Monitoring Requirements E-16
 - A. Water Supply Monitoring..... E-16
 - B. Monitoring Location SLD-001 Sludge Monitoring E-16
 - C. Pretreatment Monitoring..... E-18
- X. Reporting Requirements E-18
 - A. General Monitoring and Reporting Requirements E-18
 - B. Self-Monitoring Reports (SMRs) E-18
 - C. Discharge Monitoring Reports (DMRs)..... E-21
 - D. Other Reports E-22

List of Tables

- Table E-1. Monitoring Station Locations..... E-5
- Table E-2. Influent Monitoring E-6
- Table E-3. Effluent Monitoring..... E-6
- Table E-4. Whole Effluent Toxicity Test Species..... E-8
- Table E-5. Example of Screening Table for Chronic Test..... E-9
- Table E-6. Receiving Water Monitoring Requirements..... E-14
- Table E-7. Receiving Water Monitoring Requirements E-15
- Table E-8. Sludge Monitoring Required SLD-001..... E-16
- Table E-9. Sludge Monitoring Frequency SLD-001 E-16
- Table E-10. Monitoring Periods and Reporting Schedule..... E-19
- Table E-11. Self-Monitoring Report – Mailing Address..... E-21
- Table E-12. Discharge Monitoring Reports – Mailing Address E-21
- Table E-13. Sewage Sludge Monitoring Report – Mailing Address E-22
- Table E-14. Operations and Maintenance Report E-22

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

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

I. GENERAL MONITORING PROVISIONS

- A.** 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.)

- 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 Water Code 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. The permittee must utilize analytical methods as specified below, unless otherwise specifically stated:
 - 1. A test procedure listed in section 136.3; or
 - 2. An alternative test procedure approved by EPA as provided in sections 136.4 or 136.5; or
 - 3. A test procedure listed in Part 136, with modifications allowed by EPA as provided in section 136.6.

Guidance on procedures for approval of alternative and new test procedures can be obtained from the following references: *Protocol for EPA Approval of Alternative Test Procedures for Organic and Inorganic Analytes in Wastewater and Drinking Water* (EPA 821-B-98-002, March 1999); and *Protocol for EPA Approval of New Methods for Organic and Inorganic Analytes in Wastewater and Drinking Water* (EPA 821-B-98-003, March 1999).

- G. 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 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 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 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.

- H.** 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 Cyanide¹, 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. The test for cyanide amenable to chlorination, Standard Methods 4500-CN-G is the most commonly used method by commercial laboratories.
- I.** In accordance with the test procedures under 40 CFR Part 136, samples shall be analyzed as soon as possible after collection. The Discharger has developed a written Quality Assurance Plan (QAP) for samples that are analyzed onsite (Temperature, pH and Dissolved Oxygen²). The QAP shall at a minimum address the following steps:
1. Provide a description of Standard Operating Procedures (SOPs);
 2. Provide an overview of the task description and objectives;
 3. Identify the sampling process, method and handling;
 4. Identify the instrumentation/equipment testing, inspection and maintenance;
 5. Identify the instrumentation/equipment calibration and frequency;
 6. Identify the sample analysis methods³ and calibration range; and
 7. Summarize the data review and validation procedures.
- J.** 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. The Discharger may use the Hach HQ40d digital meter to analyze pH, temperature and dissolved oxygen. In the event that continuous monitoring equipment is out of service for period greater than 24-hours, the Discharger shall obtain

¹ It is also recommended to use appropriate sampling procedures. The sample for cyanide measurement shall be collected as a 24-hour composite sample, which is a mixture of individual grab samples collected at regular intervals. Each grab sample shall be immediately checked for chlorine residual and shall be dechlorinated with sodium thiosulfate. Each grab sample shall be preserved by adding sodium hydroxide until a pH >12 is attained to prevent the loss of hydrogen cyanide. Cyanide samples shall be kept in the dark and refrigerated at 4 °C until the samples are submitted to the contract laboratory. It is required to record the time and date of sample collection, pH, and the name of the person(s) collecting/preserving the samples. Due to the presence of nitrite and sulfide in the wastewater sample, it is important to ensure that the commercial laboratory uses appropriate sample pretreatment procedures. Nitrosation seemed to be successfully avoided by adding sulfamic acid, and the time of sulfamic acid addition did not influence the free cyanide results, presumably due to relatively low nitrite concentration. Nonetheless, sample pretreatment with sulfamic acid at the time of sampling, not at the time of analysis, is recommended considering the potential increase in nitrite concentrations in the secondary effluent as a result of plant improvements in the future.

² Use of the Hack HQ40d for dissolved oxygen is contingent upon approval by USEPA.

³ For pH and dissolved oxygen, the Discharger may use the Hach HQ40d digital meter employing Hach Electrode method 8156 for pH and Direct Measurement Method 10360 for dissolved oxygen. Also, temperature can be sued per the QAP.

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.

- K.** Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this MRP.
- L.** Whenever the Discharger monitors any pollutant more frequently than is required by this 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.
- M.** If the facility is not in operation, or there is no discharge during a required reporting period, the Discharger shall report to the Regional Water Board indicating that there has been no activity during the required reporting period.
- N.** The Discharger shall submit all required calculations required to determine compliance with the permit effluent limit requirements (i.e., AMEL, MDEL, % removals, Geomeans, Max and Min, mass loadings, etc.).

II. MONITORING LOCATIONS

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

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	Wastewater influent to the treatment facility. The sampling station shall be located upstream of any in-plant return flows where representative influent to the treatment plant can be obtained.
001	EFF-001	Effluent discharged from the treatment facility shall be monitored at the outlet pipe to the receiving water (Pear Drain) where representative samples of the effluent can be obtained (Latitude 32° 49', 48" N and Longitude 115 °, 25', 48" W)
--	RSW-001	Receiving water (Alamo River) monitoring location at least 50 feet upstream from the location where the effluent enters the Alamo River via the Pear Drain. (Latitude 32° 49', 35" N and Longitude 115 °, 26', 04" W)
--	RSW-002	Receiving water (Alamo River) monitoring location at least 50 feet downstream from the location where the effluent enters the Alamo River via the Pear Drain. (Latitude 32° 49', 35" N and Longitude 115 °, 26', 05" W)
--	SLD-001	Sludge quantity, location and method of disposal from the Facility.

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location INF-001

1. The Discharger shall monitor influent to the facility at INF-001 as follows:

Table E-2. Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and Minimum Level (ML)
Biochemical Oxygen Demand (BOD) (5 day @ 20 Deg. C)	mg/L	24-Hr. Time-Composite	1x/2-Weeks	See Section I.E and I.F of the MRP
Total Suspended Solids (TSS)	mg/L	24-Hr. Time-Composite	1x/2-Weeks	"

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

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

Table E-3. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and ML
Flow ¹	MGD	Flow Meter (Totalizer) Reading/Calculation	Continuous	See Section I.B of the MRP
<i>Escherichia coli</i> (E. coli)	MPN/100 ml	Grab	5x/Month ²	3
Fecal coliform	MPN/100 ml	Grab	5x/Month ²	See Section I.E and I.F of the MRP
pH	Standard Units	Grab	1x/ Week	"
Temperature	°F	Grab	1x/Week	"
20°C BOD ₅	mg/L	24-Hr. Time-Composite	1x/2-Weeks	"
	lbs/day			
TSS	mg/L	24-Hr. Time-Composite	1x/2-Weeks	"
	lbs/day			
Bis(2-ethylhexyl)phthalate	µg/L	Grab	1x/Month	See Section I.G of the MRP
	lbs/day			
Ammonia, Total (as N)	mg/L	24-Hr. Time-Composite	1x/ Month	See Section I.E and I.F of the MRP
	lbs/day			
Oil and Grease	mg/L	Grab	1x/Month	"
	lbs/day			

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and ML
Nitrates as Nitrogen (N)	mg/L	24-Hr. Time-Composite	1x/Month	"
Nitrites as N	mg/L	24-Hr. Time-Composite	1x/Month	"
Total Nitrogen as N	mg/L	24-Hr. Time-Composite	1x/Month	"
Total Phosphate as Phosphorus (P)	mg/L	24-Hr. Time-Composite	1x/Quarter	"
Ortho-Phosphate Total as P	mg/L	24-Hr. Time-Composite	1x/Quarter	"
Hardness, Total (as CaCO ₃)	mg/L	Grab	1x/Quarter	"
Dissolved Oxygen	mg/L	Grab	1 x/Month	"
Total Dissolved Solids	mg/L	24-Hr. Time-Composite	1x/Month	"
Remaining Priority Pollutants ⁴ (Inorganic Portion)	µg/L	24-Hr. Time-Composite	1x/Year	See Section I.G of the MRP
Remaining Priority Pollutants ⁵ (Remaining Portion)	µg/L	Grab	1x/Year	"

¹ Report total daily flow and monthly average daily flow. The Discharger calculates the daily effluent flow from daily readings taken from the effluent flow totalizer.
² Five samples equally spaced over a 30-day period.
³ The Discharger may monitor for E. coli using analytical methods, Standard Method 9221.F or 9223 (APHA, 1998, 1995, 1992. Standard Methods for the Examination of Water and Wastewater. American Public Health Association, 20th, 19th, and 18th Editions. Amer. Publ. Hlth. Assoc., Washington D.C.)
⁴ Inorganic Priority Pollutants as listed in Attachment H and as defined by the California Toxics Rule (CTR).
⁵ Volatile, Semi-Volatile, Pesticide, and PCB Priority Pollutants as listed in Attachment H and as defined by the California Toxics Rule (CTR). pH and Hardness sampling and testing is also required with Annual Priority Pollutant testing.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Monitoring Requirements

1. Toxicity tests 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. Freshwater Species and Test Methods for the Chronic Test

The toxicity tests 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.*

The permittee shall conduct static renewal toxicity tests, with the fathead minnow (*Pimephales promelas*), (Larval Survival and Growth Test Method 1000.0) and

the water flea (*Ceriodaphnia dubia*), (Survival and Reproduction Test Method 1002.0); and static tests with the green alga (*Selenastrum capricornutum*), (Growth Test Method 1003.0). See Table E-4 for toxicity tests.

Table E-4. Whole Effluent Toxicity Test Species

Test	Species	Endpoints	Test Duration (days)	Reference	Sample Type ¹	Minimum Sampling Frequency
Chronic	Fathead Minnow (<i>Pimephales promelas</i>)	Larval Survival and Growth	7	EPA-821-R-02-013 (Chronic) EPA Method 1000.0	Grab or 24-Hr. Composite	4x/Year ²
Chronic	Water Flea (<i>Ceriodaphnia dubia</i>)	Survival and Reproduction	6-8 ³	EPA-821-R-02-013 (Chronic) EPA Method 1002.0	Grab or 24-Hr. Composite	4x/Year ²
Chronic	Green Alga (<i>Selenastrum capricornutum</i>)	Growth	4	EPA-821-R-02-013 (Chronic) EPA Method 1003.0	Grab or 24-Hr. Composite	4x/Year ²

¹ For the fathead minnow and the water flea, the sample should consist of three samples collected on three separate days as noted in the method. The green algae test uses only one sample as it is a shorter test.

² The screening phase shall be completed after a minimum of one (1) toxicity test has been completed on the three test species. The monitoring phase shall be conducted for the remaining quarters after the screening phase, using the most sensitive species.

³ Test duration is determined by production of 3rd brood by control and can be between 6 and 8 days.

2. During the first and third years of the permit term, the toxicity testing shall be conducted in two phases, the screening phase and the monitoring phase.

a. For the screening phase, the Discharger shall split a 24-hour composite effluent sample and conduct concurrent toxicity tests using a fish, an invertebrate and an aquatic plant species. The fathead minnow (*Pimephales promelas*), water flea (*Ceriodaphnia dubia*), and green alga (*Selenastrum capricornutum*) are the test species approved by the Regional Water Board’s Executive Officer. The screening phase shall be completed after a minimum of one (1) toxicity test has been completed on the three test species.

b. For the monitoring phase, toxicity testing shall be conducted on the most sensitive species. The most sensitive species shall be selected based on the most sensitive endpoint (i.e., lethal or sub-lethal) from chronic tests conducted during the screening phase. The most sensitive species is the fish, invertebrate, or alga species which consistently demonstrates the largest percent effect level among all test endpoints at the In-stream Waste Concentration⁴ (IWC), where: IWC percent effect level = [(Control mean response – IWC mean response) ÷ Control mean response] × 100. After the screening phase, the permittee shall than continue to conduct routine quarterly toxicity testing using the single, most

⁴ Mixing zones or dilution credits are not authorized and 100% effluent will be considered the IWC.

sensitive species for until the next screening phase. An example of a sensitivity comparison is shown in Table E-5.

Table E-5. Example of Screening Table for Chronic Test

Species	Endpoints	Mean Control Response	Mean Response at IWC (100% effluent)	% effect at IWC (100% effluent)	Most Sensitive Species
Fathead Minnow	Survival	10	10	$(10 - 10)/10 \times 100 = 0\%$	
Fathead Minnow	Growth	.41	.363	$(.41 - .363)/.41 \times 100 = 11.5\%$	
Water Flea	Survival	10	9	$(10 - 9)/10 \times 100 = 10\%$	
Water Flea	Reproduction	33.4	26.7	$(33.4 - 26.7)/33.4 \times 100 = 19.8\%$	Highest % effect represents most sensitive species ¹
Green Algae	Growth	197.3	170.1	$(197.3 - 170.1)/197.3 \times 100 = 13.8\%$	

1 In this example, the water flea represents the most sensitive species, chronic tests for the water flea shall be conducted quarterly measuring and reporting the endpoints for survival and reproduction during the monitoring phase.

B. Quality Assurance

1. Quality assurance measures, instructions, and other recommendations and requirements are found in the chronic test methods manual previously referenced. Additional requirements are specified below.
2. Control water should be prepared and used as specified in the test method manual *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA/821/R-02/013, 2002). 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.
3. A series of at least five dilutions and a control shall be tested for chronic toxicity testing if not using the t-test or modified t-test. The series shall include the following concentrations: 12.5, 25, 50, 75, and 100 percent effluent.
4. For the chronic toxicity testing using a t-test, two dilutions shall be used, i.e., 100 percent effluent and a control. The statistical significance (i.e., pass/fail) of a two-sample test can be determined with either a standard t-test (if homogeneity of variance is achieved) or a modified t-test (if homogeneity of variance is not achieved).
5. If organisms are not cultured in-house, testing laboratories shall conduct concurrent testing with a reference toxicant. If organisms are cultured in-house, then 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, etc.). Testing laboratories shall perform a reference toxicant test quarterly, concurrently with each effluent toxicity test. Reference toxicant testing is

used to document ongoing laboratory performance in addition to assessing the sensitivity of the test organism.

6. All reference toxicant test results must be reviewed and reported according to EPA guidance on the evaluation of concentration-response relationships found in *Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing* (Part 136) (EPA 821-B-00-004, 2000).
7. 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 Discharger 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.
8. 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.
9. If the discharged effluent is chlorinated, then chlorine shall not be removed from the effluent sample prior to toxicity testing without written approval by the permitting authority.
10. pH drift during a toxicity test may contribute to artifactual toxicity when pH-dependent toxicants (e.g., ammonia, metals) are present in the effluent. To determine whether or not pH drift is contributing to artifactual toxicity, the permittee shall conduct three sets of side-by-side toxicity tests in which the pH of one treatment is controlled at the pH of the effluent while the pH of the other treatment is not controlled, as described in Section 11.3.6.1 of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA/821/R-02/013, 2002). Toxicity is confirmed to be artifactual and due to pH drift when no toxicity above the chronic WET permit limit or trigger is observed in the treatments controlled at the pH of the effluent. Upon this confirmation, the permittee shall request and upon written approval by the Regional Water Board's Executive Officer, the permittee may use the procedures outlined in Section 11.3.6.2 of the chronic freshwater test methods manual to control effluent sample pH during the toxicity test.

C. Chronic Toxicity Definition and Numeric Toxicity Whole Effluent Toxicity (WET) Monitoring Triggers

1. Chronic Toxicity Definition.

- a. Chronic toxicity measures sub-lethal effect (e.g., reduced growth, reproduction) to experimental test organisms exposed to an effluent or ambient waters compared to that of the control organisms.
- b. Chronic toxicity shall be measured in TU_c , where $TU_c = 100/NOEC$. 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)).

- c. Chronic toxicity shall be reported as pass/fail using a laboratory control and the sample (e.g., 100% effluent) during the test. The determination of pass or fail from a single aqueous concentration is ascertained with a standard t-test (refer to Appendix H of EPA's *Short Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to Freshwater Organisms, 4th Edition* (EPA/821-R-02-013). In these pass/fail tests, the objective is to determine if the survival in the single treatment (e.g., effluent) is significantly different from the control survival. EPA Region 9 recommends the statistical significance (i.e., pass/fail) of a two-sample test design be determined with either a modified t-test (if homogeneity of variance is not achieved) or a standard t-test (if homogeneity of variance is achieved).

2. Numeric Chronic Toxicity Monitoring Trigger.

- a. 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.
- b. Any chronic toxicity test result that results in "fail" when using a t-test or modified t-test.

D. Accelerated Toxicity Testing and TRE/TIE Process

1. If the chronic WET permit trigger is exceeded and the source of toxicity is known [e.g., a temporary plant upset, ammonia, ionic imbalance or elevated total dissolved solids (TDS)], then the permittee shall conduct one additional toxicity test. The permittee shall use the same species and test method that failed the WET test. This toxicity test shall begin within 14 days of receipt of a test result exceeding the chronic WET permit trigger. If the additional toxicity test does not exceed the WET permit trigger or it is confirmed that the toxicity is due to temporary plant upset, ammonia, ionic imbalance or elevated TDS, then the permittee may return to the regular testing frequency.
2. If the chronic WET permit trigger is exceeded and the source of toxicity is not known, then the permittee shall conduct four additional toxicity tests using the same species and test method, approximately every two weeks, over an 8-week period. This testing shall begin within 14 days of receipt of a test result exceeding the chronic WET permit trigger. If none of the additional toxicity tests exceed the chronic WET permit trigger, then the permittee may return to the regular testing frequency.
3. If one of the additional toxicity tests, in two paragraphs above, exceeds the chronic WET permit trigger, then, within 14 days of receipt of this test result, the permittee shall initiate a TIE.

4. The permittee may initiate a TIE as part of a TRE to identify the causes of toxicity using the same species and test method. 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* (EPA/600/6-91/003, 1991);
 - 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).
5. As part of the TIE Investigation, the Discharger shall be required to implement its TRE workplan. The TRE Work Plan which shall include the following: further actions undertaken by the permittee to investigate, identify, and correct the causes of toxicity; actions the permittee will take to mitigate the effects of the discharge and prevent the recurrence of toxicity; and a schedule for these actions. 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 includes 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.

E. Ammonia, Ionic Imbalance or Elevated TDS Toxicity

1. For discharges where a TIE has identified ammonia as a cause of toxicity, the permittee shall calculate the response threshold on the basis of unionized and total ammonia. The permittee shall run a parallel test with ammonia in lab water to evaluate if the lab water and the effluent responses are the same (i.e., no matrix effect). In future WET testing, where ammonia toxicity is hypothesized as the cause, the permittee has the following three options to evaluate whether ammonia is causing the toxicity:

- a. If toxicity in lab water is similar to that in the effluent, the permittee shall conduct a parallel test with ammonia spiked into lab water. Toxicity endpoints are compared on the basis of unionized ammonia. If the endpoints are the same, then the implication is ammonia is responsible for toxicity and no further action is required; or
- b. If toxicity in lab water is not similar to that in the effluent, the permittee shall conduct a parallel test with effluent, maintaining pH at a level that maintains the unionized fraction below the toxic threshold. If no toxicity is observed in the pH controlled sample, then implication is that ammonia is responsible for toxicity and no further action is required; or
- c. Without using comparative tests, calculate toxicity in the sample on the basis of unionized ammonia and compare the result to data generated in the TIE; if the results support the hypothesis that ammonia explains toxicity, then no further action is required.

Using these approaches, if ammonia is identified as the toxicant, the permittee shall document the results and findings in the monitoring report and no further testing is required. However, if ammonia is not identified as the toxicant, the permittee shall take action as described in Section D. Accelerated Toxicity Testing and TRE/TIE Process of this permit.

2. For discharges where a TIE has identified ionic imbalance or elevated TDS as a cause of toxicity, the permittee shall conduct the following concurrent tests to characterize the contribution of ionic imbalance or elevated TDS to effluent toxicity. Based on the results from the TIE, toxicity should be either quantitatively recovered in synthetic effluent that mimics ionic imbalance or elevated TDS, or eliminated by adding selected ions to the effluent to address deficiencies. Thus, in future WET testing, where ionic imbalance or elevated TDS is hypothesized as contributing to toxicity, the permittee has the following two options to evaluate whether ionic imbalance or elevated TDS is causing the toxicity:
 - a. Conducting a parallel test with synthetic effluent that mimics the ionic imbalance or TDS concentration; or
 - b. Conducting a parallel test with effluent spiked with deficient ion(s).

Using these approaches, if ionic imbalance or elevated TDS is shown to account for toxicity, the permittee shall document the results and findings in the monitoring report and no further testing is required. However, if the parallel tests do not account for toxicity, the permittee shall take action as described in Section D. Accelerated Toxicity Testing and TRE/TIE Process of this permit.

F. Reporting of Toxicity Monitoring Results

1. The permittee shall submit a full laboratory report for all toxicity testing as an attachment to the SMR or eSMR for the month in which the toxicity test was

conducted. The laboratory report shall contain: the toxicity test results (TU_c or pass/fail and percent effect); the dates of sample collection and initiation of each toxicity test; all results for effluent parameters monitored concurrently with the toxicity test(s); and progress reports on TRE/TIE investigations.

2. The permittee shall provide the actual test endpoint responses for the control (i.e., the control mean) and the IWC (i.e., the IWC mean) for each toxicity test to facilitate the review of test results and determination of reasonable potential for chronic WET by the permitting authority.
3. The permittee shall notify the permitting authority in writing within 14 days of exceedance of the chronic WET permit trigger. This notification shall describe actions the permittee has taken or will take to investigate, identify, and correct the causes of toxicity; the status of actions required by this permit; and schedule for actions not yet completed; or reason(s) that no action has been taken.

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 Alamo River 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-6. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH	Standard Units	Grab	1x/Month	See Section I.E and I.F of the MRP
Temperature	°F	Grab	1x/Month	"
Oxygen, Dissolved (DO)	mg/L	Grab	1x/Month	"
Hardness (as CaCO ₃)	mg/L	Grab	1x/Month	"
Total Dissolved Solids	mg/L	Grab	1x/Month	"
Nitrates Total as N	mg/L	Grab	1x/Quarter	"
Nitrites Total as N	mg/L	Grab	1x/Quarter	"
Ammonia Total as N	mg/L	Grab	1x/Quarter	"
Total Nitrogen as N	mg/L	Grab	1x/Quarter	"
Total Phosphate as P	mg/L	Grab	1x/Quarter	"
Ortho-Phosphate Total as P	mg/L	Grab	1x/Quarter	"
Priority Pollutants ¹ (Inorganic Portion)	µg/L	Grab	1x/Year	See Section I.G of the MRP
Priority Pollutants ²	µg/L	Grab	1x/Year	"

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
(Remaining Portion)				

¹ Inorganic Priority Pollutants as listed in Attachment H and as defined by the California Toxics Rule (CTR).
² Volatile, Semi-Volatile, Pesticide, and PCB Priority Pollutants as listed in Attachment H and as defined by the California Toxics Rule (CTR). pH and Hardness sampling and testing is also required with Annual Priority Pollutant testing.

B. Monitoring Location RSW-002

1. The Discharger shall monitor the Alamo River at RSW-002 as follows.

Table E-7. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH	pH units	Grab	1x/Month	See Section I.E and I.F of the MRP
Temperature	°F	Grab	1x/Month	"
Dissolved Oxygen	mg/L	Grab	1x/Month	"
Hardness (as CaCO ₃)	mg/L	Grab	1x/Month	"
Total Dissolved Solids	mg/L	Grab	1x/Month	"
Nitrates, Total as N	mg/L	Grab	1x/Quarter	"
Nitrites, Total as N	mg/L	Grab	1x/Quarter	"
Ammonia, Total as N	mg/L	Grab	1x/Quarter	"
Total Nitrogen as N	mg/L	Grab	1x/Quarter	"
Total Phosphate as P	mg/L	Grab	1x/Quarter	"
Ortho-Phosphate, Total as P	mg/L	Grab	1x/Quarter	"

2. **Visual Monitoring.** In conducting the receiving water sampling, a log shall be kept of the receiving water conditions at Monitoring Locations RSW-001 and RSW-002. Notes on receiving water conditions shall be summarized in the monthly monitoring report and when data are submitted electronically via the eSMR module in the California Integrated Water Quality System (CIWQS) Program, data shall be reported in the "Attachments" section. 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

A. Water Supply Monitoring

The Discharger is required to obtain or acquire quarterly total dissolved solids concentrations of the source water, either through monitoring or obtaining the data from the drinking water purveyor. This information will be compiled and summarized in a report, in accordance with Provision VI.C.2.d of the Order. Further, when data are submitted electronically via the eSMR module in CIWQS, data shall be reported in the “Attachments” section in the Quarterly monitoring report.

B. Monitoring Location SLD-001 Sludge Monitoring

1. Sludge that is generated at the treatment facility shall be sampled and analyzed for the following prior to disposal:

Table E-8. Sludge Monitoring Required SLD-001

Constituent	Units	Sample Type ¹	Required Analytical Test Method
Arsenic	mg/kg	Composite	See Footnotes 2 and 3
Cadmium	mg/kg	Composite	”
Copper	mg/kg	Composite	”
Lead	mg/kg	Composite	”
Mercury	mg/kg	Composite	”
Molybdenum	mg/kg	Composite	”
Nickel	mg/kg	Composite	”
Selenium	mg/kg	Composite	”
Zinc	mg/kg	Composite	”
Kjeldahl Nitrogen (TKN), Total (as N)	mg/kg	Composite	”
Ammonia (as N)	mg/kg	Composite	”
Nitrate (as N)	mg/kg	Composite	”
Phosphorus, Total	mg/kg	Composite	”
Potassium, Total	mg/kg	Composite	”
Total Solids	mg/kg	Composite	”
Fecal Coliform	MPN/gram	Composite	”
Total Petroleum Hydrocarbons	µg/L	Composite	”
Bis(2-ethylhexyl)phthalate	µg/L	Composite	”

¹ Composite samples shall be collected prior to use or disposal.
² Pollutants shall be analyzed using the analytical methods described in Part 503.8.
³ Results shall be reported on a 100% dry weight basis. Records of all analyses shall state on each page of the analysis results whether the results are expressed on an “as-is” basis or on a 100% dry weight basis.

Sludge monitoring requirements listed in Table E-8, above, shall be sampled and analyzed according to the volume of sludge generated per year at the frequency specified below:

Table E-9. Sludge Monitoring Frequency SLD-001

Volume Generated¹ (dry metric tons per year)	Minimum Sampling Frequency²
Greater than zero, but less than 290	1x/Year
Equal to or greater than 290, but less than 1,500	1x/Quarter
Equal to or greater than 1,500, but less than 15,000	6x/Year
Equal to or greater than 15,000	1x/Month

¹ If sludge is removed for use or disposal on a routine basis (e.g., daily, weekly, quarterly, etc.), sampling should be scheduled at regular intervals throughout the year in accordance with Table E-9. If sludge is stockpiled at the treatment facility and is not removed for use or disposal within the applicable monitoring frequencies listed in Table E-9, the Discharger may collect representative samples of the sludge generated at the treatment facility with the sampling frequency listed in Table E-9 or representative composite samples may be taken from the stockpile(s) prior to use or disposal. For dredging operations where sludge will be dewatered at the treatment facility, the Discharger shall collect representative composite samples from the dewatered sludge prior to use or disposal.

² The Discharger shall submit the results of the sludge monitoring requirements listed in Tables E-8 and E-9 in an annual sewage sludge monitoring report.

2. In addition to the sludge monitoring requirements listed above in Tables E-8 and E-9, the Discharger shall also include the following information in the sewage sludge monitoring report:

- a.** The volume of sludge generated at the treatment facility that year, in dry metric tons, and the amount of sludge stockpiled from previous years.
- b.** The names, mailing addresses, and street addresses of persons who received sludge generated from the treatment facility. The Discharger shall specify the volume of sludge delivered and specify if the transferred sludge is to be stored, treated, placed in surface disposal sites, land applied, incinerated, disposed in municipal solid waste landfills or disposed by some other method.
- c.** For sewage sludge to be disposed in a municipal solid waste landfill, the Discharger shall certify that the sludge does not contain “free liquids” as defined by Method 9095B (Paint Filter Liquids Test), included in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods” (EPA Publication SW-846). The Discharger shall test the sludge using the Paint Filter Liquids Test at the frequency in Table E-9, or more frequently if necessary, to demonstrate that there are no free liquids.
- d.** For sewage sludge to be applied to the land or placed on a surface disposal site, the Discharger provide the following certification:
 - i.** Prior to land application, the Discharger shall demonstrate that the sewage sludge achieved the operational standards for pathogen reduction levels and vector attraction reduction requirements as required in section 503.17 and section 503.15.
 - ii.** Prior to disposal in a surface disposal site, the Discharger shall demonstrate that the sewage sludge achieved the operational standards for pathogen

reduction levels and vector attraction reduction requirements as required in section 503.27 and section 503.25.

3. In accordance with Special Provision VI.C.5.a., Limitations and Discharge Requirements, the Discharger shall prepare a plan in which the methods of treatment, handling, storage, and disposal of sludge are described. Further, the Discharger shall maintain a copy of the solids management plan on-site and have available for review during inspection.

C. Pretreatment Monitoring

In the event that significant industrial wastewater are being discharged to the wastewater treatment facility, then the Discharger shall provide the Regional Water Board with an annual report describing the pretreatment program activities over the previous twelve (12) month period and it shall include:

1. A summary of actions taken by the Discharger which ensures industrial-user compliance;
2. An updated list of industrial users (by SIC categories) which were issued permits, and/or enforcement orders; and
3. The name and address of each user that received a revised discharge limit.

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 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.
4. The Discharger shall ensure laboratory analytical results are consistent with the requirements contained in Part 136 with regard to significant figures. Part 136 specifies for some analytical methods, the number of significant figures to which measurements are made.

B. Self-Monitoring Reports (SMRs)

1. The State and Regional Water Board are notifying 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>). The Discharger shall submit hard copy SMRs, until the Discharger requests to only submit electronically and the Regional Water Board approves their request or the Regional Water Board notifies you to only submit electronically. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal. Upon notification directing the Discharger to submit electronic SMRs and discontinue submitting hard copy SMRs, the Discharger shall maintain sufficient staffing and resources to ensure it submits electronic SMRs for the duration of the term of this permit including any administrative extensions. This includes provision of training and supervision of individuals (e.g., Discharger personnel or consultant) on how to prepare and submit electronic SMRs.

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 Order. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.
3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-10. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
Continuous	June 1, 2011	All	Submit with monthly SMR
1/Day	June 1, 2011	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submit with monthly SMR
1/Week	June 3, 2011	Sunday through Saturday	Submit with monthly SMR
5/Month	June 1, 2011	1 st day of calendar month through last day of calendar month	Submit with monthly SMR
1/Month	June 1, 2011	1 st day of calendar month through last day of calendar month	First day of second month from end of monitoring period
2/Month	June 1, 2011	1 st day of calendar month through last day of calendar month	First day of second month from end of monitoring period
1/Quarter	July 1, 2011	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

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
1/Year	June 1, 2011	January 1 through December 31	First day of February

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.

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, MDEL, or AWEL for a 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 Discharger shall submit SMRs in accordance with the following requirements:
 - a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.
 - b. The Discharger shall attach a cover letter to the SMR; when SMRs are submitted electronically via CIWQS, the cover letter shall be included in the "Submittal" section. 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-11:

Table E-11. 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. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit eSMRs 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-12:

Table E-12. 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, 15 th Floor Sacramento, CA 95814

- 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

- The Discharger shall report the results of any special studies required by Special Provisions – VI.C (TRE/TIE; chronic toxicity testing, Translator Study; Total Dissolved Solids Study; Spill Response Plan, and Sludge Disposal and Notification Plan) of this Order. The Discharger shall report the progress in satisfaction of compliance schedule dates specified in Special Provisions – VI.C.7 of this Order. The Discharger shall submit reports with the first monthly SMR scheduled to be submitted on or immediately following the report due date.
- As described in section IX.B above, the Discharger shall submit a copy of the annual sewage sludge monitoring report to the Regional Water Board and USEPA. The address for the USEPA is listed below in Table E-13:

Table E-13. Sewage Sludge Monitoring Report – Mailing Address

Standard Mail/FedEx/UPS/ Other Private Carriers
Regional Biosolids Coordinator US EPA (WTR-7) 75 Hawthorne St. San Francisco, CA 94105-3901

- Operations and Maintenance Report.** The Discharger shall report the following as shown in Table E-14:

Table E-14. Operations and Maintenance Report

Activity	Reporting Frequency
To inspect and document the operation and maintenance of the UV disinfection system, including but not limited to, inspection, cleaning, and bulb replacement. The Discharger shall provide a certification in the annual report.	1x/Year
To inspect and document any operation/maintenance problems by inspecting each unit process. The Discharger shall provide a certification in the annual report.	1x/Year
Calibration of flow meters and mechanical equipment shall be performed in a timely manner and documented. The Discharger shall provide a certification in the annual report.	1x/Year

The Discharger shall include documentation of all logbooks (operation and maintenance), chain of custody sheets, laboratory and sampling activities as stated in Special Provision VI.C.4.a (Limitations and Discharge Requirements) and Standard Provisions sections IV and V (Attachment D). The Discharger shall provide a certification in the annual report.	1x/Year
The Discharger shall conduct an annual review and evaluation of priority pollutant sampling results collected each year to evaluate the impact on surface water quality, and provide this evaluation in the annual report.	1x/Year

ATTACHMENT F – FACT SHEET

Table of Contents

I.	Permit Information.....	F-3
II.	Facility Description.....	F-4
	A. Description of Wastewater and Biosolids Treatment or Controls.....	F-4
	B. Discharge Points and Receiving Waters.....	F-5
	C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data.....	F-5
	D. Compliance Summary.....	F-7
	E. Planned Changes.....	F-11
III.	Applicable Plans, Policies, and Regulations.....	F-11
	A. Legal Authorities.....	F-11
	B. California Environmental Quality Act (CEQA).....	F-12
	C. State and Federal Regulations, Policies, and Plans.....	F-12
	D. Impaired Water Bodies on CWA 303(d) List.....	F-16
	E. Other Plans, Policies and Regulations.....	F-17
IV.	Rationale For Effluent Limitations and Discharge Specifications.....	F-17
	A. Discharge Prohibitions.....	F-18
	B. Technology-Based Effluent Limitations.....	F-18
	1. Scope and Authority.....	F-18
	2. Applicable Technology-Based Effluent Limitations.....	F-19
	C. Water Quality-Based Effluent Limitations (WQBELs).....	F-20
	1. Scope and Authority.....	F-20
	2. Applicable Beneficial Uses and Water Quality Criteria and Objectives.....	F-20
	3. Determining the Need for WQBELs.....	F-22
	4. WQBEL Calculations.....	F-23
	5. Whole Effluent Toxicity (WET).....	F-29
	D. Final Effluent Limitations.....	F-30
	1. Mass-based Effluent Limitations.....	F-31
	2. Final Effluent Limitations.....	F-31
	3. Satisfaction of Anti-Backsliding Requirements.....	F-33
	4. Satisfaction of Antidegradation Policy.....	F-33
	5. Stringency of Requirements for Individual Pollutants.....	F-33
	E. Interim Effluent Limitations.....	F-34
	F. Land Discharge Specifications – Not Applicable.....	F-34
	G. Reclamation Specifications – Not Applicable.....	F-34
V.	Rationale for Receiving Water Limitations.....	F-34
	A. Surface Water.....	F-34
	B. Groundwater – Not Applicable.....	F-35
VI.	Rationale for Monitoring and Reporting Requirements.....	F-35
	A. Influent Monitoring.....	F-35
	B. Effluent Monitoring.....	F-35
	C. Whole Effluent Toxicity Testing Requirements.....	F-36
	D. Receiving Water Monitoring.....	F-37
	1. Surface Water.....	F-37
	E. Groundwater – Not Applicable.....	F-38
	F. Other Monitoring Requirements.....	F-38
	1. Water Supply Monitoring.....	F-38
	2. Biosolids/Sludge Monitoring.....	F-38

VII. Rationale for Provisions F-38

 A. Standard Provisions..... F-38

 B. Special Provisions..... F-39

 1. Reopener Provisions F-39

 2. Special Studies and Additional Monitoring Requirements F-39

 3. Best Management Practices and Pollution Prevention..... F-39

 4. Construction, Operation, and Maintenance Specifications F-39

 5. Special Provisions for Municipal Facilities (POTWs Only)..... F-40

 6. Other Special Provisions F-40

 7. Compliance Schedules F-41

VIII. Public Participation..... F-41

 A. Notification of Interested Parties F-41

 B. Written Comments F-41

 C. Public Hearing F-41

 D. Waste Discharge Requirements Petitions F-42

 E. Information and Copying F-42

 F. Register of Interested Persons..... F-42

 G. Additional Information F-42

List of Tables

Table F-1. Facility Information..... F-3

Table F-2. Historic Effluent Limitations and Monitoring Data..... F-5

Table F-3. Effluent Characteristics..... F-7

Table F-4. Compliance Summary F-7

Table F-5. Single Sample Triggers for Accelerated Monitoring of Toxicity in Effluent¹..... F-9

Table F-6. Enforcement Summary F-9

Table F-7. Basin Plan Beneficial Uses F-12

Table F-8. Summary of Technology-based Effluent Limitations F-19

Table F-9. Basis for Limitations..... F-20

Table F-10. Applicable Beneficial Uses and Water Quality Criteria and Objectives..... F-21

Table F-11. Summary of Reasonable Potential Analysis..... F-23

Table F-12. Summary of Water Quality-based Effluent Limitations F-29

Table F-13. Summary of Final Effluent Limitations..... F-31

ATTACHMENT F – FACT SHEET

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

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	7A130105011
Discharger	City of Holtville
Name of Facility	City of Holtville Municipal Wastewater Treatment Plant
Facility Address	1250 Kamm Road
	Holtville, CA 92250
	Imperial County
Legally Responsible Official	Laura Fisher, City Manager (760) 356-4574
Facility Contact, Title and Phone	Frank Cornejo, Chief Plant Operator, (760) 356-3186
	James G. “Jack” Holt, City Engineer, (760) 337-3883
Authorized Person to Sign and Submit Reports	Frank Cornejo, (760) 356-3186 David Huerta, (760) 356-4978
Mailing Address	121 West Fifth Street Holtville, CA 92250
Billing Address	SAME
Type of Facility	POTW
Major or Minor Facility	Minor
Threat to Water Quality	2
Complexity	B
Pretreatment Program	N
Reclamation Requirements	None
Facility Permitted Flow	0.85 MGD
Facility Design Flow	0.85 MGD
Watershed	Imperial Hydrologic Unit (Brawley HA) – 723.10
Receiving Water	Pear Drain
Receiving Water Type	Agricultural Drain

- A.** The City of Holtville (hereinafter Discharger) is the owner and operator of the City of Holtville Municipal Wastewater Treatment Plant (hereinafter Facility), a Publicly Owned Treatment Works.

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

- B.** The Facility discharges wastewater to the Pear Drain, a water of the United States, and is currently regulated by Order R7-2006-0050 (amended by Order R7-2009-0016) which was adopted on June 21, 2006 and expired on June 21, 2011. The terms and conditions of the current Order have been automatically continued and remain in effect until new Waste Discharge Requirements and NPDES permit are adopted and effective pursuant to this Order.
- 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 22, 2010. A site visit was conducted on October 25, 2010, to observe operations and collect additional data to develop permit limitations and conditions.

II. FACILITY DESCRIPTION

The Discharger owns and operates a wastewater collection, treatment and disposal system (hereinafter referred to as the Facility) and provides sewerage service to the City of Holtville (service to a population of approximately 5,600). The wastewater treatment plant has a treatment capacity of 0.85 MGD and is located in SW ¼ of Section 21, T15S, R15E, SBB&M.

A. Description of Wastewater and Biosolids Treatment or Controls

The total design capacity of the wastewater treatment plant is 0.85 MGD. The current wastewater treatment plant consists of an grit chamber, three circular primary clarifiers operated in parallel, a trickling filter, three secondary clarifiers operated in parallel, effluent flow meter, three sand filters, an ultraviolet (UV) disinfection system, an aerobic digester, and three sludge drying beds. The Discharger accepts septic tank and portable waste and introduces the waste prior to primary treatment.

The City’s collection system includes two pump stations that direct flow to a 15-inch diameter sewer main trunk line. Wastewater is conveyed via two pump stations within the City limits and gravity flow to the WWTP. Following the grit chambers, wastewater is directed to a distribution box that splits flow to a 28-foot diameter circular clarifier and another distribution box that splits the flow to two 18-foot diameter circular clarifiers. Flow is directed to a trickling filter equipped with 6- to 8-foot diameter rock media (original media since the WWTP has been operating). The trickling filter is equipped with two recirculating pumps, capable of handling 700,000 gallons per day (gpd) flow. Flow from the trickling filter is directed through a distribution box that channels wastewater to three secondary clarifiers (two 18-foot diameter circular secondary

clarifiers and one 38-foot diameter circular secondary clarifier). Following treatment in the secondary clarifiers, flow is sent through a distribution box, and flows via gravity to the secondary effluent pump station. A 15-HP pump directs wastewater to three sand-media filters. Water is pumped in, it enters at the top of the filter, flows down through radial diffusers, and the water works its way back up through the filter. Sand filters produce two discharges: reject water flows out the top of the sand filter and treated wastewater is channeled to the UV disinfection system. The UV disinfection unit is comprised of two banks of modules (lamps), each having three modules, for a total of six modules. Following treatment via UV disinfection, effluent is discharged through Discharge Point 001.

Sludge collected from the primary and secondary clarifiers is treated at an aerobic digester. The digester consists of four rectangular Imhoff tanks each of which is 20 feet long, 13 feet wide, and 21.8 feet deep, with a volume of 22,672 cubic feet. From the aerobic digester chamber, thickened sludge is removed to three sludge drying beds for drying. The total area of the drying beds is approximately 7,560 square feet. Each drying bed is 4 feet deep, 35 feet wide, and 72 feet long. Sludge drying beds are equipped with sand filters and perforated underdrains. Leachate collected from the drying beds is pumped back to the plant headworks for processing. After drying, the sludge is hauled off-site to a farm in Arizona.

Wastewater is discharged from Discharge Point 001 (see table on cover page) to the Pear Drain. From the Pear Drain, effluent flows approximately 180 yards prior to entering Alamo River, a water of the United States.

B. Discharge Points and Receiving Waters

Final effluent is discharged through Discharge Point 001 at Latitude 32° 49' 48" North and Longitude 115° 25' 48" West, to the Pear Drain. The permitted maximum daily flow limitation is equal to the design capacity of the wastewater treatment plant, which is 0.85 MGD. The discharge consists of disinfected secondary treated wastewater.

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

Effluent limitations contained in the existing Order (as amended by Order R7-2009-0016) for discharges from Discharge Point 001 (Monitoring Location EFF-001) and representative monitoring data from the term of the previous Order are as follows in Table F-2:

Table F-2. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation			Monitoring Data (From July 2006 – August 2010)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Flow	MGD	0.85	--	--	0.6605	--	0.8374

Parameter	Units	Effluent Limitation			Monitoring Data (From July 2006 – August 2010)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Biochemical Oxygen Demand (BOD) (5 day @ 20 Deg. C)	mg/L	30	45	--	23.3	37.5	--
	lb/day	210	320	--	115	180	--
BOD ₅ % Removal	%	85	--	--	87.6 ²	--	--
Total Suspended Solids (TSS)	mg/L	30	45	--	18	43.8	--
	lb/day	210	320	--	99	221	--
TSS % Removal	%	85	--	--	92.4 ³	--	--
pH	s.u.	--	--	6.0 – 9.0 ⁴	--	--	7.0 – 8.0
<i>Escherichia coli</i> (E. coli)	MPN/100 ml	126 ⁵	--	400 ⁶	264	--	1,600
Bis(2-ethylhexyl)phthalate (Interim) ⁷	µg/L	6.4	--	6.4	14	--	14
Bis(2-ethylhexyl)phthalate (Final) ⁸	µg/L	5.9	--	12	< 0.59	--	< 0.59
	lb/day	0.042	--	0.085	--	--	--
Total Ammonia (as Nitrogen)- (Interim) ⁹	mg/L	23	--	34	28.6	--	28.6
	lb/day	160	--	240	122	--	122

¹ This value represents the highest average monthly flow value (June 2007).
² This value represents the lowest reported value of the minimum percent removal of BOD (April 2009).
³ This value represents the lowest reported value of the minimum percent removal of TSS (April 2009).
⁴ This range represents the instantaneous minimum and maximum pH limitations, respectively.
⁵ This effluent limitation is expressed as a geometric (or log) mean, based on a minimum of not less than five samples for any 30-day period.
⁶ No single sample shall exceed an MPN of 400 per 100 ml.
⁷ Interim effluent limitations for Bis(2-ethylhexyl)Phthalate were effective beginning June 26, 2006 and ending on May 18, 2010.
⁸ Final Effluent Limitations. Order R7-2006-0050 as amended by Order R7-2009-0016 established final effluent limitations for Bis(2-ethylhexyl)Phthalate effective May 19, 2010.
⁹ Order R7-2006-0050 established interim effluent limitations for ammonia (Total, as N) for wastewater discharged to the Pear Drain and Cease and Desist Order (CDO) No. R7-2009-0061 and amending CDO R7-2011-0016 extended the time period the interim effluent limitations are effective (interim effluent limitations are effective through August 17, 2014).

The ROWD described the existing discharge as follows:

Annual Average Effluent Flow – 0.55 MGD

Maximum Daily Effluent Flow – 0.79 MGD

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

Table F-3. Effluent Characteristics

Parameter	Units	Maximum Daily	Average Daily
pH (Minimum)	s.u.	7.0	--
pH (Maximum)	s.u.	7.7	--
Temperature (Winter)	°F	75	68.83
Temperature (Summer)	°F	88	78.71
BOD ₅	mg/L	50	13.79
Fecal Coliform	MPN/100 mL	866	10.9
TSS	mg/L	43.8	6.11
Ammonia as Nitrogen	mg/L	28.56	13.35 ¹
Total Kjeldahl Nitrogen	mg/L	42.99	23.36
Nitrate+Nitrite (as Nitrogen)	mg/L	26.4	7.47
Oil and Grease	mg/L	1.3	0.43
Phosphorus	mg/L	9.05	3.09
Total Dissolved Solids	mg/L	1,138	911.08

¹ The Discharger originally reported the average daily value for ammonia as 132.35 mg/L, but provided clarification following a request from the Regional Water Board; the original input contained a typographical error and should read 13.35 mg/L.

D. Compliance Summary

The available effluent monitoring data and enforcement correspondence indicate that the Discharger exceeded certain effluent limitations contained in Order R7-2006-0050, including the limitations for E. Coli, bis(2-ethylhexyl)phthalate (interim), ammonia (interim), nickel, and copper.

Table F-4 summarizes the violations for all other effluent limitations which apply to the Facility during the permit term.

Table F-4. Compliance Summary

Date	Violation Type	Parameter	Reported Effluent Value	Permit Limitation	Units
August 2010	Average Monthly	Ammonia, Total (as N)	3.92	1.9	mg/L
August 2010	Average Monthly	Ammonia	17	13	lbs/day
8/4/2010	Maximum	Ammonia	3.92	3.6	mg/L

Date	Violation Type	Parameter	Reported Effluent Value	Permit Limitation	Units
	Daily				
July 2010	Average Monthly	Ammonia	21	1.9	mg/L
July 2010	Average Monthly	Ammonia	89	13	lbs/day
7/7/2010	Maximum Daily	Ammonia	21	3.6	mg/L
7/7/2010	Maximum Daily	Ammonia	89	26	lbs/day
May 2010	Average Monthly	Ammonia	6.16	1.9	mg/L
May 2010	Average Monthly	Ammonia	28.86	13	lbs/day
March 2010	Average Monthly	Bis(2-ethylhexyl)Phthalate	14	6.4	µg/L
March 2010	Average Monthly	Bis(2-ethylhexyl)Phthalate	0.07	0.045	lbs/day
3/3/2010	Maximum Daily	Bis(2-ethylhexyl)Phthalate	14	12	µg/L
3/19/2008	Instantaneous Maximum	<i>E. Coli</i>	500	400	MPN/100 mL
1/16/2008	Instantaneous Maximum	<i>E. Coli</i>	1,600	400	MPN/100 mL
December 2007	Average Monthly	Copper, Total Recoverable ¹	19.0	12	µg/L
December 2007	Average Monthly	Copper, Total Recoverable	0.086	0.085	lbs/day
12/5/2007	Maximum Daily	Copper, Total Recoverable	19.0	12	µg/L
12/5/2007	Maximum Daily	Copper, Total Recoverable	0.094	0.085	lbs/day
February 2008	Average Monthly	Ammonia	25.2	23	mg/L
11/28/2007	Instantaneous Maximum	<i>E. Coli</i>	1,600	400	MPN/100 mL
September 2006	Average Monthly	Nickel, Total Recoverable ¹	24	6.8	µg/L
September 2006	Average Monthly	Nickel, Total Recoverable	0.069	0.048	lbs/day
9/11/2006	Maximum Daily	Nickel, Total Recoverable	24	14	µg/L
9/11/2006	Maximum Daily	Nickel, Total Recoverable	0.11	0.099	lbs/day
July 2006	Average Monthly	Nickel, Total Recoverable	26	6.8	µg/L
July 2006	Average Monthly	Nickel, Total Recoverable	0.12	0.048	lbs/day
7/5/2006	Maximum Daily	Nickel, Total Recoverable	26	14	µg/L
7/5/2006	Maximum Daily	Nickel, Total Recoverable	0.13	0.099	lbs/day

¹ Order R7-2006-0050 established effluent limitations for copper and nickel. Amending Order R7-2009-0016 (adopted May 21, 2009) amended the original Order to reflect USEPA approval of application of water quality criteria for the protection of freshwater aquatic life. For the violations listed above, the Amending Order discontinued the effluent limitations for copper and nickel.

Table F-5 summarizes the instances where the chronic and acute toxicity triggers were exceeded during the permit term.

Table F-5. Single Sample Triggers for Accelerated Monitoring of Toxicity in Effluent¹

Species/Sample	% Acute Survival	TUc (Survival)	TUc (Repro.)
<i>Ceriodaphnia dubia:</i>			
Trigger	90²	2³	2³
2 nd Quarter 2007 (June)	81	--	--
3 rd Quarter 2007 (July)	30	--	--
Accelerated Monitoring: July 2007 (1 st bioassay) ⁴	0	4	--
Accelerated Monitoring: August 2007 (2 nd bioassay) ⁴	0	--	--
Accelerated Monitoring: August 2007 (3 rd bioassay) ⁴	55	--	--
4 th Quarter 2007 (October)	50	--	--
1 st Quarter 2008 (March)	85	--	--
Accelerated Monitoring: April 2008 (1 st bioassay) ³	80	--	--
<i>Pimephales promela:</i>			
1 st Quarter 2008 (March)	87.5	--	--
Accelerated Monitoring: April 2008 (1 st bioassay) ³	82.5	--	--

¹ All values in the above table are also violations of the permit, part A.1.e., which states there “shall be toxicity in the treatment plant effluent nor shall the treatment plant effluent cause any toxicity in the receiving water.”

² Permit states that any acute toxicity test result less than 90% survival (when acute toxicity is calculated from the results of the acute toxicity test) shall trigger an accelerated monitoring frequency.

³ Permit states that any single chronic toxicity test that exceeds 2 TU_c or the median of the three consecutive (3) monitoring sample results that exceeds 1 TU_c shall trigger accelerated monitoring. Only the single sample triggers have been summarized here. During the period from June 2007 through April 2008, the median of three consecutive monitoring events exceeded 1 TU_c.

⁴ Discharger submitted TIE results in a letter dated November 13, 2007. TIE determined that zinc in the effluent was the cause of the acute toxicity to *Ceriodaphnia dubia* in the effluent.

Table F-6 summarizes the enforcement actions taken against the facility, date of violations and a description of the violation.

Table F-6. Enforcement Summary

Enforcement Action	Date	Date of Violation(s)	Description
Administrative Civil Liability	August 19, 2009	For violations of Order R7-2006-	E. Coli, Nickel, and Copper (interim) daily maximum effluent

Enforcement Action	Date	Date of Violation(s)	Description
Complaint (ACLC) Order R7-2010-0036		0050, July 2006 through December 2007	violations
Cease and Desist Order (CDO) R7-2011-0016	January 20, 2011	--	Revises CDO R7-2009-0061 to extend the milestone deadlines specified for Milestones 1,2,3, and 4, related to completion of construction and operational start-up of the new plant upgrades to achieve compliance with ammonia effluent limitations.
CDO R7-2009-0061	September 17, 2009	--	Requires development and implementation of a Pollution Prevention Plan to achieve compliance with ammonia effluent limitations
Time Schedule Order (TSO) R7-2009-0040	February 19, 2009	July 2008 – December 2008	Failure to use certified laboratory for bacteria testing.
Notice of Noncompliance (NON)	June, August, October 2010 and July 2008	May, July, August 2010 and February 2008	Ammonia daily maximum and average monthly effluent limitation violations ¹ .
NON	May 4, 2010	March 2010	Bis(2-ethylhexyl)phthalate maximum and average monthly effluent limitation violations.
NON	July 18, 2008 and February 21, 2008	January and March 2008 and November 2007	E. Coli daily maximum effluent limitation violations ² .
NON	July 18, 2008	December 2007	Copper interim daily maximum and average monthly effluent limitation violations.
NON	December 8, 2006	July 2006, September 2006, and 3Q 2006	Nickel daily maximum and average monthly effluent limitation violations. Failure to collect a sample for selenium, TDS, and failure to develop a Pollutant Minimization Program.
NON	December 8, 2006	July 2006, September 2006, and 3Q 2006	Failure to conduct analyses for nickel and selenium using appropriate Minimum Levels (MLs).

¹ NONs for exceedances of the maximum and average monthly effluent limitations for ammonia during the months of May, July, and August 2010 were issued on June 25, 2010, August 31, 2010, and October 19, 2010. The NON for exceedances of the average monthly effluent limitation for ammonia during February 2008 was issued on July 18, 2008. The violations cited in these NONs are summarized in Table F-4.

² NONs for exceedances of the maximum and log mean effluent limitations for E. Coli during the months of January and March 2008 were issued on July 18, 2008. The violations cited in these NONs are summarized in Table F-4.

A NPDES permit compliance evaluation inspection (CEI) was conducted October 25, 2010. The major findings addressed record keeping requirements for sampling events (e.g., reporting results of monitoring conducted more frequently than required by the permit, recording the time of measurement of daily samples collected for pH and temperature, and

failure of the contract laboratory indicating the individual performing analyses) and proper refrigeration for influent samples collected using an automatic sampler. Further, the CEI report noted visible erosion along the Facility's northern boundary, which is bordered by the Pear Drain and evidence of sediment leaving the site and potentially entering the receiving water (Pear Drain). In addition, the CEI report indicated failure by the Discharger to complete Milestones 1 and 2 by the due date, as required by Cease and Desist Order R7-2009-0061. The CEI report notes the Discharger is requesting an extension of the compliance schedule.

A pretreatment compliance inspection (PCI) was conducted February 18, 2010 to perform a Pretreatment Program Needs Assessment of the City of Holtville. The purpose of the assessment was to evaluate any efforts the City has implemented with respect to source control and identify any potential significant industrial users that might be discharging to the WWTP. The assessment contained recommendations for the City to increase the effectiveness of controlling non-domestic discharges to the WWTP. The inspector recommended the City of Holtville implement a fats, oils, and grease (FOG) control program for all food service establishments to prevent sewer line obstructions and sanitary sewer overflow (SSO) events. The report indicates the FOG control program should include control measures, such as food service establishment inspections, and requirements to install and maintain adequate grease interceptors or traps.

E. Planned Changes

The Discharger has indicated there will be upgrades to the WWTP during this permit term, to address the requirements of Cease and Desist Order (CDO) R7-2009-0061 and amending CDO R7-2011-0016. The Discharger noted the design capacity will remain at 0.85 MGD. Plans to upgrade the headworks include replacement of the headworks unit and installation of a new raking unit. At the time the Regional Water Board prepared this draft permit renewal, the City had not yet submitted a proposal for upgrades to the WWTP; a preliminary engineering study is in progress, to evaluate WWTP upgrade options and subsequently propose an upgrade project.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

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

B. California Environmental Quality Act (CEQA)

Under Water Code Section 13389, this action to adopt an NPDES permit is exempt from the provisions of 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 (including 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 specified in this Order protect existing and potential beneficial uses of the Pear Drain, which are described in Table F-7:

Table F-7. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Uses
001	Pear Drain (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 Water Board; and such substantiation must be provided within a reasonable time frame as approved by the Regional Water Board.

Requirements of this 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 these discharges to the Pear Drain because agricultural drainage channels do not have a “natural” receiving water temperature.

3. National Toxics Rule (NTR) and California Toxics Rule (CTR). USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for

California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.

- 4. State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.
- 5. 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) (EPCRA) 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 meeting certain conditions are applicable industries under the storm water program and are obligated to comply with the Federal Regulations.
- 7. Endangered Species Act.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (California Fish and Game Code section 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C. Sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. 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 Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on BOD₅, TSS, and pH are specified in Federal regulations as discussed in Part 133 and the Permit's technology-based pollutant restrictions are no more stringent than required by the CWA. This 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, CFR 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 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 discharges to waters of the State be regulated to achieve the "highest water quality consistent with maximum benefit to the State." It also establishes the intent that where waters of the State are of higher quality than that required by state policies, including Water Quality Control Plans, such higher quality "shall be maintained to the maximum extent possible" unless it is demonstrated that any change in quality will be consistent with maximum benefit to people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in plans and policies (e.g., violation of any water quality objective). The discharge is also required to meet waste discharge requirements that result in the best practicable treatment or control necessary to assure that pollution or nuisance will not occur, and that the highest water quality consistent with maximum benefit to the people will be maintained.

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

The source water for the City of Holtville and the entire Imperial Valley is the Colorado River. Average annual precipitation in the Imperial Valley is insignificant (approximately 2 inches/year). Therefore, the Pear Drain is an agricultural-dominated surface water that also carries discharges from WWTPs; and agricultural return flows from approximately 30 Imperial Valley drains that discharge tilewater and tailwater from farmlands. The Pear Drain discharges to the Alamo River, which in turn discharges to the Salton Sea. 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. The wastes from Mexico also contain pollutants (e.g., pathogens, trash, VOCs, pesticides, nutrients, raw sewage, BOD₅, and metals) that impaired the river's beneficial uses. Consequently, "background" water quality in Pear Drain is difficult to establish for the purpose of conducting a typical antidegradation analysis. It is likely that the Alamo River has historically contained "background" water from farmland and Mexico that contains pollutants at concentrations that violate certain Basin Plan water quality objectives for those pollutants, in particular, pesticides, silt/sediment, and selenium. It also contains nutrients (e.g., phosphorus) at concentrations that contribute to the nutrient impairment of the Salton Sea. The agricultural return flows, however, are essentially free of BOD₅ and fecal coliform bacteria and have pH well within the receiving water quality objective of 6.0 to 9.0 pH units.

The discharge from the WWTP contains conventional pollutants (BOD₅, TSS, fecal coliform bacteria, oil and grease, and pH) that are controlled through treatment using primary clarifiers, trickling filters, followed by secondary clarification, sand filters, and UV disinfection of the final effluent 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 Pear Drain. The discharge also contains TDS, but at concentrations significantly below the 4,000 mg/L TDS WQO for the receiving water. The discharge from the WWTP does not contain any of the 303(d) List of impairing pollutants for the receiving water at detectable levels. Therefore, the discharge is not likely to contribute to exceedances of the WQOs for 303(d) List pollutants.

Bis(2-ethylhexyl)phthalate has been measured in the effluent and is being controlled through WQBELs derived from water quality criteria established in the CTR. These established WQBELs prevent adverse impacts of the REC-I and REC-II beneficial uses of the Pear Drain and ensure compliance with the Basin Plan. Nevertheless, the BOD₅, TSS, bacteria, and bis(2-ethylhexyl)phthalate in the discharge are likely to lower water quality in the receiving water (i.e., cause degradation). For conventional pollutants, including BOD₅, TSS, and bacteria, this degradation is restricted to pollutants associated with domestic wastewater, is localized and will not result in water quality less than that prescribed in the Basin Plan.

The discharge from the WWTP 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 WWTP incorporates:

- a. technology for secondary treated domestic wastewater;
- b. effluent UV disinfection;
- c. sludge handling facilities;
- d. an operation and maintenance manual;
- e. staffing to assure proper operation and maintenance; and
- f. a standby emergency power generator of sufficient size to operate the necessary treatment units during periods of loss of commercial power.

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

- 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 Pear Drain, which is a part of the Imperial Valley Drains. The 2006 USEPA CWA Section 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. The Alamo River, to which the Pear Drain is tributary, is listed as impaired by chloropyrifos, DDT, dieldrin, polychlorinated biphenyls (PCBs), selenium, and toxaphene. A sedimentation/siltation Total Maximum Daily Load (TMDL) for the Alamo River was approved by USEPA on June 28, 2002.

The sedimentation/siltation TMDL establishes a numeric target of an annual average in-stream TSS concentration of 200 mg/L. In assigning the waste load allocation (WLA), the TMDL assigned to the City of Holtville of 77.7 tons per year of suspended solids based on a TSS effluent limit equal to double the TSS effluent limits contained in the City’s NPDES permit. The TSS effluent limits equal to secondary effluent standards as specified in Part 133 for TSS of 30 mg/L as a monthly average and 45 mg/L as a weekly average are applied to this discharge. If the Discharger were to discharge at its maximum design flow rate of 0.85 MGD every day for a year as a concentration equal to the monthly average limit, the Facility would not exceed the WLA of 77.7 tons per year of sediment.

Calculation of Average Monthly Effluent Limitation (mass-based):

$$\frac{30\text{mg}}{L} \times 0.85\text{MGD} \times 8.34 = \frac{213\text{lbs}}{\text{day}}$$

Calculation of TSS loading rate:

$$\frac{213\text{lbs}}{\text{day}} \times \frac{1\text{ton}}{2,000\text{lbs}} \times \frac{365\text{days}}{\text{year}} = \frac{39\text{tons}}{\text{year}}$$

The limits established in this Order adequately implement the requirements of the TMDL.

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).

E. Other Plans, Policies 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 Best Available Technology Economically Achievable (BAT) to reduce or eliminate industrial storm water pollution.

The State Water Board adopted 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. Coverage under the General Permit is not required because this facility's total design flow is less than 1 MGD and is not required to have a pretreatment program and therefore is not required to be regulated under this General Permit.

The State Water Board adopted Statewide General Waste Discharge Requirements (WDRs) for Sanitary Sewer Systems, Water Quality Order No. 2006-0003 (Sanitary Sewer Order), on May 2, 2006. The Sanitary Sewer Order requires public agencies that own or operate sanitary sewer systems to develop and implement sewer system management plans and report all SSOs to the State Water Board's online SSO database. Among other requirements, the Sanitary Sewer Order requires the Discharger to report all SSOs to the Regional Water Board in accordance with section G of the Sanitary Sewer Order (section D.5) and the Discharger to develop and implement a Sewer System Management Plan (SSMP). Further, section D.13.vii requires the SSMP include a Fats, Oils, and Grease (FOG) Control Program (section D.11). The Facility is enrolled under the Sanitary Sewer Order.

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 Order are based on the federal CWA, Basin Plan, State Water Board's plans and policies, USEPA guidance and regulations, 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, USEPA Forms 1, 2A, and 2S dated December 22, 2010.
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 City of Holtville Municipal Treatment Plant NPDES permit CA0104361.

A. Discharge Prohibitions

Effluent and receiving water limitations in this Order are based on the Federal CWA, Basin Plan, State Water Board's plans and policies, USEPA guidance and regulations, 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 Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at Part 133.

- a. **Secondary Treatment Standards.** Regulations promulgated in Section 125.3(a)(1) require technology-based effluent limitations for municipal Dischargers to be placed in NPDES permits based on Secondary Treatment Standards or Equivalent to Secondary Treatment Standards.

The Federal Water Pollution Control Act Amendments of 1972 (PL 92-500) established the minimum performance requirements for POTWs [defined in Section 304(d)(1)]. Section 301(b)(1)(B) of that Act requires that such treatment works must, as a minimum, meet effluent limitations based on secondary treatment as defined by the USEPA Administrator.

Based on this statutory requirement, USEPA developed secondary treatment regulations, which are specified in Part 133. These technology-based regulations apply to all municipal wastewater treatment plants and identify the minimum level of effluent quality attainable by secondary treatment in terms of BOD₅, TSS, and pH.

2. Applicable Technology-Based Effluent Limitations

- a. This Facility meets the technology based regulations for the minimum level of effluent quality attainable through secondary treatment in terms of BOD₅ and TSS, removal efficiency for BOD₅ and TSS, and pH as summarized in Table F-8, below. Previous Order R7-2006-0050 as amended by Order R7-2009-0016 established technology-based effluent limits to meet applicable secondary treatment standards for BOD₅ and TSS, removal efficiency for BOD₅ and TSS, and pH. These effluent limitations have been carried over from the previous Order. Further, mass-based effluent limitations are based on a design flow rate of 0.85 MGD.

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

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow	MGD	0.85	--	--	--	--
BOD ₅	mg/L	30	45	--	--	--
	lbs/day ¹	210	320	--	--	--
Removal Efficiency for BOD ₅	%	85	--	--	--	--
pH	s.u.	--	--	--	6.0	9.0
TSS	mg/L	30	45	--	--	--
	lbs/day ¹	210	320	--	--	--
Removal Efficiency for TSS	%	85	--	--	--	--

¹ Mass-based effluent limitations are based upon a maximum flow of 0.85 MGD.

b. Basis for Limitations:

Table F-9. Basis for Limitations

Constituents	Basis for Limitations
Biochemical Oxygen Demand (BOD)	Discharges to waters that support aquatic life and are dependent on oxygen. Organic matter in the discharge may consume oxygen as it breaks down.
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.
Total Suspended Solids (TSS)	High levels of suspended solids can adversely impact aquatic habitat. Untreated or improperly treated wastewater can contain high amounts of suspended solids.
Flow	The design capacity of the treatment plant is 0.85 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

Order R7-2006-0050 included interim and final effluent limitations for copper, nickel, selenium, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and bis(2-ethylhexyl)phthalate that were developed based on the most stringent of saltwater, freshwater, and human health criteria; the

final effluent limitations for copper and nickel were based on saltwater criteria, the effluent limitations for selenium were based on freshwater criteria, and the effluent limitations for benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and bis(2-ethylhexyl)phthalate were based on human health criteria.

On November 2, 2007, the Discharger conducted a Biological Assessment at the location of the discharge from the Facility. The areas of observation were the discharge point and approximately 100 meters upstream and 100 meters downstream 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 freshwater environment. On February 11, 2008, the Discharger submitted the results of the Biological Assessment to the USEPA requesting approval to use alternative freshwater criteria at the location of the discharge. This assessment determined that the applicable reach of the Pear Drain is characterized as freshwater; therefore, the criteria for the protection of freshwater aquatic life are applicable.

USEPA reviewed the Biological Assessment and on January 15, 2009, 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. The Amending Order R7-2009-0016 designated the Pear Drain as a freshwater environment and discontinued effluent limitations for copper, nickel, selenium, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, and chrysene based on a reasonable potential analysis (RPA) implementing water quality criteria for the protection of freshwater aquatic life.

Table F-10 summarizes the applicable water quality criteria/objectives for priority pollutants reported in detectable concentrations in the effluent and receiving water as well as those pollutants for which effluent limitations existed in Order R7-2006-0050 as amended by Order R7-2009-0016. The hardness value used to conduct the RPA was 384 mg/L. These criteria were used in conducting the RPA for this 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: Organisms Only
			Acute	Chronic	Acute	Chronic	
			µg/L	µg/L	µg/L	µg/L	µg/L
2	Arsenic	150	340	150	N/A		--
5b	Chromium (VI)	11.43	16.29	11.43	N/A		Narrative
6	Copper	29.45	49.73	29.45	N/A		--
9	Nickel	162.82	1,464.46	162.82	N/A		4,600

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
10	Selenium	5.00	20.00	5.00			Narrative
13	Zinc	374.65	374.65	374.65			--
68	Bis(2-ethylhexyl)phthalate	5.9	--	--			5.9

--" 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 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 from samples collected during the period from January 2008 through September 2010. Based on the RPA, the discharge demonstrate reasonable potential to cause or contribute to an excursion above a water quality standard for bis(2-ethylhexyl)phthalate. 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 Order R7-2006-0050 as amended by Order R7-2009-0016, are summarized in Table F-11.

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	4.37	9.95	No	MEC & B < C
5b	Chromium (VI)	11.43	0.0023	0.0095	No	MEC & B < C
6	Copper	29.45	5.12	13	No	MEC & B < C
9	Nickel	162.82	<1.8	11.5	No	MEC is ND & B < C
10	Selenium	5.00	<3.7	5.6	No	MEC is ND & B < C
13	Zinc	374.65	<2.6	38	No	MEC is ND & B < C
68	Bis(2-ethylhexyl)phthalate	5.9	14	<0.59	Yes	MEC > C

NC = No Criteria contained in the CTR, DNQ = Detected Not Quantified

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 Order is provided in Attachment I of this Order.

b. WQBELs Calculation Example

Using bis(2-ethylhexyl)phthalate as an example, the following demonstrates how WQBELs based on a human health criterion were established for Order R7-2011-0020. 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 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:

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

Where C = The priority pollutant criterion/objective, adjusted if necessary for hardness, pH and translators. In this Order a hardness value from the effluent of 384 mg/L (as CaCO₃) was used for development of hardness-dependant criteria, and a pH of 6.68 was used for pH-dependent criteria. Upstream receiving water samples were not available.

D = The dilution credit, and

B = The ambient background concentration

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

$$ECA = C$$

For bis(2-ethylhexyl)phthalate, the applicable water quality criteria are:

$ECA_{acute} =$ Not Applicable
 $ECA_{chronic} =$ Not Applicable
 $ECA_{human\ health} =$ 5.9 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 bis(2-ethylhexyl)phthalate, there are no applicable aquatic life criteria; the CTR establishes only a human health criterion. Therefore, acute and chronic LTA values are not developed.

Step 3: For the ECA based on human health, set the AMEL equal to the $ECA_{human\ health}$

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

For bis(2-ethylhexyl)phthalate:

$$AMEL_{\text{human health}} = 5.9 \mu\text{g/L}$$

Step 4: 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.

$$MDEL_{\text{human health}} = AMEL_{\text{human health}} \times (\text{Multiplier}_{\text{MDEL}} / \text{Multiplier}_{\text{AMEL}})$$

For bis(2-ethylhexyl)phthalate, 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

$$MDEL_{\text{human health}} = 5.9 \mu\text{g/L} \times 2.01 = 11.8 \mu\text{g/L}$$

Step 5: Select the lower of the AMEL and MDEL based on aquatic life and human health as the water-quality based effluent limit for the Order.

AMEL _{aquatic life}	MDEL _{aquatic life}	AMEL _{human health}	MDEL _{human health}
Not Available	Not Available	5.9 μg/L	12 μg/L

The lowest (most restrictive) effluent limits for bis(2-ethylhexyl)phthalate are based on human health and were incorporated into this Order.

c. WQBELs Based on Basin Plan Objectives

i. The Basin Plan states that any discharge to a water body with a REC-1 designated use shall not have bacterial densities in excess of the following:

- (a) ***E. Coli***. The geometric mean bacterial density (based on a minimum of not less than five samples equally spaced over a 30-day period) shall not exceed a Most Probable Number (MPN) of 126 per 100 milliliters, nor shall any sample exceed the maximum allowable bacterial density of a MPN of 400 per 100 milliliters.
- (b) **Fecal Coliform**. The geometric mean bacterial density (based on a minimum of not less than five samples equally spaced over a 30-day period) shall not exceed a MPN of 200 per 100 milliliters, nor shall more than ten percent of the total samples during any 30-day period exceed a MPN of 400 per 100 milliliters.

Effluent limitations for *E. coli* and fecal coliform are incorporated in this Order. The bacterial indicators of *E. coli* and fecal coliform are used to estimate the presence of pathogens in the wastewater effluent discharged to Discharge Point 001. Effluent limitations for *E. coli* and fecal coliform shall be used as

an indicator to determine the effectiveness of the municipal wastewater treatment facilities disinfection system.

- ii. The Basin Plan contains narrative water quality objectives for oil and grease and floating material in surface waters, which state: *“All waters shall be free from substances attributable to wastewater of domestic or industrial origin or other discharges which adversely affect beneficial uses not limited to: floating as debris, scum, grease, oil, wax, or other matter that may cause nuisance.”* In addition, as discussed in section III.C.10 of this Fact Sheet, the antidegradation provisions of the State Water Board Resolution No. 68-16 state that: *“Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.”* Oil and grease is a pollutant that generally may be found in sanitary waste from households, businesses and industries, and for which POTWs typically are designed to remove. Oil and grease removal is typically achieved during primary treatment. The Discharger was required to provide analytical data for effluent samples collected annually; however, the Discharger provided samples from 2 years of the permit term. The Regional Water Board determines the discharge demonstrates a reasonable potential to cause or contribute to an in-stream excursion above the Basin Plan’s narrative objective for oil and grease and floating material. This Order establishes a MDEL for oil and grease, to implement the narrative water quality objective contained in the Basin Plan, which will provide protection of the beneficial uses of the Pear Drain. The effluent limitation for oil and grease is based on the numeric limitation (MDEL) included in the adopted General Order R7-2009-0300, NPDES Permit for Low Threat Discharges to Surface Waters Within the Colorado River Basin Region. Based on information included in self-monitoring reports submitted by the Discharger, the effluent samples reported by the Discharger during the permit term for oil and grease indicate oil and grease is not detected above method detection levels. However, the pretreatment needs assessment conducted in February 2010 indicated there are approximately 15 food service establishments that have caused sewer line obstructions and SSOs. The Regional Water Board determines it is reasonable to establish an effluent limitation for oil and grease for the City of Holtville WWTP.
- iii. The previous Order, R7-2006-0050, established effluent limitations for ammonia, based on the determination that high concentrations of ammonia in the effluent discharge from the Facility have contributed to observed effluent toxicity. The effluent limitations are based on USEPA’s “1999 Update of Ambient Water Quality Criteria for Ammonia”, EPA-822-R-99-014, December 1999 and calculated based on the equations contained in USEPA’s *Technical Support Document for Water Quality-based Toxics Control (TSD)* (EPA-505-

2-90-001, 1991). The effluent limitations established in Order R7-2006-0050 are carried forward in Order R7-2011-0020.

The 1999 guidance document specifies that freshwater aquatic life shall be protected if both of the following conditions are satisfied for the temperature and pH of the waterbody:

- (a) The criteria maximum concentration (CMC) for total ammonia nitrogen (in mg/L) for receiving water bodies where salmonid fish are not present shall be calculated as follows:

$$CMC = [0.411/(1 + 10^{7.204 - pH})] + [58.4/(1 + 10^{pH - 7.204})]$$

- (b) The criteria continuous concentration (CCC) for total ammonia nitrogen (in mg/L) for receiving water bodies where early life stages of fish are present shall be calculated as follows:

$$CCC = [0.0577/(1 + 10^{7.688 - pH}) + 2.487/(1 + 10^{pH - 7.688})] * MIN(2.85, 1.45 * 10^{0.028 * (25 - T)})$$

The total ammonia nitrogen criteria were calculated based on a weighted average calculation considering receiving water pH and temperature from receiving water monitoring data submitted by the Discharger for the period from July 2006 through August 2010. The final total ammonia nitrogen effluent limitations (AMEL and MDEL) were calculated based on the equations contained in USEPA's *Technical Support Document For Water Quality-based Toxics Control (TSD)* (EPA-505-2-90-001, 1991). The step-wise procedure is identical to that used to calculate effluent limitations for priority pollutants and is illustrated below:

Step 1: For each constituent requiring an effluent limit, identify the applicable water quality criteria or objective.

For ammonia, the applicable water quality criteria, calculated using the equations shown above, are:

$$WLA_a = CMC = 18.0 \text{ mg/L}$$

$$WLA_c = CCC = 2.2 \text{ mg/L}$$

Step 2: Determine the long-term average discharge condition (LTA) by multiplying the water quality criterion by a factor (multiplier). The multiplier is a statistically based factor that adjusts the water quality criterion 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 5-1 of the TSD provides pre-calculated values for the multipliers based on the value of the CV and will not be repeated here.

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

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

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 ammonia, the following data was used to develop the acute and chronic LTA using Table 5-1 of the TSD:

<u>No. of Samples Available</u>	<u>CV</u>	<u>Multiplier_{acute}</u>	<u>Multiplier_{chronic}</u>
51	0.55	0.34	0.55

$$LTA_{acute} = 18.0 \text{ mg/L} \times 0.34 = 6.27 \text{ mg/L}$$

$$LTA_{chronic} = 2.2 \text{ mg/L} \times 0.55 = 1.21 \text{ mg/L}$$

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

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

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

$$LTA = 1.21 \text{ mg/L}$$

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 Table 5-2 of the TSD and will not be repeated here.

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

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

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 ammonia, the following data was used to develop the AMEL and MDEL for aquatic life using Table 5-2 of the TSD:

<u>No. of Samples per Month</u>	<u>CV</u>	<u>Multiplier_{MDEL}</u>	<u>Multiplier_{AMEL}</u>
4	0.55	3.0	1.58

$$AMEL_{\text{aquatic life}} = 1.2 \times 1.58 = 1.9 \text{ mg/L}$$

$$MDEL_{\text{aquatic life}} = 1.2 \times 3.0 = 3.6 \text{ mg/L}$$

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

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Escherichia Coli (E. Coli)	MPN/100 ml	126 ¹	---	400 ²	---	---
Fecal coliform	MPN/100 ml	200 ¹	---	400 ³	---	---
Bis(2-ethylhexyl)phthalate	µg/L	5.9	---	12	---	---
	lbs/day ⁴	0.042	---	0.085	---	---
Ammonia, Total (as N)	mg/L	1.9	---	3.6	---	---
	lbs/day ⁴	13	---	26	---	---
Oil and grease	mg/L	---	---	25	---	---
	lbs/day ⁴	---	---	180	---	---

¹ This effluent limitation is expressed as a geometric (or log) mean, based on a minimum of not less than five equally spaced samples collected for any 30-day period.

² This effluent limitation is expressed as a maximum single sample value.

³ No more than ten percent of the total fecal coliform samples collected during any 30-day period shall exceed a MPN of 400 per 100 milliliters.

⁴ The mass-based effluent limitations are based on a design capacity of 0.85 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 Order contained narrative toxicity language and triggers, and monitoring requirements. During the previous permit term, the toxicity triggers were exceeded and the Discharger initiated accelerated monitoring, as summarized in Table F-5. The Discharger has twice initiated TIE procedures. In November 2007, the Discharger reported the cause of toxicity to *Ceriodaphnia dubia* was concentrations of zinc in the effluent. In April 2008, the laboratory report indicated ammonia was the cause of toxicity, based on a pH-adjusted analysis. As stated in the laboratory report, *"The pH adjustment allows elimination of ammonia as the primary toxicant by converting un-ionized ammonia (NH₃) to ionized ammonia (NH₄). No toxicity resulted."* Thus, the laboratory concluded ammonia was the cause of toxicity. Beginning with effluent samples collected April 28, 2008, the discharge has been in compliance with the toxicity triggers contained in Order R7-2006-0050. The Discharger will conduct toxicity monitoring 4 times a year.

This Order implements the narrative objective for toxicity, requiring there shall be no 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 Order requires the Discharger to conduct chronic toxicity testing for discharges to the Pear Drain.

D. Final Effluent Limitations

Table F-13 below summarizes the proposed effluent limitations for the discharge through Discharge Point 001. Proposed effluent limitations are based on secondary standards, California Toxics Rule, and Colorado River Basin Plan Water Quality Standards.

The previous Order (R7-2006-0050) established effluent limitations for E. coli, pH, TSS, BOD₅, BOD percent removal, TSS percent removal, copper, nickel, selenium, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, bis(2-ethylhexyl)phthalate, TDS, ammonia, and toxicity. As discussed in

section IV.C.3, the amending Order (R7-2009-0016) discontinued effluent limitations for copper, nickel, selenium, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, and chrysene. The effluent limitations for E. Coli, pH, BOD₅, TSS, BOD₅ and TSS percent removal, ammonia, and bis(2-ethylhexyl)phthalate are carried over to the proposed Order. Also, this Order establishes a MDEL for oil and grease, to implement the narrative water quality objective for aesthetic qualities (i.e., waters free from substances such as debris, scum, grease, and oil), which is based on the limitation included in the adopted General Order R7-2009-0300, NPDES Permit for Low Threat Discharges to Surface Waters Within the Colorado River Basin Region. The Regional Water Board determined the measurement of oil and grease helps to ensure that the Discharger is practicing proper operation and maintenance of the Facility and additionally, that the receiving stream and its intended uses are protected.

1. Mass-based Effluent Limitations

Title 40 CFR 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 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:

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

where: Mass = mass limitation for a pollutant (lbs/day)

Effluent limitation = concentration limit for a pollutant (mg/L)

Flow rate = discharge flow rate (MGD)

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 ¹	MGD	0.85	---	---	---	---	
Biochemical	mg/L	30	45	---	---	---	40 CFR

Parameter	Units	Effluent Limitations					Basis
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Oxygen Demand (BOD) (5 day @ 20 Deg. C)	lbs/day ¹	210	320	---	---	---	133
pH	standard units	---	---	---	6.0	9.0	40 CFR 133
Total Suspended Solids (TSS)	mg/L	30	45	---	---	---	40 CFR 133
	lbs/day ¹	210	320	---	---	---	
Bis(2-ethylhexyl)phthalate	µg/L	5.9	---	12	---	---	CTR, SIP
	lbs/day ¹	0.042	---	0.085	---	---	
Ammonia, Total (as N)	mg/L	1.3	---	3.6	---	---	Basin Plan
	lbs/day ¹	13	---	26	---	---	
Oil and Grease	mg/L	---	---	25	---	---	Basin Plan
	lbs/day ¹	---	---	180	---	---	

¹ The mass-based effluent limitations are based on a design capacity of 0.85 MGD.

- b. Percent Removal:** The average monthly percent removal of BOD 5-day 20°C and TSS shall not be less than 85 percent.
- c. Toxicity:** There shall be no toxicity in the treatment plant effluent nor shall the treatment plant effluent cause any 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 toxicity tests of appropriate duration or other appropriate methods specified by the Regional Water Board.
- d. Bacteria:** The bacterial concentrations in the wastewater effluent discharged to the Pear Drain shall not exceed the following concentrations, as measured by the following bacterial indicators:
 - i. E. Coli.** The geometric mean bacterial density (based on a minimum of not less than five samples equally spaced over a 30-day period) shall not exceed a MPN of 126 per 100 milliliters, nor shall any sample exceed the maximum allowable bacterial density of a MPN of 400 per 100 milliliters.
 - ii. Fecal Coliform.** The geometric mean bacterial density (based on a minimum of not less than five samples equally spaced over a 30-day period) shall not exceed a MPN of 200 per 100 milliliters, nor shall more than ten percent of the total samples during any 30-day period exceed a MPN of 400 per 100 milliliters.

- 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

All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order.

Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at Title 40, CFR 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 Order are less stringent than those in the previous Order. The existing Order (R7-2006-0050) contained final effluent limitations for copper, nickel, selenium, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, bis(2-ethylhexyl)phthalate, and chrysene. Special Order R7-2009-0016 amended the original Order to reflect USEPA approval of application of water quality criteria for the protection of freshwater aquatic life. The Amending Order discontinued the effluent limitations for copper, nickel, and selenium, based on the exclusion of saltwater criteria from applicable water quality criteria. In addition, effluent limitations for benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, and chrysene were discontinued in the Amending Order based on the consideration of new information (i.e., current discharge monitoring data and RPA). This removal 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. The State Water Board established California's anti-degradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal anti-degradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal anti-degradation policies. As discussed in detail in Fact Sheet section III.C.10, the permitted discharge is consistent with the anti-degradation provision of Section 131.12 and State Water Board Resolution No. 68-16.

5. Stringency of Requirements for Individual Pollutants

This Order contains technology-based effluent limitations for certain specified individual pollutants. The technology-based effluent limitations consist of restrictions

on flow, BOD₅, TSS, percent removal, and pH. Restrictions on flow, BOD₅, TSS, percent removal, and pH, are presented in Table F-8 of the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

In addition, this Order contains effluent limitations more stringent than the minimum, federal technology-based requirements that are necessary to meet water quality standards. These 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 Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

E. Interim Effluent Limitations

Order R7-2006-0050 established interim effluent limitations for ammonia (total, as N) for wastewater discharged to the Pear Drain. However in this permit no interim limits are established. Cease and Desist Order No. R7-2009-0061 (adopted September 17, 2009) extended the time period the interim effluent limitations are effective through an enforcement order. These interim limits have been carried over from Cease and Desist Order (CDO) R7-2009-0061 to amending CDO R7-2011-0016 (adopted January 20, 2011) and are effective through August 17, 2014.

F. Land Discharge Specifications – Not Applicable

G. Reclamation Specifications – Not Applicable

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

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

A. Surface Water

The surface water receiving water limitations in the proposed Order are based upon the water quality objectives contained in the Basin Plan and are carried forward from the

previous Order. As such, they are a required part of the proposed 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 Pear Drain 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. Water Code sections 13267 and 13383 authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP), Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

A. Influent Monitoring

This Order carries forward the treatment plant influent monitoring requirements.

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 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 wastewater treatment 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 Order. Monthly monitoring has been added for oil and grease at monitoring location EFF-001 due to the inclusion of new effluent limitations and dissolved oxygen at monitoring location EFF-001 to evaluate the impact of the discharge on receiving water quality.

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).

This Order modifies the WET testing requirements in that the Order includes a screening phase and a monitoring phase of species testing. Screening is required during the first and third years of the permit term, to determine the most sensitive species with which to use during the monitoring phase. The Order establishes chronic toxicity testing and monitoring triggers, which when exceeded, initiates accelerated testing, TRE, and TIE procedures. This Order also includes implementation procedures for toxicity caused by ammonia, ionic imbalance, and elevated TDS concentrations.

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) and the Test of Significant Toxicity Implementation (EPA 833-R-10-003) and Technical (EPA 833-R10-002) Documents. This is the most current guidance available to the Regional Water Board.

The U.S. Environmental Protection Agency (EPA or the Agency) has developed a new statistical approach that assesses the whole effluent toxicity (WET) measurement of wastewater effects on specific test organisms' ability to survive, grow, and reproduce. The new approach is called the Test of Significant Toxicity (TST) and is a statistical

method that uses hypothesis testing techniques based on research and peer-reviewed publications. The TST approach examines whether an effluent, at the critical concentration (e.g., in-stream waste concentration or IWC, as recommended in EPA's Technical Support Document (TSD) (USEPA 1991) and implemented under EPA's WET National Pollutant Discharge Elimination System (NPDES) permits program and the control within a WET test differ by an unacceptable amount (the amount that would have a measured detrimental effect on the ability of aquatic organisms to thrive and survive).

The TST approach explicitly incorporates test power (the ability to correctly classify the effluent as nontoxic) and provides a positive incentive to generate valid, high quality WET data to make informed decisions regarding NPDES WET reasonable potential (RP) and permit compliance determinations. Once the WET test has been conducted, the TST approach can be used to analyze the WET test results to assess whether the effluent discharge is toxic at the critical concentration. The TST approach is designed to be used for a two concentration data analysis of the in-stream waste concentration (IWC) or a receiving water concentration (RWC) compared to a control concentration. Using the TST approach, permitting authorities will have more confidence when making NPDES determinations as to whether a permittee's effluent discharge is toxic or non-toxic. Use of the TST approach does not result in any changes to EPA's WET test methods; however, a facility might desire to modify its future WET tests by increasing the number of replicates over the minimum required (USEPA 1995, 2002a, 2002b, 2002c) by the approved EPA WET test method to increase test power, which is the probability of declaring an effluent non-toxic if the organism response at the IWC is truly acceptable.

This 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. The monitoring locations for the receiving water have been revised to reflect the upstream receiving water location (RSW-001) as a location in the Alamo River upstream of the entry point of the discharge from the Pear Drain into the Alamo River. Similarly, the downstream receiving water monitoring location (RSW-002) is at a location in the Alamo River downstream of the entry point of the discharge from the Pear Drain into the Alamo River. The Facility's discharge travels approximately 100 yards in the Pear Drain prior to entering the Alamo River; often there is no water in the upstream monitoring location in the Pear Drain. Monitoring requirements for the receiving water are largely unchanged from the previous Order. This Order establishes monitoring for nutrients in the upstream and downstream receiving water in order to characterize that portion of the Pear Drain upon the completion of the Salton Sea Nutrient TMDL. Additionally, annual monitoring for

priority pollutants in the upstream receiving water has been continued, as required in accordance with the SIP.

E. Groundwater – Not Applicable

F. Other Monitoring Requirements

1. Water Supply Monitoring

The requirement for the Discharger to obtain or acquire quarterly TDS concentrations of the source water, either through monitoring or obtaining the data from the drinking water purveyor is continued in Order R7-2011-0020. This information will be compiled and summarized in a quarterly report, in accordance with Special Provisions, Special Studies and Additional Monitoring Requirements, section VI.C.2.d of the proposed Order.

2. Biosolids/Sludge Monitoring

This section establishes monitoring and reporting requirements for the storage, handling and disposal practices of sludge generated from the operation of this Facility. All sludge and or solids generated at the treatment plant will be disposed, treated, or applied to land in accordance with Federal Regulations Part 503. The previous Order required sludge monitoring on an annual basis. This monitoring will be carried over from the previous permit.

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 Order. Section 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with section 123.25, this Order omits federal conditions that address enforcement authority specified in sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

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

b. 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.

c. Total Dissolved Solids (TDS) Study. The purpose of this study is to provide more detailed information on the Regional Board's development of salinity standards pursuant to section 303 of the CWA and through the NPDES permitting authority in the regulation of municipal and industrial sources (see section 402 of the Federal Water Pollution Control Act). The Discharger shall provide an annual update regarding progress on the action proposed in the TDS Study (dated December 2010) and a final report shall be submitted to the Regional Board's Executive Officer prior to the filing date for re-application.

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 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 Order.

b. Antidegradation Analysis and Engineering Report for Significant Expansion. This requirement is required if the Discharger proposes to significantly upgrade existing treatment systems. The Discharger would be

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.

- c. Operations Plan for Proposed Plant Modification.** This provision is based on Water Code Section 13385(j)(1)(D) in which the Discharger may adjust and test the expansion to the treatment system. This provision requires the Discharger to submit an Operations Plan describing the actions the Discharger will take during the period of adjusting or testing, including steps to prevent violations.
- d. Spill Response Plan.** This provision is based on the requirements of section 122.41(e) and the previous Order.

5. Special Provisions for Municipal Facilities (POTWs Only)

The State Water Board issued General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order 2006-0003-DWQ (General Order) on May 2, 2006. The General Order requires public agencies that own or operate sanitary sewer systems with greater than one mile of pipes or sewer lines to enroll for coverage under the General Order. The General Order requires agencies to develop sanitary sewer management plans (SSMPs) and report all sanitary sewer overflows (SSOs), among other requirements and prohibitions.

Furthermore, the General Order contains requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows. Inasmuch that the Discharger's collection system is part of the system that is subject to this Order, certain standard provisions are applicable as specified in Provisions, section VI.C.5. For instance, the 24-hour reporting requirements in this Order are not included in the General Order. The Discharger must comply with both the General Order and this Order. The Discharger and public agencies that are discharging wastewater into the facility were required to obtain enrollment for regulation under the General Order by December 1, 2006.

- a. Sludge Disposal Requirements.** Requirements are based on the previous Order and Part 503.
- b. Pretreatment Program Requirements.** Requirements are based on the previous Order and Part 403.
- c. Collection Systems.** Requirements are based on section 122.41.

6. Other Special Provisions

Special Provisions VI.C.6.a and VI.C.6.b are included to ensure the compliance with requirements established in Order R7-2011-0020, and are based on the previous Order, the CWA, USEPA regulations, CWC, and Regional Water Board plans and policies.

7. Compliance Schedules

The compliance schedules specify the deliverables and due dates for the TRE Workplan, TDS Study, Spill Response Plan, and Sludge Disposal Notification and Plan.

VIII. PUBLIC PARTICIPATION

The Regional Water Board is considering the issuance of WDRs that will serve as a NPDES permit for City of Holtville Municipal WWTP. 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 WDR adoption process.

A. Notification of Interested Parties

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

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 Order.

To be fully responded to by staff and considered by the Regional Water Board, written comments must be received at the Regional Water Board office by 5:00 p.m. on **May 5, 2011**.

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: **May 19, 2011**
Time: **10:00 a.m.**
Location: **City of La Quinta
City Council Chambers
78-495 Calle Tampico
La Quinta, CA 92253**

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

Please be aware that dates and venues may change. The Regional Water Board's Web address is <http://www.waterboards.ca.gov/coloradoriver>, where you may access the Regional Water Board's current agenda and determine if changes in hearing dates and locations have been made.

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 Water Code 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 Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

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

or will be provided upon request.

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

E. Information and Copying

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address 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 order should be directed to John Carmona at (760) 340-4521.

ATTACHMENT G – LIST OF ANALYTICAL METHODS

**List of Analytical Methods compiled from the California Department of Public Health (CDPH) Environmental Laboratory Accreditation Program (ELAP). These methods for those constituents related to the analysis of wastewater. Permittee to utilize analytical methods as specified in Attachment E, Monitoring and Reporting Program, General Monitoring Provisions, sections 1.F.1 through 1.F.3. All analyses for priority pollutants shall follow the State Implementation Policy and Attachments H and I for methods and requirements.*

Parameter	Analytical Methods
2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)	EPA 1613
Acidity	SM2301B / ASTM D1067-92
Acrolein, Acrylonitrile	EPA 603
Adipates	EPA 625 / SM6410B
Alkalinity	EPA 310.2 / SM2320B / ASTM D1067-92
Aluminum	EPA 200.7/ 200.8/ 200.9 / SM3111D / SM3113B / SM3120B / SM3500-AI B (20 th) / SM3500-AI D (18 th /19 th)
Ammonia	EPA 350.1 / SM4500-NH3 C (18 th) / SM4500-NH3 C (19 th /20 th) / SM4500-NH3 D or E (19 th /20 th) / SM4500-NH3 F or G (18 th) / SM4500-NH3 E (18 th) / SM4500-NH3 G (19 th /20 th) / SM4500-NH3 H (18 th) / ASTM D1426-98A / ASTM D1426-98B
Antimony	EPA 200.7/ 200.8/ 200.9 / SM3111B / SM3113B / SM3120B
Aromatic Compounds	EPA 624 / SM6210B
Aromatic Volatiles	EPA 602 / SM6220B
Arsenic	EPA 200.7/ 200.8/ 200.9/ 206.5 / SM3113B / SM3114B / SM3120B / SM3500-As B (20 th) / SM3500-As C (18 th /19 th)
Barium	EPA 200.7/ 200.8/ SM3111D / SM3113B / SM3120B
Benzidine	EPA 605
Beryllium	EPA 200.7/ 200.8/ 200.9 / SM3111D / SM3113B / SM3120B / SM3500-Be D (18 th /19 th)
Biochemical Oxygen Demand	SM5210B
Boron	EPA 200.7/ 200.8 / SM3120B / ASTM D4190-94 / SM4500-B B
Bromide	EPA 300.0/ 300.1 / SM4110B / ASTM D4327-97
Cadmium	EPA 200.7/ 200.8/ 200.9 / SM3111B / SM3111C / SM3113B / SM3120B / SM3500-Cd D (18 th /19 th)
Calcium	EPA 200.7/ 200.8 / SM3111B / SM3120B / ASTM D6919-03 / SM3500-Ca D (18 th /19 th) / SM3500-Da B (20 th) / ASTM D511-93B / ASTM D511-93A
Carbamates	EPA 632
Carbonaceous BOD	SM5210B
Cesium	EPA (March, 1979), p92 / EPA 901.0/ 901.1 / SM720 / ASTM D3649-91 / USGS R-1110-76 / USGS R-1111-76 / DOE 4.5.2.3

Chemical Oxygen Demand	EPA 410.3/410.4 / SM5220C / SM5220D / HACH800 / ASTM D1252-95A / ASTM D1252-95B
Chloride	EPA 300.0/ 300.1 / SM411B / SM4500-CI- B / SM4500-CI- C / SM4500-CI- E / SM4500-CI- D / ASTM D512-89A / ASTM D512-89B / ASTM D512-89C / ASTM D4327-97
Chlorinated Hydrocarbons	EPA 612
Chlorinated Phenoxy Acid Herbicides	SM6640B
Chlorine	SM4500-CI B / SM4500-CI C / SM4500-CI D / SM4500-CI E / SM4500-CI F / SM4500-CI G
Chromium	EPA 200.7/ 200.8/ 200.9 / SM3111B / SM3111C / SM3113B / SM3120B
Chromium (VI)	EPA 218.6 / SM3111C / SM3500-Cr B (21 st) / SM3500-Cr B (20 th) / SM3500-Cr D (18 th /19 th) / SM3500-Cr C (20 th) / SM3500-Cr E / ASTM D5257-97
Chromium, Total	SM3500-Cr B (20 th) / SM3500-Cr D (18 th /19 th)
Cobalt	EPA 200.7/ 200.8/ 200.9 / SM3111B / SM3111C / SM3113B / SM3120B
Conductivity	EPA 120.1 / SM2510B / ASTM D1125-95A
Copper	EPA 200.7/ 200.8/ 200.9 / SM3111B / SM3111C / SM3113B / SM3120B / SM3500-Cu B (20 th) / SM3500-Cu D (18 th /19 th) / SM3500-Cu E (18 th /19 th) / SM3500-Cu C (20 th) / SM3500-Cu E
Cyanide	Kelada-01 / Quickchem 10-204-00-1-X
Cyanide, amenable	SM4500-CN G / ASTM D2036-98B / ASTM D6888-04 / Kelada-01 / OIA-1677
Cyanide, Manual Distillation	SM450-CN C
Cyanide, Total	EPA 335.4 / SM4500-CN D / SM4500-CN E / SM4500-CN F / ASTM D2036-98A
Dioxins	EPA 1613B
Dissolved Oxygen	SM4500-O C / SM4500-O G / ASTM D888-92A / ASTM D888-92B
Dissolved Silica	SM4500-Si D (18 th /19 th) / ASTM D859-94
E. coli	SM9223
Enterococci	SM9230B / SM9230C (MF/ME) / SM9230C (MF/m-Enterococcus) / Enterolert / EPA 1106.1/ 1600
Fecal Coliform	SM9221C,E (MTF/EC) / SM9221C,E (A-1) / SM9222D
Fecal Streptococci	SM9230B / SM9230C (MF/ME) / SM9230C (MF/m-Enterococcus)
Fluoride	EPA 300.0/ 300.1 / SM4110B / SM4500-F C / SM4500-F D / SM4500-F E / SM4500-F B / ASTM D1179-93A / ASTM D1179-93B / ASTM D4327-97
Gamma	EPA 901.1 / SM7120 / ASTM D3649-91 / DOE 4.5.2.3
Gold	EPA 200.8/ 231.2 / SM3111B
Gross Alpha	EPA 900.0 / SM7110B / ASTM D1943-90 / USGS 76-177, p.75 & 78
Gross Beta	EPA 900.0 / SM7110B / ASTM D1890-90 / USGS 76-177, p.75 & 78
Haloethers	EPA 611
Halogenated Hydrocarbons	EPA 624 / SM6210B
Halogenated Volatiles	EPA 601 / SM6230B

Hardness	EPA 130.1 / SM2340C / ASTM D1126-86(92) / ASTM D1126-86
Hardness (calc.)	EPA 200.7 / SM2340B / SM3111B / SM3120B
Herbicides	SM6410B
Heterotrophic Bacteria	SM9215B
Iodine	EPA (March, 1979), p92 / EPA 901.1 /902.0 / SM7120 / SM7500-I C / ASTM D3649-91 / ASTM D4785-88 / DOE 4.5.2.3
Iridium	EPA 235.2 / SM3111B
Iron	EPA 200.7/ 200.8/ 200.9 / SM3111B / SM3111C / SM3113B / SM3120B / SM3500-Fe B (20 th) / SM3500-Fe D (18 th /19 th)
Kjeldahl Nitrogen	EPA 351.1/ 351.2 / SM4500-NH3 C (18 th) / SM4500-NH3 C (19 th /20 th) / SM4500-NH3 D or E (19 th /20 th) / SM4500-NH3 F or G (18 th) / SM4500-NH3 E (18 th) / ASTM D3590-89A / ASTM D3590-89B
Lead	EPA 200.7/ 200.8/ 200.9 / SM3111B / SM3111C / SM3113B / SM3120B / SM3500-Pb D (18 th /19 th) / SM3500-Pb B (20 th)
Magnesium	EPA 200.7/ 200.8/ SM3111B / SM3120B / ASTM D6919-03 / SM3500-Mg D / ASTM D511-93B
Manganese	EPA 200.7/ 200.8/ 200.9 / SM3111B / SM3113B / SM3120B / SM3500-Mn D (18 th /19 th) / SM3500-Mn B (20 th)
Mercury	EPA 245.1/ 245.2/ 245.7/ 1631E / SM3112B
Molybdenum	EPA 200.7/ 200.8 / SM3111D / SM3113B / SM3120B
Nickel	EPA 200.7/ 200.8/ 200.9 / SM3111B / SM3111C / SM3113B / SM3120B / SM3500-Ni D (17 th)
Nitrate	EPA 300.0/ 300.1/ 353.1 / SM4110B / SM4500-NO3 D / ASTM D4327-97
Nitrate-nitrite	EAP 300.0/ 300.1/ 353.2 / SM4110B / SM4500-NO3 E / SM4500-NO3 F / SM4500-NO3 H / ASTM D3867-99B / ASTM D3867-99A / ASTM D4327-97
Nitrite	EPA 300.0/ 300.1/ 353.2 / SM4110B / SM4500-NO2 B / SM4500-NO3 E / SM4500-NO3 F / HACH8507 / ASTM D3867-99B / ASTM D3867-99B / ASTM D3867-99A / ASTM D4327-97
Nitroaromatics and Cyclic Ketones	EPA 609
Nitrosamines	EPA 607
Oil and Grease	EPA 1664A / SM5520B (20 th) / EPA 413.1
Organochlorine Pesticides	EPA 608 / SM6630B / SM6630C
Osmium	EPA 252.2 / SM3111D
Other Extractables	EPA 625 / SM6410B
Other Volatile Organics	EPA 624 / SM6210B
Oxygenates	EPA 624 / SM6210B
Palladium	EPA 253.2 / SM3111B
PCBs	EPA 625/ 608 / SM6410B / SM6630B / SM6630C
Pesticides	EPA 625 / SM6410B
pH	EPA 150.2 / SM4500-H+ B / ASTM D1293-84

Phenols	EPA 604 / SM6420B
Phenols, Total	EPA 420.1/ 420.4
Phosphate, Ortho	EPA 300.0/ 300.1/ 365.1/ 365.3 / SM4110B / SM4500-P E / SM4500-P F / HACH8048 / ASTM D515-88A / ASTM D4327-97
Phosphorus, Total	EPA 365.1/ 365.3/ 365.4 / SM4500-P E / SM4500-P F / HACH8190 / ASTM D515-88A / ASTM D515-88B
Phthalate Esters	EPA 606
Phthalates	EPA 625 / SM6410B
Platinum	EPA 255.2 / SM3111B
Polynuclear Aromatic Hydrocarbons	EPA 625 / SM6410B
Polynuclear Aromatics	EPA 610 / SM6440B
Potassium	EPA 200.7/ 200.8 / SM3111B / SM3120B / ASTM D6919-03 / SM3500-K D (18 th /19 th) / SM317B (14 th) / SM3500-K B (20 th)
Radium-226	EPA 903.1 / SM7500-Ra C / ASTM D3454-91 / USGS 76-177, p.81 /
Radium-228	EPA (1976), p24 / EPA (March, 1979), p19 / EPA 904.0 / EPA Ra-05 / SM304 / USGS R-1142-76
Residue, Filterable	SM2540C
Residue, Non-filterable	SM2540D
Residue, Settleable	SM2540F
Residue, Total	SM2540B
Residue, Volatile	EPA 160.4
Rhodium	EPA 265.2 / SM3111B
Ruthenium	EPA 267.2 / SM3111B
Selenium	EPA 200.7/ 200.8/ 200.9 / SM3113B / SM3114B / SM3120B
Semi-volatile Organics	EPA 1625
Silica	EPA 200.7/ 200.8 / SM3120B / SM4500-SiO2 C (20 th)
Silver	EPA 200.7/ 200.8/ 200.9 / SM3111B / SM3111C / SM3113B / SM3120B
Sodium	EPA 200.7/ 200.8 / SM3111B / SM3120B / ASTM D6919-03 / SM3500-Na D (18 th /19 th) / SM3500-Na B (20 th)
Strontium	EPA (March, 1979), p65 / EPA 905.0 / EPA Sr-0 / SM303 / USGS R-1160-76 / DOE Sr-01 / DOE Sr-02
Sulfate	EPA 300.0/ 300.1/ 375.2 / SM4110B / SM4500-SO4 C / SM4500-SO4 D / ASTM D516-90 / ASTM D4327-97
Sulfide	SM4500-S=D / SM4500-S=E(18 th) / SM4500-S=F(19 th /20 th) / SM4500-S=G / ASTM D4658-03
Sulfite	SM4500-SO3 B
Surfactants	SM5540C
Tannin and Lignin	SM5550B (18 th /19 th)
Thallium	EPA 200.7/ 200.8/ 200.9/ 279.2 / SM3111B / SM3120B

Tin	EPA 200.7/ 200.8/ 200.9 / SM3111B / SM3113B
Titanium	EPA 200.8/ 283.2 / SM3111D
Total Alpha Radium	EPA 903.0 / SM7500-Ra B / ASTM D2460-90
Total Coliform	SM9221B / SM9222B
Total Organic Carbon	SM5310B / SM5310C / SM5310D
Total Organic Halides	SM5320B
Total Recoverable Petroleum Hydrocarbons	EPA 418.1
Tritium	EPA 906.0
Turbidity	EPA 180.1 / SM2130B / ASTM D1889-94
Uranium	EPA (March, 1979), p33 / EPA 00-07 / EPA 908.0 / SM7500-U C / ASTM D3972-90 / USGS R-1180-76 / USGS R-1181-76 / USGS R-1182-76 / DOE U-02 / DOE U-04
Vanadium	EPA 200.7/ 200.8 / SM3111D / SM3120B / SM3500-V B (20 th) / SM3500-V D (18 th /19 th)
Volatile Organic Compounds	EPA 1624
Zinc	EPA 200.7/ 200.8/ 289.2 / SM3111B / SM3111C / SM3120B / SM3500-Zn B (20 th) / SM3500-Zn E (18 th /19 th) / SM3500-Zn F (18 th /19 th)

Notes:

All ammonia analyses must be preceded by manual distillation as described in methods EPA 350.1 and SM4500-NH3 B.

All fluoride and cyanide analyses must be preceded by manual distillation as described in SM4500-F B and 4500-CN-C, respectively.

Please refer to 40 CFR part 136.3 Table IB for more information concerning NPDES distillation requirement.

Unless otherwise noted, SM refers to 18th, 19th, 20th editions of Standard Methods.

Please refer to 40 CFR 136 for the currently approved version of the test methods (March 12, 2007 FRN).

Methods cited from SM 300 series are from the 13th edition.

ATTACHMENT H – LIST OF PRIORITY POLLUTANTS

**Adapted from the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP)*

Table H-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
5b	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 100.1
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

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
29	1,2-Dichloroethane	107062	EPA 8260B
30	1,1-Dichloroethylene	75354	EPA 8260B
31	1,2-Dichloropropane	78875	EPA 8260B
32	1,3-Dichloropropylene	542756	EPA 8260B
33	Ethylbenzene	100414	EPA 8260B
34	Methyl Bromide	74839	EPA 8260B
35	Methyl Chloride	74873	EPA 8260B
36	Methylene Chloride	75092	EPA 8260B
37	1,1,2,2-Tetrachloroethane	79345	EPA 8260B
38	Tetrachloroethylene	127184	EPA 8260B
39	Toluene	108883	EPA 8260B
40	1,2-Trans-Dichloroethylene	156605	EPA 8260B
41	1,1,1-Trichloroethane	71556	EPA 8260B
42	1,1,2-Trichloroethane	79005	EPA 8260B
43	Trichloroethylene	79016	EPA 8260B
44	Vinyl Chloride	75014	EPA 8260B
45	2-Chlorophenol	95578	EPA 8270C
46	2,4-Dichlorophenol	120832	EPA 8270C
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

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
65	Bis(2-Chloroethoxy)Methane	111911	EPA 8270C
66	Bis(2-Chloroethyl)Ether	111444	EPA 8270C
67	Bis(2-Chloroisopropyl)Ether	108601	EPA 8270C
68	Bis(2-Ethylhexyl)Phthalate	117817	EPA 8270C
69	4-Bromophenyl Phenyl Ether	101553	EPA 8270C
70	Butylbenzyl Phthalate	85687	EPA 8270C
71	2-Chloronaphthalene	91587	EPA 8270C
72	4-Chlorophenyl Phenyl Ether	7005723	EPA 8270C
73	Chrysene	218019	EPA 8270C
74	Dibenzo(a,h)Anthracene	53703	EPA 8270C
75	1,2-Dichlorobenzene	95501	EPA 8260B
76	1,3-Dichlorobenzene	541731	EPA 8260B
77	1,4-Dichlorobenzene	106467	EPA 8260B
78	3,3'-Dichlorobenzidine	91941	EPA 8270C
79	Diethyl Phthalate	84662	EPA 8270C
80	Dimethyl Phthalate	131113	EPA 8270C
81	Di-n-Butyl Phthalate	84742	EPA 8270C
82	2,4-Dinitrotoluene	121142	EPA 8270C
83	2,6-Dinitrotoluene	606202	EPA 8270C
84	Di-n-Octyl Phthalate	117840	EPA 8270C
85	1,2-Diphenylhydrazine	122667	EPA 8270C
86	Fluoranthene	206440	EPA 8270C
87	Fluorene	86737	EPA 8270C
88	Hexachlorobenzene	118741	EPA 8260B
89	Hexachlorobutadiene	87863	EPA 8260B
90	Hexachlorocyclopentadiene	77474	EPA 8270C
91	Hexachloroethane	67721	EPA 8260B
92	Indeno(1,2,3-cd)Pyrene	193395	EPA 8270C
93	Isophorone	78591	EPA 8270C
94	Naphthalene	91203	EPA 8260B
95	Nitrobenzene	98953	EPA 8270C
96	N-Nitrosodimethylamine	62759	EPA 8270C
97	N-Nitrosodi-n-Propylamine	621647	EPA 8270C
98	N-Nitrosodiphenylamine	86306	EPA 8270C
99	Phenanthrene	85018	EPA 8270C
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 I – 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 I-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 I-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 I-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 I-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 J – 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 J-1. Summary of WQBELS Calculations

CTR #	Parameter	Human Health Calculations			Aquatic Life Calculations											Effluent Limitations	
		Organism Only			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
68	Bis(2-ethylhexyl) phthalate	5.9	2.01	11.8	--	--	--	--	--	--	--	1.55	--	3.11	--	5.9	12
--	Ammonia	--	--	--	18.0	0.34	6.27	2.2	0.55	1.21	1.21	1.58	1.91	3.0	3.6	1.9	3.6

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