CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

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ORDER R7-2014-0004
NPDES NO. CA7000009

WASTE DISCHARGE REQUIREMENTS FOR CITY OF CALEXICO, WATER POLLUTION CONTROL PLANT

The following Discharger is subject to waste discharge requirements (WDR's) set forth in this Order:

Table 1. Discharger Information

Discharger	**City of Calexico**
Name of Facility	**City of Calexico Water Pollution Control Plant**
Facility Address	**298 West 2nd Street**
	Calexico, CA 92231
	Imperial County

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001	Secondary treated municipal wastewater	32°, 40', 17" N	115 °, 30', 45" W	New River

Table 3. Administrative Information

This Order was adopted on:	May 8, 2014
This Order shall become effective on:	June 1, 2014
This Order shall expire on:	May 31, 2019
The Discharger shall file a Report of Waste Discharge as an application for reissuance of WDR's in accordance with title 23, California Code of Regulations, and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than:	December 2, 2018, or as soon as possible if planned changes meet the Notice Requirement under 40 C.F.R. 122.41(l) (1).
The U.S. Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, Colorado River Basin Region have classified this discharge as follows:	Major Discharge

I, Robert Perdue, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, Colorado River Basin Region, on May 8, 2014.

Robert Perdue, Executive Officer

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Tables

Attachments

I. FACILITY INFORMATION

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

Table 4. Facility Information

WDID	7A 13 0101 011
Discharger	City of Calexico
Name of Facility	City of Calexico Water Pollution Control Plant
Facility Address	298 West 2nd Street
	Calexico, CA 92231
	Imperial County
Legal Responsible Official	Nick Servin, Public Works Director/City Engineer, (760) 768-2100, nservin@calexico.ca.gov
Legal Responsible Official Representative	Nick Servin, Public Works Director/City Engineer, (760) 768-2100, nservin@calexico.ca.gov
Facility Contact, Title and Phone	Jose Lopez, Interim Chief Operator, (760) 768-2167, jlopez@calexico.ca.gov
Authorized Person(s) to Sign and Submit Reports	Jose Lopez, Interim Chief Operator, (760) 768-2167, jlopez@calexico.ca.gov
Mailing Address	608 Heber Road Calexico, CA 92231
Billing Address	Same
Type of Facility	Publicly-Owned Treatment Works (POTW)
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	N
Reclamation Requirements	N
Facility Design Flow	4.3 million gallons per day (MGD)
Facility Design Flow	4.3 MGD
Watershed	Brawley Hydrologic Area
Receiving Water	New River
Receiving Water Type	Inland Waterbody

II. FINDINGS

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

A. Background. The City of Calexico (hereinafter Discharger) is the owner and operator of the City of Calexico Water Pollution Control Plant (hereinafter Facility), a Publicly-Owned Treatment Works (POTW).

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 Facility discharges wastewater to the New River, a water of the United States, within the Brawley Hydrologic Area (H.A.). Primary and secondary sludge generated from the clarifiers is pumped to two anaerobic digesters for stabilization. Stabilized primary and secondary sludge is discharged from the two anaerobic digesters to fourteen sludge drying beds. Digested sludge is dried in the sludge drying beds prior to removal and eventual land application in Arizona. The Discharger was previously regulated by Board Order R7-2009-0018 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA7000009 adopted on May 21, 2009, with an expiration date of May 20, 2014. The permit is administratively extended until a new permit is adopted (40 C.F.R. 122.6(d); Cal. Code Regs., tit. 23, § 2235.4). 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 serves as WDR's pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260).This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) (33 U.S.C. § 1342) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this facility to surface waters.

D. Background and Rationale for Requirements. The Colorado River Basin 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 the requirements in this Order, is hereby incorporated into and constitutes Findings for this Order. Attachments A through E and G through J are also incorporated into this Order.

E. 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 (33.U.S.C. § 1251 et seq.); consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

F. Notification of Interested Parties. The Colorado River Basin Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDR's for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet.

G. Consideration of Public Comment. The Colorado River Basin 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.

THEREFORE, IT IS HEREBY ORDERED that Board Order R7-2009-0018 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations

adopted thereunder, and the provisions of the CWA and regulations adopted thereunder, the Discharger shall comply with the requirements in this Order. This action in no way prevents the Colorado River Basin Water Board from taking enforcement action for past violations of the previous Order.

III. DISCHARGE PROHIBITIONS

A. The discharge of waste to land not owned or controlled by the Discharger is prohibited unless authorized in Waste Discharge Requirements or NPDES Permit.

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

C. The discharge of trash to the New River is prohibited.

D. Except as allowed under the Standard Provisions for NPDES permits (Standard Provisions), included as Attachment D, the bypass or overflow of untreated wastewater or wastes to the New River 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 Monitoring and Reporting Program, Attachment E:

Table 5. Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow	MGD	4.3	---	---	---	---
pH	Standard Units	---	---	---	6.0	9.0
Biochemical Oxygen Demand 5-day @ 20°C	mg/L	30	45	---	---	---
	lbs/day[1]	1,076	1,614	---	---	---
Suspended Solids, Total	mg/L	36	53	---	---	---
	lbs/day[1]	1,291	1,901	---	---	---
Oil and Grease, Total	mg/L	---	---	25	---	---
	lbs/day	---	---	897	---	---
Cyanide, Free	µg/L	4.3	---	8.5	---	---
	lbs/day[1]	0.15	---	0.30	---	---

[1]The mass-based effluent limitations are based on a design capacity of 4.3 MGD (8.34 x Flow, MGD x Conc., mg/L.)

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 Colorado River Basin Water Board.

d. **Bacteria**: The bacterial density in the wastewater effluent discharged to the New River, 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. **Enterococci**. 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 33 per 100 milliliters, nor shall any sample exceed a MPN of 100 per 100 milliliters.

iii. **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 Colorado River Basin 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. Recycling Specifications – Not Applicable

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

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

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 Colorado River Basin Water Board or the State Water Resources Control Board (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 Colorado River Basin Water Board will revise and modify this Permit in accordance with such more stringent standard.
14. Result in the concentration of total dissolved solids in the New River 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. **Colorado River Basin Water Board Standard Provisions**. The Discharger shall comply with the following provisions. In the event that there is any conflict, duplication, or overlap between provisions specified by this Order, the more stringent provision shall apply:
    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 shall immediately notify 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 the State Water Board and the nine 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.

ii. As soon as possible, follow the notification, reporting, monitoring, and recordkeeping requirements under WQ 2013-0058-EXEC for the Statewide Waste Discharge Requirements for Sanitary Sewer Systems (http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2013/wqo2013_0058exec.pdf).

e. The Discharger shall provide a report to the Colorado River Basin Water Board upon determining that the treatment plant's monthly average flow 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.

f. 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 Colorado River Basin Water Board. The new owner/operator shall apply for this Permit.

g. 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 Colorado River Basin Water Board and obtain revised requirements before any modifications are implemented.

h. 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.

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

j. 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.

k. 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 Colorado River Basin Water Board by telephone (760) 346-7491 within 24 hours of having knowledge of such current or expected noncompliance, and shall confirm this notification in writing within five days, unless the Colorado River Basin Water Board waives confirmation. The written notification shall state the nature, time, duration, and cause of the current or expected noncompliance, and shall describe the measures being taken to remedy the noncompliance and to prevent or avoid recurrence including, where applicable, a schedule of implementation. Noncompliance other than the types indicated above requires written notification as previously described at the time of the normal monitoring report.

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 of 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 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 Colorado River Basin Water Board, including revisions to the Basin Plan.

c. The CWA requires an NPDES permit be modified, or terminated and reissued, 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 U.S. EPA or State Water Board policies or guidance regarding the testing or reporting requirements for WET testing.

e. In accordance with 40 C.F.R. 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 discharges consistent with the statewide policy.

g. If a statewide policy for nutrients 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 nutrients for discharges consistent with the statewide policy.

h. TMDLs for 303(d)-listed impairments of the New River are to be developed by the Colorado River Basin Water Board. The permit may be reopened and modified to include appropriate requirements necessary to fully implement the approved TMDLs, if needed.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. **Whole Effluent Toxicity Requirements**

For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Discharger to conduct 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.C 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. 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. **Chronic Whole Effluent Toxicity.**

On August 19, 2009, the Discharger developed and submitted to the Colorado River Basin Water Board a TRE Work Plan for approval by the Executive Officer to comply with the requirements of Order R7-2009-0018. On September 18, 2013, the Discharger submitted to the Colorado River Basin Water Board a revised TRE Work Plan. The Discharger shall review and update the existing TRE Work Plan on an annual basis. The Discharger shall submit the updated TRE Work Plan with each Annual Report. 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 U.S. EPA 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 TIE is necessary, an indication of who would conduct the TIE (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 metals and selenium other than the default U.S. EPA conversion factors listed in Tables 2 and 3 of the CTR, the Discharger shall submit a written request to the Executive Officer. Otherwise, the U.S. EPA conversion factors shall remain the default standard used when calculating water quality-based effluent limitations for selenium and metals. U.S. EPA has developed a guidance manual, EPA 823-B-96-007, June 1996, entitled, "The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion."

d. **Total Dissolved Solids Study**

The purpose of this study is to provide more detailed information on the Colorado River Basin 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 Colorado River Basin Water Board 's development of salinity standards, the Colorado River Basin 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 November 2013 on November 21, 2013. The Discharger indicated the current discharge has a 400 mg/L incremental increase over the salinity of the source water, and has evaluated salinity minimization options in the TDS Study. The Discharger evaluated replacement or banning of self-regenerative water softeners and implementing a program of periodic inspection and maintenance of the wastewater collection system to identify areas subject to infiltration.

No further action on the Total Dissolved Solids Study is required.

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 Colorado River Basin 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 Colorado River Basin 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 are required to have an approved pretreatment program under 40 C.F.R. part 403.

The Discharger is not required to submit a Notice of Intent to obtain coverage under Water Quality Order 97-03-DWQ, NPDES General Permit CAS000001, for Discharges of Storm Water Associated with Industrial Activities because the Discharger is effectively addressing storm water permitting requirements by preventing storm water runoff from leaving the WWTP property through the use of berms and grading.

4. Construction, Operation and Maintenance Specifications

a. **Aeration Lagoons**

i. A minimum depth of freeboard of two (2) feet shall be maintained at all times in all treatment basins.

ii. The treatment basins shall be managed to control breeding of mosquitoes, in particular:

(a) An erosion control program should assure that small coves and irregularities are not created around the perimeter of the water surface;

(b) Weeds shall be minimized through control of water depth, harvesting, or herbicides; and

(c) Dead algae, vegetation, and debris shall not accumulate on the water surface.

iii. The treatment basins shall be maintained so they will be kept in aerobic conditions.

iv. On-site wastes shall be strictly confined to the lands specifically designated for the disposal operation.

v. Public contact with un-disinfected wastewater shall be precluded through such means as fences, signs, and other acceptable alternatives.

vi. Objectionable odors originating at this facility shall not be perceivable beyond the limits of the wastewater treatment and disposal area.

b. **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 Colorado River Basin 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.

c. **Anti-degradation Analysis and Engineering Report for Significant Expansion**

Discharges from a new or an existing facility that will undergo significant expansion[1] within the next 5 years shall be required to submit an anti-degradation analysis report to the Colorado River Basin Water Board's Executive Officer for review and approval. The anti-degradation analysis report shall be developed in accordance

[1] 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 that may result in an incremental increase in pollutants discharged to the receiving water body of greater than 10% of the permitted discharge rates. When a new or existing facility undergoes significant expansion, the discharge shall be evaluated on a pollutant by pollutant basis.

with the State Anti-degradation Policy (Resolution No. 68-16) and the Federal Anti-degradation Policy (40 C.F.R. 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 Colorado River Basin 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 anti-degradation policies.

d. **Operations Plan for Proposed Plant Expansion**

At least 30 days in advance of the operation of the expanded wastewater treatment system, the Discharger shall submit an Operations Plan, in accordance with Section 13385(j)(1)(D) of the CWC. The Operations Plan shall describe the actions the Discharger will take during the period of adjusting or testing, including steps to prevent violations and identification of the shortest reasonable time required for the period of adjusting and testing (not to exceed 90 days for a wastewater treatment unit that relies on a biological treatment process and not to exceed 30 days for any other wastewater treatment unit). Upon receipt of the Operations Plan by the Executive Officer and if the Executive Officer has not objected in writing to the Operations Plan, Sections 13385(h) and 13385(i) of the CWC shall not apply in accordance with Section 13385(j)(1) of the CWC if a violation is caused by the operation of a new or reconstructed wastewater treatment unit during a defined period of adjusting or testing, as described above.

e. **Spill Response Plan**

On August 19, 2009, the Discharger developed and submitted to the Colorado River Basin Water Board a Spill Response Plan (SRP) for approval by the Executive Officer to comply with the requirements of Order R7-2009-0018. The Discharger shall review and update the existing SRP on an annual basis. The Discharger shall submit the updated SRP with each Annual Report. The Discharger shall make the SRP available for staff review during Colorado River Basin Water Board inspections. The Discharger shall ensure that all operating personnel are familiar with the contents of the SRP. A copy of the SRP shall be maintained at the site and shall be accessible to all operating personnel.

5. Special Provisions for Municipal Facilities (POTWs Only)

a. **Sludge Requirements.**

i. **General Requirements**

(a) In the event that sludge is generated at the treatment facility, all sludge generated at the treatment facility shall be used or disposed of in compliance with the applicable portions of:

(1) 40 C.F.R. 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) 40 C.F.R. part 258: for sludge disposed in municipal solid waste landfills (with other materials).

(3) 40 C.F.R. part 257: for all sludge use and disposal practices not covered under 40 C.F.R. parts 503 or 258.

(b) In the event that sludge is generated at the treatment facility, 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) In the event that sludge is generated at the treatment facility, 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 40 C.F.R. section 503.32(a) shall be tarped.

(d) In the event that sludge is generated at the treatment facility, any sludge treatment, disposal, or storage site shall have adequate procedures to restrict public access and access by domestic animals.

(e) In the event that sludge is generated at the treatment facility, 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. Adequate protection is defined as protection from a storm with a predicted frequency of once in 100 years.

(f) In the event that sludge is generated at the treatment facility, for sewage sludge that is applied to land in accordance with 40 C.F.R. 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 California Department of Resources Recycling and Recovery’s (CalRecycle) consolidated regulations in Title 27 of the California Code of Regulations (CCRs) and that is approved by the Colorado River Basin 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 Colorado River Basin Water Board’s Executive Officer 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 40 C.F.R. part 503 Subpart C, or shall submit written notification in accordance with 40 C.F.R. section 503.20(b) to the U.S. EPA and the Colorado River Basin 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 40 C.F.R. part 503. The results of the analyses should be submitted to the Colorado River Basin 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 Colorado River Basin 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 40 C.F.R. part 403, and shall be subject to enforcement actions, penalties, and other remedies by the U.S. EPA, or the Colorado River Basin Water Board, as provided in the CWA.

(b) Within one year of notification that a pretreatment program is required, the Discharger shall submit a formal Pretreatment Program Submission for approval by the Colorado River Basin Water Board.

(c) The Discharger must seek approval of its Pretreatment Program from the Colorado River Basin 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. The Discharger is enrolled under the State Water Board's General Waste Discharge Requirements (WDRs) for Sanitary Sewer Systems, Order No. 2006-0003-DWQ, WDID #7SSO10515.

6. Other Special Provisions

a. The Discharger shall submit the Electronic Self-Monitoring Reports (eSMRs) for the reporting periods of May 2014 in the SMR module for Board Order No. R7-2009-0018 in the California Integrated Water Quality System (CIWQS) Program.

b. The Discharger may be required to submit technical reports as directed by the Colorado River Basin Water Board's Executive Officer.

c. 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 schedule as summarized in Table 6:

Table 6. Compliance Schedule

Activity	Description	Due Date
TRE Workplan VI.C.2.b.	The Discharger shall update the TRE Work Plan. The Work Plan should include a description of steps the Discharger will take in the event toxicity is detected. The Work Plan 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.	Annual updates submitted yearly.
Pollutant Minimization Program (PMP) VI.C.3.a.	The Discharger shall develop a PMP when there is evidence a priority pollutant is present in the effluent above an effluent limitation and either the sample result is reported as DNQ and the effluent limitation is less than the RL; or a sample result is reported as ND and the effluent limitation is less than the MDL. The PMP shall include an annual review of monitoring pollutant sources, quarterly influent monitoring for the priority pollutants, submittal of a pollutant control strategy, and an annual status report which will include PMP monitoring results for the previous year, a list of pollutant sources, summary of actions taken pursuant to the control strategy, and a description of actions to be taken in the following year.	Upon triggering the requirement, Annual Review of monitoring data and control strategies.

Activity	Description	Due Date
Anti-degradation Analysis and Engineering Report for Significant Expansion VI.C.4.c.	Discharges from a new or an existing facility that will undergo significant expansion within the next 5 years shall be required to submit an anti-degradation analysis report to the Colorado River Basin Water Board's Executive Officer for review and approval. The anti-degradation analysis report shall be developed in accordance with the State Anti-degradation Policy (Resolution No. 68-16) and the Federal Anti-degradation Policy (40 C.F.R. 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 Colorado River Basin Water Board's Basin Plan.	Prior to start of construction of significant changes to the treatment plant.
Operations Plan for Proposed Plant Expansion VI.C.4.d.	The Discharger shall develop an Operations Plan. The Operations Plan will describe the actions the Discharger will take during the period of adjusting or testing, including steps to prevent violations and identifies the shortest reasonable time required for the period of adjusting and testing. CWC Section 13385(j)(1)(D)	Within 30 days in advance of any discharges from the upgraded treatment plant.
Spill Response Plan VI.C.4.e.	The Discharger shall update the Spill Response Plan (SRP). The SRP shall be updated annually and available for inspection.	Annual updates submitted yearly.
Sludge Disposal Notification and Plan VI.C.5.a.ii.(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 Colorado River Basin 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.

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 AWEL 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 Discharger 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 Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or 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.

iii. 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 C.F.R. 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:

$$\frac{(SumoftheDailyPercent\,\mathrm{Re}\,moval)}{NumberofDailyPercent\,\mathrm{Re}\,movalValues}$$

L. Chronic Toxicity Narrative Language.

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

Reasonable potential for toxicity has not been determined, hence effluent chronic toxicity limits based on WET tests do not exist. However, compliance with narrative effluent limitations established in the Order comprises of chronic toxicity triggers. The chronic toxicity permit triggers for this discharge 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 Enterococci and/or E. coli and/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 and/or if more than ten percent of total samples 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.
2. If the calculated geometric mean bacterial concentrations for Enterococci, and E. coli and/or fecal coliform exceed the 30-day geometric mean effluent limitations, Enterococci shall be noted as the violation.
3. If the calculated geometric mean bacterial concentrations for E. coli and fecal coliform exceed the 30-day geometric mean effluent limitations, E. coli shall be noted as the violation.
4. If only the calculated geometric mean for fecal coliform exceed the effluent limitations, then fecal coliform shall be noted as the violation.
5. If the calculated geometric mean bacterial concentration for only one bacterial indicator exceeds the effluent limitation and if more than ten percent of total samples for fecal coliform exceed 400 MPN per 100 milliliters, that calculated geometric mean bacterial concentration for indicator parameter (i.e., Enterococci, E. coli or fecal coliform) shall be noted as the violation.
6. If there are no geometric mean bacterial concentration violations, and if more than ten percent of total samples for fecal coliform exceed 400 MPN per 100 milliliters, then fecal coliform shall be noted as a violation.
7. In cases where the bacterial concentrations for Enterococci and E. coli exceed the single sample maximum effluent limitations for a day, Enterococci shall be noted as a violation for single sample maximum exceedance.
8. In cases where the bacterial concentrations for E. coli exceed the single sample maximum effluent limitations for a day, E. coli shall be noted as the violation for single sample maximum exceedance.

N. Significant Figures

The Discharger shall report monitoring and calculation results 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:

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

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

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.

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 40 C.F.R. section 503.9.

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. Sample results reported as DNQ are estimated concentrations.

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). EC25 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 U.S. EPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

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

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

Estuaries
Estuaries means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

Existing Discharger
Any Discharger that is not a new Discharger. An existing Discharger includes an "increasing Discharger" (i.e., an existing Facility with treatment systems in place from its current discharge that is or will be expanding, upgrading, or modifying its existing permitted discharge after the effective date of the State Implementation Policy).

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

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

*Eeffluent 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.

Group 1 Pollutants
The list of pollutants is based on Appendix A to 40 C.F.R. section 123.45. The State Water Resources Control Board enforcement policy located at

http://www.waterboards.ca.gov/water_issues/programs/enforcement/docs/enf_policy_final111709.pdf provides the list in Appendix C: Group I Pollutants.

Group 2 Pollutants
The list of pollutants is based on Appendix A to 40 C.F.R. section 123.45. The State Water Resources Control Board enforcement policy located at http://www.waterboards.ca.gov/water_issues/programs/enforcement/docs/enf_policy_final111709.pdf provides the list in Appendix D: Group 2 Pollutants.

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).

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).

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.

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

Load Allocation
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)
MDL is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in in 40 C.F.R. part 136, Attachment B, revised as of July 3, 1999.

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

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 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 Colorado River Basin 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)
Sample results which are 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:

$$\frac{\left(ControlMean\,\mathrm{Re}\,sponse - IWCMean\,\mathrm{Re}\,sponse\right)}{ControlMean\,\mathrm{Re}\,sponse} * 100$$

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

PET Tool
The PET tool is a Microsoft Excel file that allows you to configure your data into a format that CIWQS will understand and interpret correctly, which is the CIWQS Data Format, or CDR. You can open the PET Tool in Excel, configure it on the basis of your permit requirements, and then use the configured file as a template for entering data during the different reporting frequency and periods.

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 Colorado River Basin 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 Water Resources Control Board (State Water Board) or Colorado River Basin 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 C.F.R. part 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 C.F.R. section 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 Individual Board Order, references to the Report of Waste Discharge (ROWD) shall include the California Form 200, U.S. EPA forms and any other application information submitted to the Colorado River Basin Water Board.

Reporting Level (RL)
The 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, including an additional factor if applicable as discussed herein. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Colorado River Basin 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 C.F.R. part 261.

Sewage Sludge, Class A
Sewage Sludge to be classified Class A with respect to pathogens shall comply with the requirements in 40 C.F.R. section 503.32(a)(2) and the requirements in either 40 C.F.R. sections 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 C.F.R. sections 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.

Significant Figures
Significant figures of a number are those digits that carry meaning contributing to its precision. 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:

37.24
+10.3
47.54 is rounded to 47.5

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 x 1.43 = 161.876 is rounded to 162

Additional Information on significant figures.

- All nonzero digits are significant.
- Zeros between nonzero digits are significant (e.g., 1.005 mg has four significant figures.
- When a number ends in zeros to the right of a decimal point, they are significant (0.00500 has three significant figures).
- When a number ends in zeros that are not to the right of a decimal point, significant figures are indeterminable (e.g., 10300 kg).
- 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, 40 C.F.R. 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 40 C.F.R. part 136 with regard to significant figures.

Source of Drinking Water
Any water designated as municipal or domestic supply (MUN) in a Colorado River Basin Water Board's 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).

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.

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).

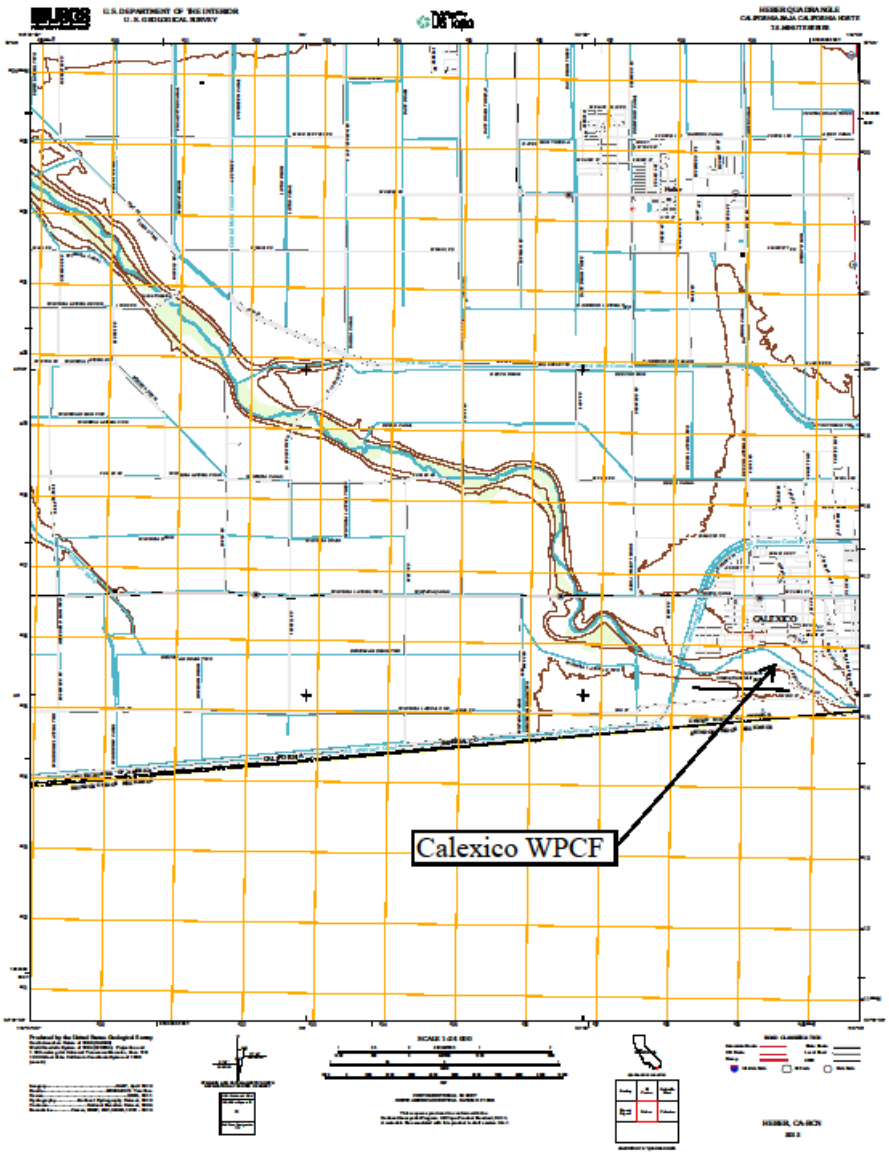
Vector Attraction
Vector Attraction is the characteristic of a material that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents.

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.

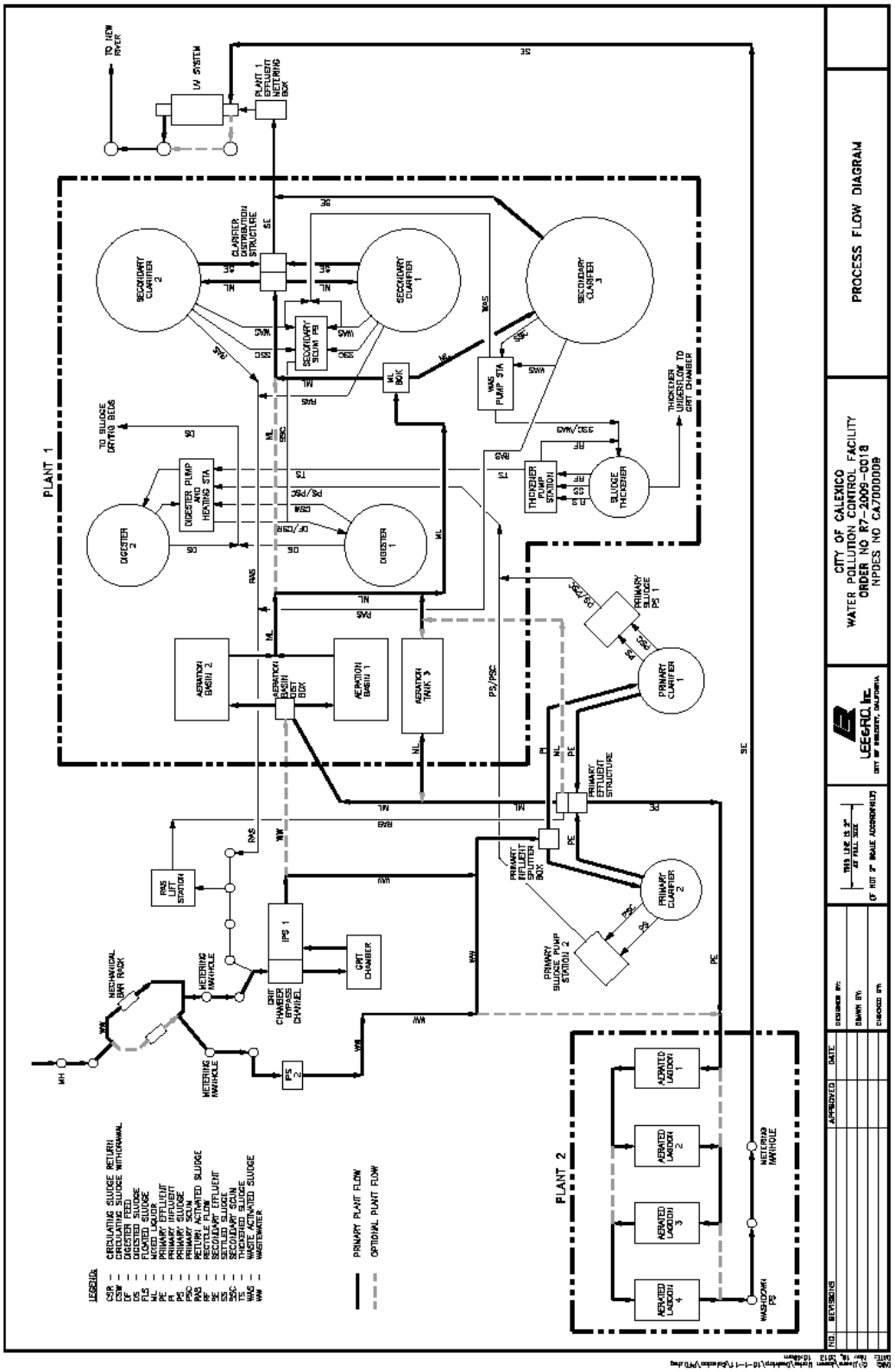
Whole Effluent Toxicity (WET)
The aggregate toxic effect of an effluent measured directly by a toxicity test.

ATTACHMENT B – MAP



CITY OF CALEXICO
CITY OF CALEXICO WATER POLLUTION CONTROL PLANT
Calexico - Imperial County
Facility Location: NE ¼ of the SW ¼ of Section 14, T17S, R14E, SBB&M
Discharge to New River - N32º 40’ 17” W115º 30’ 45”

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 Colorado River Basin Water Board, State Water Board, U.S. EPA, 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 Colorado River Basin 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 Colorado River Basin Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C).)

4. The Colorado Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Colorado River Basin 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 Colorado River Basin Water Board. The Colorado River Basin 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 40 C.F.R. part 136 or, in the case of sludge use or disposal, approved under 40 C.F.R. part 136 unless otherwise specified in 40 C.F.R. part 503 unless other test procedures have been specified in this Order. (40 C.F.R. § 122.41(j)(4); § 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 C.F.R. part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Colorado River Basin 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 Colorado River Basin Water Board, State Water Board, or U.S. EPA within a reasonable time, any information which the Colorado River Basin Water Board, State Water Board, or U.S. EPA 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 Colorado River Basin Water Board, State Water Board, or U.S. EPA 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 Colorado River Basin Water Board, State Water Board, and/or U.S. EPA 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 U.S. EPA). (40 C.F.R. § 122.22(a)(3).).

3. All reports required by this Order and other information requested by the Colorado River Basin Water Board, State Water Board, or U.S. EPA 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 Colorado River Basin 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 Colorado River Basin 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. § 122.41(l)(4).)

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Colorado River Basin Water Board or State Water

Board for reporting results of monitoring of sludge use or disposal practices. (40 C.F.R. § 122.41(l)(4)(i).)

3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 C.F.R. part 136, or another method required for an industry-specific waste stream under 40 C.F.R. subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Colorado River Basin 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 Colorado River Basin 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 Colorado River Basin 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).)

   The alteration or addition could significantly change the nature or increase the quantity of

pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in this Order nor to notification requirements under section 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1). (40 C.F.R. § 122.41(l)(1)(ii).)

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Colorado River Basin Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with this Order's requirements. (40 C.F.R. § 122.41(l)(2).)

H. Other Noncompliance

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

I. Other Information

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

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The Colorado River Basin 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 Colorado River Basin 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

Contents

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations (40 C.F.R. § 122.48) requires that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Colorado River Basin Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements that implement 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 Colorado River Basin 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," U.S. EPA, 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, unless otherwise specified by this Order or Monitoring and Reporting Program. 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 40 C.F.R. 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 (U.S. EPA), unless otherwise specified in this MRP.

In addition, the Colorado River Basin Water Board and/or EPA, at their discretion, may specify test methods that are more sensitive than those specified in 40 C.F.R. part 136.

F. The permittee must utilize analytical methods specified in this permit, see Attachment G. If no test procedure is specified, the permittee shall analyze the pollutant using:

1. A test procedure listed in 40 C.F.R. section 136.3; or
2. An alternative test procedure approved by EPA as provided in 40 C.F.R. sections 136.4 or 136.5; or;
3. A test procedure listed in 40 C.F.R. part 136, with modifications allowed by EPA as provided in 40 C.F.R. 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 Colorado River Basin 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 Colorado River Basin Water Board will reject the quantified laboratory data if quality control data is unacceptable.

H. In conformance with federal regulations 40 C.F.R. 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 40 C.F.R. part 136 shall be used to measure compliance with a Chromium (VI) effluent limitation. For Cyanide[1], analytical test methods in conformance with 40 C.F.R. part 136 shall be used as acceptable methods to measure compliance with a Cyanide effluent limitation. U.S.E.P.A approved[2] tests for free cyanide are ASTM D4282-02, ASTM D7237-10, and OIA 677(2009).

I. In accordance with the test procedures under 40 C.F.R. part 136, samples shall be analyzed as soon as possible after collection. For samples with maximum holding times of 15 minutes or less (e.g., Temperature, Dissolved Oxygen, pH and Sulfite) the Discharger shall be

[1] The sample for cyanide measurement shall be collected as a grab sample. Various sample preservation and sample stabilizations procedures are available to resolve analytical interferences associated with cyanide analysis of treated wastewater effluent and are represented in ASTM Standard Practice D7365-09a. Furthermore, any technique for removal or suppression of may be employed, provided the laboratory demonstrates that it more accurately measures cyanide through quality control measures described in the analytical test method. Any removal or suppression technique not described in D7365-09a or the analytical test method must be documented with supporting data.

[2] Federal Register, Vol. 77, No. 97, May 18, 2012. Cyanide exists in a variety of forms. It can be free or part of strong or weak complexes with other species. The analytical method employed determines what type of cyanide is measured. Types of cyanide measured include: Total, Available, Amenable to Chlorination, Weak Acid Dissociable, Free and others. This Board Order has an effluent limit of Free Cyanide.

authorized to analyze the samples onsite. The Discharger's onsite lab is certified by the State Department of Public Health (Certification #2447) for the fields of testing E108 (inorganic chemistry of wastewater). The Discharger has developed a written Quality Assurance Plan (QAP) for samples that are analyzed onsite (pH, temperature, and dissolved oxygen).] The QAP at a minimum addresses 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 methods 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. In the event that continuous monitoring equipment is out of service for period greater than 24-hours, the Discharger shall obtain representative grab samples each day the equipment is out of service. The Discharger shall correct the cause(s) of failure of the continuous monitoring equipment as soon as practicable. The Discharger shall report the period(s) during which the equipment was out of service and if the problem has not been corrected, shall identify the steps which the Discharger is taking or proposes to take to bring the equipment back into service and the schedule for these actions.

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 indicate that there has been no activity during the required reporting period in CIWQS.

N. The Discharger shall submit values in eSMR as required to determine compliance with the permit effluent limit requirements (i.e., AMEL, MDEL, % removals, Geomeans, mass loadings, etc.).

O. The Discharger shall submit the Electronic Self-Monitoring Reports (eSMRs) for reporting periods May 2014 in the eSMR module for Board Order No. R7-2009-0018 in the California Integrated Water Quality System (CIWQS) Program.

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 a representative influent sample to the treatment plant can be obtained.
001	EFF-001	Effluent discharged from the treatment facility into the New River; Latitude 32°40' 17" N and Longitude 115° 30' 45" W.
---	RSW-001	Receiving water (New River) monitoring location not to exceed 100 feet upstream from the location where the effluent enters the New River; Latitude 32°40' 17.5" N and Longitude 115° 30' 43.3" W.
---	RSW-002	Receiving water (New River) monitoring location not to exceed 200 feet downstream from the location where the effluent enters the New River, at a point where a plume would be expected; Latitude 32° 40' 18.8" N and Longitude 115° 30' 47" W.
---	SLD-001	Sludge quantity, location and method of disposal from the Facility; Latitude 32°40' 20" N and Longitude 115° 30' 45" W.
---	INT-001, INT-002, INT-003, INT-004	Unit Processes (i.e. Freeboard) Monitoring in Aeration Lagoons.

The North latitude and West longitude information in Table 1 are approximate for administrative purposes.

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location INF-001

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

Table E-2. Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	MGD	Meter/Totalizer	1x/Day	See Section I.E and I.F of the MRP
Biochemical Oxygen Demand (BOD) (5 day @ 20 Deg. C)	mg/L	24-Hr. Composite	2x/Week	See Section I.E. and I.F of the MRP
	lbs/day	Calculated		
Total Suspended Solids (TSS)	mg/L	24-Hr. Composite	2x/Month	See Section I.E. and I.F of the MRP
	lbs/day	Calculated		

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

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

Table E-3. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and (Minimum Level, units), respectively
Flow	MGD	Flow Meter (Totalizer) Reading	1x/Day[1]	See Section I.B of the MRP
pH	Standard Units	Grab	1x/Day	See Section I.E and I.F of the MRP
Dissolved Oxygen	mg/L	Grab	1xDay	‘’
Temperature	°F	Grab	1x/Day	‘’
20°C BOD5	mg/L	24-Hr. Composite[2]	2x/Week	‘’
	lbs/day	Calculated		---
TSS	mg/L	24-Hr. Composite	2x/Month	“
	lbs/day	Calculated		---
Escherichia coli (E. coli)	MPN/100 ml	Grab	5x/Month[3]	[4]
Enterococci	MPN/100 ml	Grab	5x/Month[3]	See Section I.E and I.F of the MRP
Fecal coliform	MPN/100 ml	Grab	5x/Month[3]	‘’
Total Dissolved Solids	mg/L	24-Hr. Composite	1x/Month	“
Nitrate as Nitrogen (N)	mg/L	Grab	1x/Month	“
Nitrite, as N	mg/L	Grab	1x/Month	“
Ammonia, as N	mg/L	Grab	1x/Month	“
Kjeldahl Nitrogen (TKN), Total (as N)	mg/L	Grab	1x/Month	“
Total Phosphorus (P), as P	mg/L	Grab	1x/Month	“
Total Orthophosphate, as P	mg/L	Grab	1x/Month	“
Sulfate	mg/L	Grab	1x/Month	‘’
Oil and Grease, Total[5]	mg/L	Grab	1x/Month	‘’
	lbs/day	Calculated		---
Hardness, (as CaCO3)	mg/L	Grab	1x/Quarter	‘’
Cyanide, Free	µg/L	Grab	1x/Month	See Sections I.G and I.H of the MRP
	lbs/day	Calculated		---
Priority Pollutants[6]	µg/L	Grab	1x/Year	See Section I.G of the MRP

[1] Report total daily flow. The Discharger calculates the daily effluent flow from daily readings taken from the effluent flow totalizer.
[2] 24-hour composite samples shall be time-proportionate composite samples.
[3] Five samples equally spaced over a 30-day period with a minimum of one sample per week.

[4] 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.)
[5] Total oil and grease shall include the polar and non-polar fraction of oil and grease materials.
[6] All Priority Pollutants as listed in Attachment H and as defined by the California Toxics Rule (CTR).

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 Colorado River Basin 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.

2. The Discharger shall conduct chronic toxicity testing on the final effluent measured at Monitoring Location EFF-001 as follows:

Table E-4. Whole Effluent Toxicity Test Species

Test (s)	Species	Endpoints	Test Duration (days)	References	Sample Type	Minimum Sampling Frequency
Chronic	Fathead Minnow (Pimephales promelas)[1]	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 (Ceriodaphnia dubia)[1]	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 (Selenastrum capricornutum[1]	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 (conducted during the first and fourth years of the permit term) 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 after the initial screening and during the remaining years (i.e., second, third, and fifth years of the permit term), 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.

3. During the first and fourth 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 Colorado River Basin 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 Concentration[3] (IWC), where: IWC percent effect level = [(Control mean response − IWC mean response) ÷ Control mean response] × 100. After the screening phase, the permittee shall then continue to conduct routine quarterly toxicity testing using the single, most 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	Larval Survival	10	10	(10 - 10)/10 x 100 = 0%	
Fathead Minnow	Growth	.41	.363	(.41-.363)/.41 x 100 =11.5%	
Water Flea	Survival	10	9	(10-9)/10 x 100 = 10%	
Water Flea [1]	Reproduction	33.4	26.7	(33.4-26.7)/33.4 x 100 =20%	Highest % effect represents most sensitive species [1]
Green Alga	Growth	197.3	170.1	(197.3-170.1)/197.3 x 100 =13.8%	

[1] In this example, the water flea represents the most sensitive species, chronic tests for the water flea shall be conducted as required by 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)

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

dilution is an option and may be used if the above source is suspected to have toxicity greater than 1.0 TUc.

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 (40 C.F.R. 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.

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

c. If using a t-test or modified t-test, 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 1.6 chronic toxicity units (TU_c) or a monthly median (consecutive samples) that exceeds 1 TU_c shall trigger accelerated WET testing.

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

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 three additional toxicity tests using the same species and test method, approximately every two weeks, over a 6-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 paragraphs V.D.1 and V.D.2 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 U.S. EPA 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, U.S. EPA 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 CIWQS for the reporting period (e.g., quarterly) and provide the data (i.e., TU_c, TU_a, or Pass/Fail) in the PET tool for uploading into CIWQS. The laboratory report shall contain: the toxicity test results (TUc 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 submit as an attachment with the quarterly report any exceedance of the chronic WET permit trigger. This attachment 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. RECYCLING MONITORING REQUIREMENTS – NOT APPLICABLE

VIII. RECEIVING WATER MONITORING REQUIREMENTS

A. Monitoring Location RSW-001

1. The Discharger shall monitor the New 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 – RSW-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH	Standard Units	Grab	1x/Month	See Section I.F of the MRP
Temperature	°F	Grab	1x/Month	‘’
Dissolved Oxygen	mg/L	Grab	1x/Month	‘’
E. Coli	MPN/100 mL	Grab	1x/Month	‘’
Total Dissolved Solids	mg/L	Grab	1x/Month	‘’
Hardness (as $CaCO_3$)	mg/L	Grab	1x/Month	‘’
Nitrate, as N	mg/L	Grab	1x/Month	‘’
Nitrite, as N	mg/L	Grab	1x/Month	‘’
Ammonia, as N	mg/L	Grab	1x/Month	‘’
TKN, Total as N	mg/L	Grab	1x/Month	‘’
Total Phosphorus as P	mg/L	Grab	1x/Month	‘’
Total Orthophosphate, as P	mg/L	Grab	1x/Month	‘’
Priority Pollutants[1]	µg/L	Grab	1x/Year	See Section I.G of the MRP

1 Priority Pollutants as listed in Attachment H and as defined by the California Toxics Rule (CTR). pH and hardness shall also be sampled and measured with annual priority pollutant testing.

B. Monitoring Location RSW-002

1. The Discharger shall monitor the New River at RSW-002 as follows. In the event that no receiving water is present at RSW-002, no receiving water monitoring data are required for station RSW-002.

Table E-7. Receiving Water Monitoring Requirements- RSW-002

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH	Standard Units	Grab	1x/Month	See Section I.F of the MRP
Temperature	°F	Grab	1x/Month	‘’
Dissolved Oxygen	mg/L	Grab	1x/Month	‘’
E. Coli	MPN/100 mL	Grab	1x/Month	‘’
Hardness (as $CaCO_3$)	mg/L	Grab	1x/Month	‘’
Total Dissolved Solids	mg/L	Grab	1x/Month	‘’
Nitrate, as N	mg/L	Grab	1x/Month	‘’
Nitrite, as N	mg/L	Grab	1x/Month	‘’
Ammonia, as N	mg/L	Grab	1x/Month	‘’
TKN, Total as N	mg/L	Grab	1x/Month	‘’
Total Phosphorus as P	mg/L	Grab	1x/Month	‘’

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Orthophosphate, as P	mg/L	Grab	1x/Month	‘’

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 SMR module in the 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.

   g. Bottom deposits

IX. OTHER MONITORING REQUIREMENTS

A. Monitoring Location SLD-001 Sludge Monitoring

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

Table E-8. Sludge Monitoring Required SLD - 001

Parameter	Units	Sample Type	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	mg/kg	Composite	”

Parameter	Units	Sample Type	Required Analytical Test Method
Hydrocarbons			
Cyanide	mg/kg	Composite	”

[1] Representative samples shall be collected prior to use or disposal.
[2] Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. section 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.

In the event that sludge is generated at the treatment facility, 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 Required SLD - 001

Volume Generated[1] (dry metric tons per year)	Volume Generated (US short tons per year)	Minimum Sampling Frequency
Greater than zero, but less than 290	Greater than zero, but less than 320	1x/Year[1,2]
Equal to or greater than 290, but less than 1,500	Equal to or greater than 320, but less than 1,650	1x/Quarter[1,2]
Equal to or greater than 1,500, but less than 15,000	Equal to or greater than 1,650, but less than 16,500	6x/Year[1,2]
Equal to or greater than 15,000	Equal to or greater than 16,500	1x/Month[1,2]

[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 40 C.F.R. 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 40 C.F.R. 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.

B. Pretreatment Monitoring

In the event that significant industrial wastewater are being discharged to the wastewater treatment facility, then the Discharger shall provide the Colorado River Basin 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.

In the event that an approved pretreatment program is required, the Discharger shall submit a pretreatment program submittal to obtain pretreatment approval.

C. Unit Processes Monitoring

1. The Discharger shall monitor the four aerated lagoons at Monitoring Location INT-001, INT-002, INT-003, and INT-004, as follows:

a. Permanent markers shall be placed in the four aerated lagoons with calibration marks indicating the water level at design capacity and available operational freeboard.

b. The Discharger shall inspect the conditions of the ponds once per week and write visual observations of potential problems in a logbook. Notations shall include observations of whether weeds are developing in the water or the pond surface, and their locations; whether dead algae, vegetation, scum, foam, oil sheen, or debris are accumulating on the pond surface, and their location; whether burrowing animals or insects are present; and the color of the pond. A copy of the logbook shall be readily available for inspection by regulatory representatives upon request. Where the operation and maintenance (O&M) manual requires remedial action, the Discharger shall briefly explain the action to be taken to correct the discrepancy.

c. Lagoon monitoring shall include the following:

Table E-10. Freeboard Monitoring

Constituent	Units	Sample Type	Frequency
Freeboard	Feet[1]	Observation	1x/Week

[1] To the nearest inch. Samples shall be collected from a depth of 1-foot, opposite the inlet.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

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

1. The Discharger shall report the results chronic toxicity testing, TRE, and TIE as required in section V, "Effluent Toxicity Testing".
2. 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 Colorado River Basin Water Board.
3. The Discharger shall ensure laboratory analytical results are consistent with the requirements contained in 40 C.F.R. part 136 with regard to significant figures. 40 C.F.R. part 136 specifies for some analytical methods, the number of significant figures to which measurements are made.

B. Electronic Self-Monitoring Reports (eSMRs)

1. The Discharger shall electronically submit SMR's using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). The CIWQS Web site will provide additional information for eSMR submittal in the event there will be a planned service interruption for electronic submittal.
2. The Discharger shall maintain sufficient staffing and resources to ensure it submits eSMRs 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 eSMRs.
3. 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 eSMR's including the results of all required monitoring using U.S. EPA-approved test methods or other test methods specified in this Order. SMR's are to include all new monitoring results obtained since the last eSMR was submitted. 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 eSMR.
4. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-11. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date[1]
Continuous	June 1, 2014	All	Submit with monthly eSMR
Daily 1x/Day	June 1, 2014	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submit with monthly eSMR

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date[1]
5x/Month	June 1, 2014	Sunday through Saturday	Submit with monthly eSMR
Weekly 1x/Week	June 1, 2014	Sunday through Saturday	Submit with monthly eSMR
Monthly 1x/Month	June 1, 2014	1st day of calendar month through last day of calendar month	First day of second month from end of monitoring period
Quarterly 1x/Quarter 4x/Year	June 1, 2014	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
Annually 1x/Year	June 1, 2014	January 1 through December 31	First day of March

[1] Except where noted otherwise in this MRP. For instance, 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.

5. Reporting Protocols. The Discharger shall follow the procedure in 40 C.F.R. part 136 when reporting the results of analytical determinations of chemical constituents in a sample. Further, the Discharger shall use the following reporting protocol:

   a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample). For reporting concentration and calculated values in the PET Tool follow these instructions:

      Reporting Concentration - Under the "Qualifier" column select "=" and under the "Result" column report the result (concentration).

      Reporting Calculated Values - Under the "Qualifier" column select "=" and under the "Result" column report the result (calculated value).

   b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported under the "Qualifier" column as "DNQ" (Detected, but Not Quantified).

      For the purposes of data collection, the laboratory shall write the estimated chemical concentration under the "Result" column next to DNQ. 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. For reporting concentration and calculated values in the PET Tool follow these instructions:

      Reporting Concentration – Under the "Qualifier" column select "DNQ", under the "Result" column report the estimated chemical concentration. In addition, the MDL shall be reported under the "MDL" column and the ML shall be reported under the "ML" column.

      Reporting Calculated Values – Under the "Qualifier" column select "<", under the "Result" column report the calculated value or in the case of mass loading report the average monthly effluent limitation for mass loading.

c. Sample results less than the laboratory's MDL shall be reported as "ND" (Not Detected). For reporting concentration and calculated values in the pet tool follow these instructions:

Reporting Concentration – Under the "Qualifier" column select "ND" and report the MDL under the "MDL" column.

Reporting Calculated Values - Under the "Qualifier" column select "<", under the "Result" column report the calculated value (Flow, mgd x 8.34 x MDL(mg/L)) or in the case of mass loading report the average monthly effluent limitation for mass loading.

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.

e. Calculated values (e.g., average monthly, average weekly, geometric mean, and mass loading) shall be reported for comparison of effluent limitations.

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

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

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

b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

8. The Discharger shall submit eSMRs 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 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 eSMR. The information contained in the cover letter or eSMR reporting 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. In addition, the Discharger shall add these violations into CIWQS.

c. The Discharger shall upload the Whole Effluent Toxicity Test result page or entire report for the reporting period under the attachment tab for the reporting period.

d. The Discharger shall upload the laboratory reports for the analysis of the priority pollutant for the reporting period under the attachment tab for the reporting period. The Discharger shall evaluate the results with the criteria and notify the Colorado River Basin Regional Board of any exceedance of the criteria.

C. Other Reports

1. The Discharger shall report the results of any special studies required by Special Provisions – VI.C (TRE/TIE; chronic toxicity testing, Translator Study, Spill Response Plan, Antidegradation Analysis and Engineering Report, Operations 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 eSMR scheduled to be submitted on or immediately following the report due date.

2. **Operations and Maintenance Report**. The Discharger shall report the following as shown in Table E-12:

Table E-12. 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 statement in the annual report that inspections and documentation of inspections and operations/maintenance problems have been completed.	1x/Year
To inspect and document any operation/maintenance problems by inspecting each unit process. The Discharger shall provide a certification statement in the annual report that inspections and documentation of inspections and operations/maintenance problems have been completed.	1x/Year
Calibration of flow meters and mechanical equipment shall be performed in a timely manner and documented. The Discharger shall provide a certification statement in the annual report that the calibration of flow meters and mechanical equipment has been conducted and documentation of such calibrations is maintained.	1x/Year
The Discharger shall maintain documentation of all logbooks (operation and maintenance), chain of custody sheets, laboratory and sampling activities as stated in Special Provision VI.C.4.b (Limitations and Discharge Requirements) and Standard Provisions sections IV and V (Attachment D). The Discharger shall provide a certification statement in the annual report that maintenance of logbooks, chain of custody sheets, and laboratory and sampling activities as required is being implemented.	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

Contents

Tables

ATTACHMENT F – FACT SHEET

As described in section I, the Colorado River Basin Water Board incorporates this Fact Sheet as findings of the Colorado River Basin Water Board supporting the issuance 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	**7A 13 0101 011**
Discharger	**City of Calexico**
Name of Facility	**City of Calexico Water Pollution Control Plant**
Facility Address	**298 West 2nd Street**
	Calexico, CA 92231
	Imperial County
Legally Responsible Official	**Nick Servin, Public Works Director/City Engineer, (760) 768-2100, nservin@calexico.ca.gov**
Legally Responsible Official Representative (if applicable)	**Nick Servin, Public Works Director/City Engineer, (760) 768-2100, nservin@calexico.ca.gov**
Facility Contact, Title and Phone	**Jose Lopez, Interim Chief Operator, (760) 768-2167, jlopez@calexico.ca.gov**
Authorized Person to Sign and Submit Reports	**Jose Lopez, Interim Chief Operator, (760) 768-2167, jlopez@calexico.ca.gov**
Mailing Address	**608 Heber Avenue Calexico, CA 92231**
Billing Address	**SAME**
Type of Facility	**POTW**
Major or Minor Facility	**Major**
Threat to Water Quality	**1**
Complexity	**A**
Pretreatment Program	**N**
Recycling Requirements	**N**
Facility Permitted Flow	**4.3 MGD (in million gallons per day)**
Facility Design Flow	**4.3 MGD**
Watershed	**Brawley Hydrologic Area**
Receiving Water	**New River**
Receiving Water Type	**Inland Waterbody**

A. The City of Calexico (Discharger) is the owner and operator of the City of Calexico Water Pollution Control Plant (WPCP or Facility), a Publicly Owned Treatment Works (POTW).

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 New River, a water of the United States, within the Brawley Hydrologic Area (H.A.). The Discharger was previously regulated by Board Order R7-2009-0018 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA7000009 adopted on May 21, 2009, and expires on May 20, 2014. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

Prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Discharger must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. The State Water Board retains the jurisdictional authority to enforce such requirements under Water Code section 1211.

C. The Discharger filed a report of waste discharge and submitted an application for reissuance of its WDR's and NPDES permit on November 21, 2013. Supplemental information was requested on January 13, 2014, and received on January 13, 2014. The application was deemed complete on January 14, 2014. A pre-permitting site visit was conducted on November 6, 2013, to observe operations and collect additional data to develop permit limitations and requirements for waste discharge.

II. FACILITY DESCRIPTION

The Discharger owns and operates a wastewater collection, treatment and disposal system (hereinafter Facility) and provides sewerage service to a population of approximately 39,000 individuals located in the City of Calexico. The wastewater treatment plant has a treatment capacity of 4.3 MGD and is located in the NW ¼ of the SW ¼ of Section 14, T17S, R14E, SBB&M.

A. Description of Wastewater and Biosolids Treatment or Controls

The WPCP design capacity is 4.3 MGD. The WPCP provides secondary treatment through two treatment trains: an activated sludge treatment system with a design capacity of 2.5 MGD, referred to as Plant #1 and an aerated lagoon treatment system with a design capacity of 1.8 MGD, referred to as Plant #2. Wastewater received at the headworks is screened at influent pump stations #1 and #2 and pumped to two circular clarifiers which are operated in parallel.

Plant #1 was originally constructed in 1967 and upgraded in 1974, 1991, and 1995. Plant #1 provides extended aeration activated sludge biological treatment through three concrete-lined aeration basins fitted with surface aerators operated in parallel. Three circular secondary clarifiers remove solids after aeration. Return sludge from the clarifiers is directed to influent pump station #1 and combines with raw wastewater to maintain sufficient levels of biomass in the treatment system.

Plant #2 was constructed in 1991 and upgraded in 1994. Plant #2 consists of a set of four lagoons operated in series. Each treatment lagoon has an approximate volume of 3 million gallons and is equipped with high-speed floating aerators.

Secondary effluent from both treatment systems is combined for disinfection by an ultraviolet (UV) disinfection system prior to discharge to the New River.

Sludge generated from the primary clarifiers is pumped to two anaerobic digesters for stabilization, normally operated in series. Secondary sludge generated from the two of the three secondary clarifiers from plant #1 is also pumped to the anaerobic digesters for stabilization. Secondary sludge from plant #2 is thickened by dissolved air flotation prior to

being pumped to the digesters. Stabilized primary and secondary sludge is discharged from the two anaerobic digesters to fourteen sludge drying beds. Digested sludge is dried in the sludge drying beds prior to removal and eventual land application in Yuma, Arizona.

Wastewater is discharged from Discharge Point 001 (see table on cover page) to the New River, a water of the United States.

B. Discharge Points and Receiving Waters

Final effluent is discharged through Discharge Point 001, at Latitude 32º, 40', 17" North and Longitude 115º, 30', 45" West, to the New River. The permitted maximum daily flow limitation is equal to the design capacity of the wastewater treatment plant, which is 4.3 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 Board Order R7-2009-0018 for discharges from Discharge Point 001 (Monitoring Location EFF-001) and representative monitoring data from the term of the previous Board Order are as follows in Table F-2:

Table F-2. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation			Monitoring Data (From May 2009 To August 2013)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Flow	MGD	4.3	---	---	2.885[1]	---	4.361[2]
Biochemical Oxygen Demand (BOD) (5 day @ 20 Deg. C)	mg/L	30	45	---	36.5[3]	43.8	---
	lb/day	1,076	1,614	---	746	897	---
BOD_5 % Removal	%	85	---	---	89[4]	---	---
Total Suspended Solids (TSS)	mg/L	36	53	---	20.4	23.8	---
	lb/day	1,291	1,901	---	511.6	605	---
pH	s.u.	---	---	6.0 – 9.0[5]	--	---	7.0 – 8.09
Escherichia coli (E. coli)	MPN/ 100 ml	126[6]	---	400[7]	32.8	---	98.5
Enterococci	MPN/ 100 ml	33[6]	---	100[7]	39.3[8]	---	900[8]
Fecal Coliform	MPN/ 100 ml	200[6]	---	400[9]	136.1	---	1,600[8]
Copper, Total Recoverable	µg/L	18	---	44	30[8]	---	30[8]
	lb/day	0.64	---	1.6	0.67[8]	---	0.67[8]

[1] This value represents the highest average monthly flow value (December 2011).
[2] This value (December 13, 2011) represents an exceedance of the permit limitation.
[3] This value (May 2011) represents an exceedance of the permit limitation.
[4] This value represents the lowest reported value of the minimum monthly average percent removal of BOD (November 2010).
[5] This range represents the instantaneous minimum and maximum pH limitations, respectively.
[6] 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.

[7] This effluent limitation is expressed as a maximum single sample value.
[8] Refer to section II.D.1 for a detailed discussion of compliance with BOD, copper, and bacteria effluent limitations.
[9] 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.

The ROWD described the existing discharge as follows:

Annual Average Effluent Flow – 2.68 MGD

Maximum Daily Effluent Flow – 2.84 MGD

Average Daily Effluent Flow – 2.68 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.	7.15	--
pH (Maximum)	s.u.	8.44	--
Temperature (Winter)	°F	73.90	66.50
Temperature (Summer)	°F	91.70	84.40
BOD_5	mg/L	47.40	20.28
Fecal Coliform	MPN/100 mL	1,600	57.48
TSS	mg/L	23.80	11.32
Ammonia as Nitrogen	mg/L	10.64	3.49
Dissolved Oxygen	mg/L	8.63	5.12
Total Kjeldahl Nitrogen	mg/L	--	--
Nitrate+Nitrite (as Nitrogen)	mg/L	88.20	33.70
Oil and Grease	mg/L	33.90	3.54
Phosphorus	mg/L	13.04	3.32
Total Dissolved Solids	mg/L	1,022	837

D. Compliance Summary

A review of the available effluent monitoring data, submitted in the Discharger's Self-Monitoring Reports, indicate that the Discharger had several effluent limitation violations for reporting, BOD, copper and bacterial indicators, summarized below:

Table F-4. Violations Report Summary

Date of Exceedance	Parameter	Permit Limitations	Reported Value
8/31/2011	Copper, Total	0.64 lbs/day	0.67

Date of Exceedance	Parameter	Permit Limitations	Reported Value
	Recoverable		
8/31/2011	Copper, Total Recoverable	18 µg/L	30 µg/L
6/30/2011	Fecal Coliform	400 MPN/100 mL	500 MPN/100 mL
5/31/2011	Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C)	30 mg/L	36.5 mg/L
4/26/2011	Enterococci	100 MPN/100 mL	240 MPN/100 mL
4/13/2011	Fecal Coliform	400 MPN/100 mL	900 MPN/100 mL
4/6/2011	Fecal Coliform	400 MPN/100 mL	1,600 MPN/100 mL
10/6/2010	Copper, Total Recoverable	18 µg/L	22 µg/L
4/29/2010	Enterococci	100 MPN/100 mL	900 MPN/100 mL
4/29/2010	Enterococci	33 MPN/100 mL	39.3 MPN/100 mL
1/21/2010	Flow	4.3 MGD	4.443 MGD
8/1/2009	Not Applicable	Deficient Reporting	Incomplete June 2009 Self-Monitoring Report
7/15/2009	Enterococci	100 MPN/100 mL	900 MPN/100 mL
7/15/2009	Fecal Coliform	400 MPN/100 mL	1,600 MPN/100 mL
7/13/2009	Enterococci	100 MPN/100 mL	110 MPN/100 mL
7/1/2009	Not Applicable	Deficient Reporting	Late May 2009 Self-Monitoring Report

Table F-5. Enforcement Report Summary

Type of Enforcement	Adoption Date
Administrative Civil Liability R7-2012-0036	9/20/2012
Administrative Civil Liability R7-2009-0067	9/17/2009

E. Planned Changes

The Discharger did not indicate any planned changes in their ROWD dated November 21, 2013.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

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

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 Division 13 of the Public Resources Code.

C. State and Federal Laws, Regulations, Policies, and Plans

1. **Water Quality Control Plan.** The Colorado River Basin 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. In addition, the Basin Plan implements 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 New River, which are described in Table F-6:

Table F-6. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	New River	Existing: Fresh Water Replenishment (FRSH); Water Contact Recreation (REC-I)[1]; Non-Contact Water Recreation (REC-II); Warm Freshwater Habitat (WARM); Wildlife Habitat (WILD); and Support of Rare, Threatened, or Endangered Species (RARE)[2]. Potential: Industrial Service Supply (IND).

[1] Although some fishing occurs in the downstream reaches, the presently contaminated water in the river makes it unfit for any recreational use. An advisory has been issued by the Imperial County Health Department warning against the consumption of any fish caught from the river and the river has been posted with advisories against any body contact with the water.

[2] 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 Colorado River Basin Water Board; and such substantiation must be provided within a reasonable time frame as approved by the Colorado River Basin Water Board.

Requirements of this Order implement the Basin Plan.

2. **Thermal Plan.** The State Water Board adopted the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan) on January 7, 1971, and amended this plan on September 18, 1975. This plan contains temperature objectives for surface waters. The Thermal Plan does not apply these objectives to the New River, since the New River is an agricultural drainage channel which does not have a "natural" receiving water temperature.

3. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** U.S. EPA 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, U.S. EPA 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 federal 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 U.S. EPA through the NTR and to the priority pollutant objectives established by the Colorado River Basin Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the U.S. EPA 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**. CWC section 13263.6(a) requires that "the Regional Water Board shall prescribe effluent limitations as part of the WDRs of a POTW for all substances that the most recent toxic chemical release data reported to the state emergency response commission pursuant to Section 313 of the Emergency Planning and Community Right to Know Act of 1986 (42 U.S.C. Sec. 11023) (EPCRKA) indicate as discharged into the POTW, for which the State Water Board or the Regional Water Board has established numeric water quality objectives, and has determined that the discharge is or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to, an excursion above any numeric water quality objective."

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

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

discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

8. **Anti-degradation Policy.** Federal regulation 40 C.F.R. 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 68-16. Resolution 68-16 is deemed to incorporate the federal anti-degradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Colorado River Basin Water Board's Basin Plan implements, and incorporates by reference, both the State and federal anti-degradation policies. The permitted discharge must be consistent with the anti-degradation provision of 40 C.F.R. section 131.12 and State Water Board Resolution 68-16.

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

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

The immediate receiving water is the New River. The 2010 U.S. EPA CWA Section 303(d) list of impaired waters (hereinafter 303(d) List) identifies the New River as impaired by the following chemical constituents: chlordane, chlorpyrifos, copper, dichlorodiphenyltrichloroethane (DDT), diazinon, dieldrin, hexachlorobenzene, mercury, nutrients, organic enrichment/low dissolved oxygen, polychlorinated biphenyls (PCBs), pathogens, sediment, selenium, toxaphene, toxicity, trash, and zinc. The New River Dissolved Oxygen TMDL was adopted by the Regional Board in May 2010 and approved by U.S. EPA. The New River is also listed as impaired for bacteria and sediment / siltation. U.S. EPA has approved the Colorado River Basin Water Board's TMDLs for these parameters. These TMDLs establish waste load allocations (WLAs) for fecal coliform, E. coli, enterococci, and sediment. The established effluent limitations for fecal coliform, E. coli, enterococci, and TSS in this Order comply with the WLAs established in the New River TMDLs. A Trash TMDL for the New River has been approved by the Colorado River Basin Water Board and State Water Board, the Office of Administrative Law, and U.S. EPA. The TMDL essentially establishes a prohibition on the discharge of any trash to the New River by point sources. This Order prohibits discharges of trash to the New River.

In addition, the 303(d) List classifies the Salton Sea as impaired by arsenic, chlorpyrifos, DDT, enterococcus, nutrients, and salinity. Tributaries to the Salton Sea, including the New 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., New River).

E. Other Plans, Polices and Regulations

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

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 is not required to have a pretreatment program, and the Colorado River Basin Water Board has not designated this facility to enroll. In addition, coverage under the General Permit is not required because there are no storm water flows from the facility. Storm water is retained on-site by berms and grading and does not discharge from the Facility.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: 40 C.F.R. section 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 C.F.R. section 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. 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 U.S. EPA 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 40 C.F.R. 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, U.S. EPA 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. U.S. EPA NPDES Application Forms: California Form 200, U.S. EPA Forms 1, 2A, and 2S dated November 18, 2013 and January 13, 2014.
2. Code of Federal Regulations – Title 40.
3. Water Quality Control Plan (Colorado River Basin – Region 7) as amended to date.
4. Colorado River Basin Water Board files related to City of Calexico Water Pollution Control Plant NPDES permit CA7000009.

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, U.S. EPA 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 U.S. EPA permit regulations at 40 C.F.R. section 122.44 require that permits include conditions meeting applicable technology-

based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at 40 C.F.R. part 133.

a. **Secondary Treatment Standards**. Regulations promulgated in 40 C.F.R. 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 U.S. EPA Administrator.

Based on this statutory requirement, U.S. EPA developed secondary treatment regulations, which are specified in 40 C.F.R. 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 biochemical oxygen demand (BOD_5), total suspended solids (TSS), and pH.

b. **Equivalent to Secondary Treatment Standards**. Following publication of the secondary treatment regulations, legislative history indicates that Congress was concerned that U.S. EPA had not "sanctioned" the use of certain biological treatment techniques that were effective in achieving significant reductions in BOD_5 and TSS for secondary treatment. Therefore, to prevent unnecessary construction of costly new facilities, Congress included language in the 1981 amendment to the Construction Grants statutes [Section 23 of Pub. L. 97-147] that required U.S. EPA to provide allowance for alternative biological treatment technologies such as trickling filters or waste stabilization ponds. In response to this requirement, definition of secondary treatment was modified on September 20, 1984 and June 3, 1985, and published in the revised secondary treatment regulations contained in 40 C.F.R. section 133.105. These regulations allow alternative limitations for facilities using trickling filters and waste stabilization ponds that meet the requirements for "equivalent to secondary treatment." These "equivalent to secondary treatment" limitations are up to 45 mg/L (monthly average) and up to 65 mg/L (weekly average) for BOD_5 and TSS.

Therefore, POTWs that use waste stabilization ponds, identified in 40 C.F.R. section 133.103, as the principal process for secondary treatment and whose operation and maintenance data indicate that the TSS values specified in the equivalent-to-secondary regulations cannot be achieved, can qualify to have their minimum levels of effluent quality for TSS adjusted upwards.

Furthermore, in order to address the variations in facility performance due to geographic, climatic, or seasonal conditions in different states, the Alternative State Requirements (ASR) provision contained in 40 C.F.R. section 133.105(d) was written. ASR allows states the flexibility to set permit limitations above the maximum levels of 45 mg/L (monthly average) and 65 mg/L (weekly average) for TSS from lagoons. However, before ASR limitations for suspended solids can be set, the effluent must meet the BOD limitations as prescribed by 40 C.F.R. section 133.102(a).

Presently, the maximum TSS value set by the State of California for lagoon effluent is 95 mg/L. This value corresponds to a 30-day consecutive average or an average over duration of less than 30 days.

In order to be eligible for equivalent-to-secondary limitations, a POTW must meet all of the following criteria:

i. The principal treatment process must be either a trickling filter or waste stabilization pond.

ii. The effluent quality consistently achieved, despite proper operations and maintenance, is in excess of 30 mg/L BOD_5 and TSS.

iii. Water quality is not adversely affected by the discharge. (40 C.F.R. § 133.101(g).)

iv. The treatment works as a whole provides significant biological treatment such that a minimum 65 percent reduction of BOD5 is consistently attained (30-day average).

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 BOD_5, removal efficiency for BOD_5 and TSS, and pH as summarized in Table F-7, below. Previous Board Order R7-2009-0018 established technology-based effluent limitations to meet applicable secondary treatment standards for BOD_5, removal efficiency for BOD_5 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 4.3 MGD.

b. This facility, through use of the current treatment system (i.e., aeration lagoons) meets the technology-based regulations for the minimum level of effluent quality attainable by equivalent-to-secondary treatment for TSS. The previous Board Order R7-2009-0018, established technology-based effluent limits to meet applicable equivalent-to-secondary treatment standards for TSS. These effluent limitations were developed based on an average of the equivalent to secondary and conventional secondary treatment effluent limitations. These effluent limitations have been carried over from the previous Order. Further, mass-based effluent limitations are based on a design flow rate of 4.3 MGD. The average monthly and average weekly TSS effluent limitations were calculated as follows:

Average Monthly:

$$\frac{(2.5MGD * 30mg/L) + (1.8MGD * 45mg/L)}{(2.5MGD + 1.8MGD)} = 36mg/L$$

Average Weekly:

$$\frac{(2.5MGD * 45mg/L) + (1.8MGD * 65mg/L)}{(2.5MGD + 1.8MGD)} = 53mg/L$$

Table F-7. Summary of Technology-based Effluent Limitations

Parameter	Units	Effluent Limitation				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow	MGD	4.3	---	---	---	---
Biochemical Oxygen Demand (BOD) (5 day @ 20 Deg. C)	mg/L	30	45	---	---	---
	lb/day	1,076	1,614	---	---	---
BOD_5 % Removal	%	85	---	---	---	---
Suspended Solids, Total (TSS)	mg/L	36	53	---	---	---
	lb/day	1,291	1,901	---	---	---
TSS % Removal	%	85	---	---	---	---
pH	s.u.	--	--		6.0 – 9.0	---

[1] Mass-based effluent limitations are based upon a maximum flow of 4.3 MGD.

c. Basis for Limitations:

Table F-8. Basis for Limitations

Parameters	Basis for Limitations
Flow	The design capacity of the treatment plant is 4.3 MGD.
Biochemical Oxygen Demand (BOD) (5 day @ 20 Deg. C)	Discharges to waters that support aquatic life and are dependent on oxygen. Organic matter in the discharge may consume oxygen as it breaks down.
TSS	High levels of suspended solids can adversely impact aquatic habitat. Untreated or improperly treated wastewater can contain high amounts of suspended solids.
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.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

CWA Section 301(b) and 40 C.F.R. section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

Section 122.44(d)(1)(i) of 40 C.F.R. requires 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) U.S. EPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in 40 C.F.R. section 122.44(d)(1)(vi).

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

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

Board Order R7-2009-0018 included final effluent limitations for copper that were developed based on freshwater criteria. In 2007, the Discharger conducted a Biological Assessment at the location of the discharge from the Facility. This assessment determined that the applicable reach of the New River in the vicinity of the discharge from the City of Calexico Water Pollution Control Plant is characterized as freshwater; therefore, the criteria for the protection of freshwater aquatic life are applicable. On March 11, 2008, U.S. EPA issued a tentative approval of the findings in the Discharger's Biological Assessment and the application of water quality criteria for the protection of freshwater aquatic life. This Board Order R7-2014-0004 establishes effluent limitations based on the CTR and SIP freshwater criteria for the discharge.

Table F-9 summarizes the applicable water quality criteria/objectives for priority pollutants reported in detectable concentrations in the effluent and receiving water. The hardness and pH values used to conduct the Reasonable Potential Analysis (RPA) are 400 mg/L as $CaCO_3$ and 7.32 standard units, respectively. These criteria were used in conducting the RPA for this Order.

Table F-9. Applicable Beneficial Uses and Water Quality Criteria and Objectives

CTR No.	Parameter	Most Stringent Criteria	CTR/NTR Water Quality Criteria				
			Freshwater		Saltwater		Human Health for Consumption of:
			Acute	Chronic	Acute	Chronic	Organisms Only
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2	Arsenic	150	340	150	N/A		--
6	Copper	30.50	51.68	30.50			--
9	Nickel	168.54	1,515.92	168.54			4,600
10	Selenium	5.0	20.0	5.0			Narrative
12	Thallium	6.3	--	--			6.3
13	Zinc	387.83	387.83	387.83			--
14	Cyanide	5.2	22	5.2			220,000
54	Phenol	4,600,000	--	--			4,600,000
81	Di-n-Butyl Phthalate	12,000	--	--			12,000

"---" No water quality criteria available

3. Determining the Need for WQBELs

In accordance with section 1.3 of the SIP, the Colorado River Basin 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 Colorado River Basin 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 Colorado River Basin 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:

a. Trigger 1 – If the MEC is greater than or equal to the CTR water quality criteria or applicable objective (C), a limit is needed.

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

c. 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 Colorado River Basin Water Board to conduct the RPA. In accordance with section 1.2 of the SIP, the Colorado River Basin 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 November 2011 through December 2013. Based on the RPA, the discharge demonstrates reasonable potential to cause or contribute to an excursion above a water quality standard for cyanide. Data evaluated in the RPA for priority pollutants reported in detectable concentrations in the effluent as well as those pollutants for which effluent limitations existed in Board Order R7-2009-0018, are summarized in Table F-10.

Table F-10. 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	150.0	0.11	0.84	No	MEC < C & B <= C
6	Copper	30.50	30	0.11	No	MEC < C & B <= C
9	Nickel	168.54	3.09	3.09	No	MEC < C & B <= C
10	Selenium	5.0	0.003	0.2	No	MEC < C & B <= C
12	Thallium	6.3	0.268	0.268	No	MEC < C & B <= C
13	Zinc	387.83	19.2	0.16	No	MEC < C & B <= C
14	Cyanide	5.2	33.4	5.5	Yes	MEC >= C
54	Phenol	4,600,000	3.8	3.8	No	MEC < C & B <= C

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		
81	Di-n-Butyl Phthalate	12,000	6.5	ND (< 2)	No	MEC < C & B is ND

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

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 free cyanide as an example, the following demonstrates how WQBELs based on a freshwater criterion were established for Board Order R7-2014-0004. The process for developing these limits is in accordance with section 1.4 of the SIP. Attachment I summarizes the development and calculation of all WQBELs for this Order using the process described below.

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

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

ECA = C when C<= B,

Where C = The priority pollutant criterion/objective, adjusted if necessary for hardness, pH and translators. In this Order a hardness value from the effluent of 400 mg/L (as $CaCO_3$) was used for development of hardness-dependent criteria, and a pH of 7.32 was used for pH-dependent criteria.
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 cyanide, the applicable water quality criteria are:

ECA_{acute}= 22.0 µg/L

$ECA_{chronic}$= 5.2 µg/L

$ECA_{human\ health}$= 220,000 µg/L

Step 2: For each ECA based on aquatic life criterion/objective, determine the long-term average discharge condition (LTA) by multiplying the ECA by a factor

(multiplier). The multiplier is a statistically based factor that adjusts the ECA to account for effluent variability. The value of the multiplier varies depending on the coefficient of variation (CV) of the data set and whether it is an acute or chronic criterion/objective. Table 1 of the SIP provides pre-calculated values for the multipliers based on the value of the CV. Equations to develop the multipliers in place of using values in the tables are provided in section 1.4, Step 3 of the SIP and will not be repeated here.

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

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

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

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

No. of Samples Available	CV	$Multiplier_{acute}$	$Multiplier_{chronic}$
4	0.6	0.32	0.53

$LTA_{acute} = 22.0\ \mu g/L \times 0.32 = 7.04\ \mu g/L$

$LTA_{chronic} = 5.2\ \mu g/L \times 0.53 = 2.756\ \mu g/L$

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

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

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

LTA = 2.74 µg/L

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

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

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

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

For cyanide, the following data was used to develop the AMEL and MDEL for aquatic life using Table 2 of the SIP:

No. of Samples per Month	CV	$Multiplier_{MDEL}$	$Multiplier_{AMEL}$
4	0.6	3.11	1.55

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

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

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

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

For cyanide:

$AMEL_{human\ health}$ = 220,000 µg/L

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

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

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

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

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

Step 7: Select the lower of the AMEL and MDEL based on aquatic life and human health as the water-quality based effluent limit for the Order.

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

The lowest (most restrictive) effluent limits are based on aquatic life 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) **Enterococci.** 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 33 per 100 milliliters, nor shall any sample exceed the maximum allowable bacterial density of a MPN of 100 per 100 milliliters.

(c) **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, enterococci, and fecal coliform are incorporated in this Order. The bacterial indicators of E. coli, enterococci, 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, enterococci, 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.8 of this Fact Sheet, the anti-degradation 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. Based on information included in self-monitoring reports submitted by the Discharger, annual effluent samples for oil and grease indicate their presence in the effluent (detectable concentrations ranging from < 1.0 mg/L to 33.9 mg/L). Therefore, 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 New River. 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. Effluent monitoring data provided by the Discharger monthly during the permit term indicate oil and grease has been detected in the effluent.

Table F-11. 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]	---	---
Enterococci	MPN/100 ml	33[1]	---	100[2]	---	---
Fecal coliform	MPN/100 ml	200[1]	---	400[3]	---	---
Cyanide, Free	µg/L	4.3	---	8.5	---	---
	lbs/day[4]	0.15	---	0.30	---	---
Oil and Grease, Total	mg/L	---	---	25	---	---
	lbs/day[4]	---	---	897	---	---

[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 4.3 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 Colorado River Basin 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. The Discharger did not exceed any toxicity triggers during the permit term. 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 New River.

D. Final Effluent Limitation Considerations

1. Anti-Backsliding Requirements

Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. 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. The effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order, with the exception of effluent limitations for copper. The existing Board Order (R7-2009-0018) contains final effluent limitations for copper. Effluent limitations for copper are discontinued in this Board 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.

2. Anti-degradation Policies

Section 131.12 of the code of federal regulation requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires 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.

The source water for the community of Calexico and the entire Imperial Valley is the Colorado River. Average annual precipitation in the Imperial Valley is insignificant (~ 2 inches/year). The New River is an effluent dominated surface water that exclusively carries the discharge from the Discharger's WWTP; discharges from the City of Calexico, Date Gardens MHP (via the Rice Drain No. 3), Centinela State Prison (via the Dixie Drain 1-C), US NAS El Centro (via an unnamed tributary), and McCabe Unified School District WWTPs (via the Wildcat Drain); agricultural returns flows from approximately 30 Imperial Valley drains; and wastes from Mexicali, Mexico. The drains discharge tilewater and tailwater from Imperial Valley farmlands. The wastes from Mexico include agricultural runoff (tailwater), partially treated and untreated Municipal and Industrial wastewater, storm water, and urban runoff from the Mexicali Valley.

Tail water 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, BOD, and metals) that impaired the river's beneficial uses. Consequently, "background" water quality in New River before the outfall is difficult to establish for the purpose of conducting a typical anti-degradation analysis. In other words, the river has historically contained "background" water from farmland and Mexico that contain pollutants at concentrations that violate certain Basin Plan water quality objectives for those pollutants and adversely impact beneficial uses—in particular pesticides, silt/sediment, organics, nutrients, pathogens, metals, trash, and toxicity. The agricultural return flows from the Imperial Valley and Mexico are essentially free of BOD 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 City of Calexico Water Pollution Control Plant contains conventional pollutants (BOD, TSS, fecal coliform bacteria and pH) that are controlled through best practicable control technology currently available (BPT) and best available technology economically achievable (BCT) to prevent exceedance of the receiving water quality objectives for those pollutants and prevent adverse impacts on the REC I and REC II beneficial uses of the New River. The discharge also contains TDS, but at a concentration significantly below the 4,000 mg/L TDS WQO for the receiving water. Cyanide has been measured in the effluent and are being controlled through a WQBEL derived from water quality criteria established in the CTR. The established WQBELs for cyanide prevent adverse impacts of the REC I and REC II beneficial uses of the river and ensure compliance with the Basin Plan. Nevertheless, the BOD, TSS, bacteria, oil and grease, and cyanide in the discharge are likely to lower water quality in the receiving water (i.e., cause degradation). For conventional pollutants, including BOD, TSS, oil and grease and bacteria, this degradation is restricted to pollutants associated with domestic wastewater, is localized and will not result in water quality less than prescribed in the Basin Plan. For toxic pollutants, including cyanide, this degradation will be not significant once controlled and will not result in water quality less than prescribed in the Basin Plan.

The discharge from the City of Calexico Water Pollution Control Plant 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 WPCP incorporates:

a. technology for secondary treated domestic wastewater;

b. effluent disinfection;

c. an operation and maintenance manual;

d. staffing to assure proper operation and maintenance; and

e. 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 town of Calexico, which are an important benefit to the State. Based on the foregoing, the discharge as permitted herein is consistent with Resolution No. 68-16.

3. 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 BOD_5, TSS, and pH are specified in Federal regulations as discussed in 40 C.F.R. 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 40 C.F.R. section 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the CTR-SIP, which was approved by the U.S. EPA 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 U.S. EPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to U.S. EPA prior to May 30, 2000, but not approved by U.S. EPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 C.F.R. 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 – Not Applicable

F. Final Effluent Limitations

Table F-12 below summarizes the proposed effluent limitations for the discharge from the treatment system through Discharge Point 001. Proposed effluent limitations are based on secondary treatment standards, equivalent to secondary treatment standards, California Toxics Rule, and Colorado River Basin Plan Water Quality Standards.

The previous Board Order (R7-2009-0018) established effluent limitations for the discharge from the activated sludge treatment system and the aerated lagoon treatment system for TSS, BOD_5, TSS percent removal, BOD percent removal, and pH based on secondary treatment standards and equivalent to secondary treatment standards. The effluent limitations for BOD_5, TSS, BOD percent removal, TSS percent removal, and pH have been carried over to the proposed Order.

Also, this Order establishes a MDEL for oil and grease for discharges from the treatment systems, 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 Colorado River Basin Water Board General Order R7-2009-0300, NPDES Permit for Low Threat Discharges to Surface Waters Within the Colorado River Basin Region. The Colorado River Basin 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. Effluent limitations for E. coli, enterococci, and fecal coliform are carried over to the proposed Order. This Order discontinues effluent limitations for copper based on the results of the RPA. New effluent limitations for cyanide are established in accordance with requirements of the CTR and SIP. This Order proposes new effluent limitations for cyanide; therefore, the Discharger may request a Time Schedule Order or Cease and Desist Order (CDO) to comply with these effluent limitations. If a compliance schedule were granted, it would establish time schedules

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

1. **Mass-based Effluent Limitations**

Title 40 C.F.R. section 122.45(f)(1) requires effluent limitations be expressed in terms of mass, with some exceptions, and 40 C.F.R. 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 40 C.F.R. section 122.45(f)(1), some effluent limitations are not expressed in terms of mass, such as pH and temperature, and when the applicable standards are expressed in terms of concentration (e.g. CTR criteria and MCLs) and mass limitations are not necessary to protect the beneficial uses of the receiving water.

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

Mass (lbs/day) = flow rate (MGD) x 8.34 x effluent limitation (mg/L)

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

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

Flow rate = discharge flow rate (MGD)

2. **Final Effluent Limitations**

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

Table F-12. Summary of Final Effluent Limitations

Parameter	Units	Effluent Limitations					Basis
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Flow[1]	MGD	4.3	---	---	---	---	
Biochemical Oxygen Demand (CBOD) (5 day @ 20 Deg. C)	mg/L	30	45	---	---	---	40 C.F.R. part 133
	lbs/day[1]	1,076	1,614	---	---	---	
TSS	mg/L	36	53	---	---	---	40 C.F.R. part 133
	lbs/day[1]	1,291	1,901	---	---	---	
Oil and Grease, Total	mg/L	---	---	25	---	---	Basin Plan
	lbs/day[1]	---	---	897	---	---	
pH	Standard Units	---	---	---	6.0	9.0	40 C.F.R. part 133
Cyanide, Free	µg/L	4.3	---	8.5	---	---	CTR,

Parameter	Units	Effluent Limitations					Basis
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
	lbs/day[1]	0.15	---	0.30	---	---	SIP

[1] The mass-based effluent limitations are based on a design capacity of 4.3 MGD.

b. **Percent Removal**: The average monthly percent removal of BOD 5-day 20ºC 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 Colorado River Basin Water Board.

d. **Bacteria:** The bacterial concentrations in the wastewater effluent discharged to the New River 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. **Enterococci**. 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 33 per 100 milliliters, nor shall any sample exceed the maximum allowable bacterial density of a MPN of 100 per 100 milliliters.

iii. **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 Colorado River Basin Water Board that such an increase in total dissolved solids does not adversely affect beneficial uses of receiving waters.

G. Land Discharge Specifications – Not Applicable

H. Recycling 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 Colorado River Basin 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.

The discharge shall not cause the concentration of total dissolved solids in the New River 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 PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 C.F.R. section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 C.F.R. section 122.42, are provided in Attachment D. The discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 C.F.R. section 122.42.

Sections 122.41(a)(1) and (b) through (n) of 40 C.F.R. establish conditions that apply to all state-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) of 40 C.F.R. allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 C.F.R. section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 C.F.R. sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

B. Special Provisions

1. Reopener Provisions

This provision is based on 40 C.F.R. part 123. The Colorado River Basin 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 Colorado River Basin 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.

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 40 C.F.R. section 122.41(e) and the previous Order.

b. **Anti-degradation 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 anti-degradation policy.

c. **Operations Plan for Proposed Plant Expansion**. 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 40 C.F.R. 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 Monitoring and Reporting Requirements for the General Order were amended by Water Quality Order WQ 2008-0002-EXEC on February 20, 2008. 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 40 C.F.R. part 503.

b. **Pretreatment Program Requirements**. Requirements are based on the previous Order and 40 C.F.R. part 403.

c. **Collection Systems.** Requirements are based on 40 C.F.R. section 122.41.

6. Other Special Provisions

Special Provisions VI.C.6.a, VI.C.6.b, and VI.C.6.c are included to ensure the compliance with requirements established in Board Order R7-2014-0004, and are based on the previous Order, the CWA, U.S. EPA regulations, CWC, and Colorado River Basin Water Board plans and policies.

7. Compliance Schedules

The compliance schedules specify the deliverables and due dates for the TRE Work Plan, Pollutant Minimization Program, Spill Response Plan, Sludge Disposal Notification and Plan, Anti-degradation Analysis and Engineering Report for Significant Expansion, and Operations Plan for Proposed Plant Expansion for compliance with the Permit requirements.

VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 122.48 of 40 C.F.R. requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the Colorado River Basin Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP), Attachment E, establishes monitoring and reporting requirements that 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 40 C.F.R. 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 Colorado River Basin 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 Colorado River Basin 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.

Effluent monitoring requirements are largely unchanged from the previous Order. The addition of monitoring monthly for cyanide at monitoring location EFF-001 is due to the inclusion of new effluent limitations. Monthly monitoring for copper has been discontinued because the effluent limitations have been discontinued; however, regular monitoring for copper has been incorporated in the annual sampling for priority pollutants. Monitoring for oil and grease has been maintained annually to determine compliance with new effluent limitations established for oil and grease.

Monthly monitoring for ammonia nitrogen, nitrate, nitrite, total nitrogen, orthophosphate, total phosphorus, and sulfates has been continued in this permit. Quarterly monitoring for hardness has been continued in this permit.

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 permit requires chronic toxicity testing.

This requirement establishes conditions and protocol by which compliance with the Basin Plan narrative water quality objective for toxicity will be demonstrated. Conditions include required monitoring and evaluation of the effluent for 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 that the Discharger will continue 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 U.S. EPA (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 Colorado River Basin Water Board.

U.S. EPA has developed a new statistical approach that assesses the 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) (U.S. EPA 1991) and implemented under EPA's WET NPDES permits program) and the control within a WET test differ by an unacceptable amount; i.e., 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 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 want to modify its future WET tests by increasing the number of replicates over the minimum required (U.S. EPA 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 Board Order includes a reopener to allow the requirements of this section to be revised pending the issuance of final guidance or policies developed by either the U.S. EPA or State Water Board.

D. Receiving Water Monitoring

1. Surface Water

Surface water monitoring is required to determine compliance with receiving water limitations and to characterize the water quality of the receiving water pursuant to the Basin Plan. Monitoring requirements for the receiving water are largely unchanged from the previous Order. This Order continues monitoring for nutrients (e.g., nitrite, nitrate, ammonia nitrogen, total nitrogen, orthophosphate, and phosphorus) in the downstream receiving water in order to characterize that portion of the New River upon the completion of the Salton Sea Nutrient TMDL; monthly monitoring for nutrients is continued in the proposed Order. Additionally, annual monitoring for priority pollutants in the upstream receiving water has been continued, as required in accordance with the SIP. Visual monitoring of the receiving water is required to determine compliance with narrative surface water objectives for the receiving water.

2. Groundwater – Not Applicable

E. Other Monitoring Requirements

1. 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 40 C.F.R. part 503. The previous Board Order required sludge monitoring on an annual basis. This monitoring will be carried over from the previous permit.

2. Pretreatment Monitoring

The federal CWA section 307(b), and federal regulations, 40 C.F.R. part 403 require POTWs to develop an acceptable industrial pretreatment program. A pretreatment program is required to prevent the introduction of pollutants, which will interfere with treatment plant operations or sludge disposal, and prevent pass through of pollutants that exceed water quality objectives, standards, or permit limitations. These monitoring and reporting requirements are established pursuant to 40 C.F.R. part 403 to evaluate the industrial source of constituents in the wastewater.

VIII. PUBLIC PARTICIPATION

The Colorado River Basin Water Board has considered the issuance of WDR's that will serve as an NPDES permit for City of Calexico Water Pollution Control Plant. As a step in the WDR adoption process, the Colorado River Basin Water Board staff has developed tentative WDRs and has encouraged public participation in the WDR adoption process.

A. Notification of Interested Parties

The Colorado River Basin Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to

submit written comments and recommendations. Notification was provided through the following the Imperial Valley Press.

The public had access to the agenda and any changes in dates and locations through the Colorado River Basin Water Board's website at:
http://www.waterboards.ca.gov/coloradoriver

B. Written Comments

Interested persons were invited to submit written comments concerning tentative WDR's as provided through the notification process. Comments were due either in person or by mail to the Colorado River Basin Water Board at 73-720 Fred Waring Drive, Suite 100, Palm Desert, CA 92260.

To be fully responded to by staff and considered by the Colorado River Basin Water Board office, written comments were required to be received by 5:00 p.m. on April 11, 2014.

C. Public Hearing

The Colorado River Basin Water Board held a public hearing on the tentative WDR's during its regular Board meeting on the following date and time and at the following location:

Date:	May 8, 2014
Time:	9:00 AM
Location:	California Regional Water Quality Control Board Colorado River Basin Region Board Room 73-720 Fred Waring Drive, Suite 100 Palm Desert, CA 92260

Interested persons were invited to attend. At the public hearing, the Colorado River Basin Water Board heard testimony pertinent to the discharge, WDRs, and permit. For accuracy of the record, important testimony was requested in writing.

D. Reconsideration of Waste Discharge Requirements

Any person aggrieved by this action of the Colorado River Basin 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

For instructions on how to file a petition for review, see
http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml

E. Information and Copying

The Report of Waste Discharge, other supporting documents, and comments received 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 Colorado River Basin 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 WDR's and NPDES permit should contact the Colorado River Basin 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 Anders Wistrom at (760) 776-8964.

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 I.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.*

Table G-1. List of Analytical Methods

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-Al B (20^{th}) / SM3500-Al 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 (21st) / SM3500-Cr B (20th) / SM3500-Cr D (18th/19th) / SM3500-Cr C (20th) / SM3500-Cr E / ASTM D5257-97
Chromium, Total	SM3500-Cr B (20th) / SM3500-Cr D (18th/19th)
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 (20th) / SM3500-Cu D (18th/19th) / SM3500-Cu E (18th/19th) / SM3500-Cu C (20th) / 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, Free	ASTM D4282-02, ASTM D7237-10, OIA 1677(2009), ASTM D7365-09a (sample handling)
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 (18th/19th) / 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-Enterococus)
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 C.F.R. section 136.3 Table IB for more information concerning NPDES distillation requirement.
Unless otherwise noted, SM refers to 18^{th}, 19^{th}, 20^{th} editions of Standard Methods.
Please refer to 40 C.F.R. part 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

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
28	1,1-Dichloroethane	75343	EPA 8260B
29	1,2-Dichloroethane	107062	EPA 8260B
30	1,1-Dichloroethylene	75354	EPA 8260B
31	1,2-Dichloropropane	78875	EPA 8260B
32	1,3-Dichloropropylene	542756	EPA 8260B
33	Ethylbenzene	100414	EPA 8260B
34	Methyl Bromide	74839	EPA 8260B
35	Methyl Chloride	74873	EPA 8260B
36	Methylene Chloride	75092	EPA 8260B
37	1,1,2,2-Tetrachloroethane	79345	EPA 8260B
38	Tetrachloroethylene	127184	EPA 8260B
39	Toluene	108883	EPA 8260B
40	1,2-Trans-Dichloroethylene	156605	EPA 8260B
41	1,1,1-Trichloroethane	71556	EPA 8260B
42	1,12-Trichloroethane	79005	EPA 8260B
43	Trichloroethylene	79016	EPA 8260B
44	Vinyl Chloride	75014	EPA 8260B
45	2-Chlorophenol	95578	EPA 8270C
46	2,4-Dichlorophenol	120832	EPA 8270C
47	2,4-Dimethylphenol	105679	EPA 8270C
48	2-Methyl-4,6-Dinitrophenol	534521	EPA 8270C
49	2,4-Dinitrophenol	51285	EPA 8270C
50	2-Nitrophenol	88755	EPA 8270C
51	4-Nitrophenol	100027	EPA 8270C
52	3-Methyl-4-Chlorophenol	59507	EPA 8270C
53	Pentachlorophenol	87865	EPA 8270C
54	Phenol	108952	EPA 8270C
55	2,4,6-Trichlorophenol	88062	EPA 8270C
56	Acenaphthene	83329	EPA 8270C
57	Acenaphthylene	208968	EPA 8270C
58	Anthracene	120127	EPA 8270C
59	Benzidine	92875	EPA 8270C
60	Benzo(a)Anthracene	56553	EPA 8270C
61	Benzo(a)Pyrene	50328	EPA 8270C
62	Benzo(b)Fluoranthene	205992	EPA 8270C

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
63	Benzo(ghi)Perylene	191242	EPA 8270C
64	Benzo(k)Fluoranthene	207089	EPA 8270C
65	Bis(2-Chloroethoxy)Methane	111911	EPA 8270C
66	Bis(2-Chloroethyl)Ether	111444	EPA 8270C
67	Bis(2-Chloroisopropyl)Ether	108601	EPA 8270C
68	Bis(2-Ethylhexyl)Phthalate	117817	EPA 8270C
69	4-Bromophenyl Phenyl Ether	101553	EPA 8270C
70	Butylbenzyl Phthalate	85687	EPA 8270C
71	2-Chloronaphthalene	91587	EPA 8270C
72	4-Chlorophenyl Phenyl Ether	7005723	EPA 8270C
73	Chrysene	218019	EPA 8270C
74	Dibenzo(a,h)Anthracene	53703	EPA 8270C
75	1,2-Dichlorobenzene	95501	EPA 8260B
76	1,3-Dichlorobenzene	541731	EPA 8260B
77	1,4-Dichlorobenzene	106467	EPA 8260B
78	3,3'-Dichlorobenzidine	91941	EPA 8270C
79	Diethyl Phthalate	84662	EPA 8270C
80	Dimethyl Phthalate	131113	EPA 8270C
81	Di-n-Butyl Phthalate	84742	EPA 8270C
82	2,4-Dinitrotoluene	121142	EPA 8270C
83	2,6-Dinitrotoluene	606202	EPA 8270C
84	Di-n-Octyl Phthalate	117840	EPA 8270C
85	1,2-Diphenylhydrazine	122667	EPA 8270C
86	Fluoranthene	206440	EPA 8270C
87	Fluorene	86737	EPA 8270C
88	Hexachlorobenzene	118741	EPA 8260B
89	Hexachlorobutadiene	87863	EPA 8260B
90	Hexachlorocyclopentadiene	77474	EPA 8270C
91	Hexachloroethane	67721	EPA 8260B
92	Indeno(1,2,3-cd)Pyrene	193395	EPA 8270C
93	Isophorone	78591	EPA 8270C
94	Naphthalene	91203	EPA 8260B
95	Nitrobenzene	98953	EPA 8270C
96	N-Nitrosodimethylamine	62759	EPA 8270C
97	N-Nitrosodi-n-Propylamine	621647	EPA 8270C

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
98	N-Nitrosodiphenylamine	86306	EPA 8270C
99	Phenanthrene	85018	EPA 8270C
100	Pyrene	129000	EPA 8270C
101	1,2,4-Trichlorobenzene	120821	EPA 8260B
102	Aldrin	309002	EPA 8081A
103	alpha-BHC	319846	EPA 8081A
104	beta-BHC	319857	EPA 8081A
105	gamma-BHC	58899	EPA 8081A
106	delta-BHC	319868	EPA 8081A
107	Chlordane	57749	EPA 8081A
108	4,4'-DDT	50293	EPA 8081A
109	4,4'-DDE	72559	EPA 8081A
110	4,4'-DDD	72548	EPA 8081A
111	Dieldrin	60571	EPA 8081A
112	alpha-Endosulfan	959988	EPA 8081A
113	beta-Endosulfan	33213659	EPA 8081A
114	Endosulfan Sulfate	1031078	EPA 8081A
115	Endrin	72208	EPA 8081A
116	Endrin Aldehyde	7421934	EPA 8081A
117	Heptachlor	76448	EPA 8081A
118	Heptachlor Epoxide	1024573	EPA 8081A
119	PCB-1016	12674112	EPA 8082
120	PCB-1221	11104282	EPA 8082
121	PCB-1232	11141165	EPA 8082
122	PCB-1242	53469219	EPA 8082
123	PCB-1248	12672296	EPA 8082
124	PCB-1254	11097691	EPA 8082
125	PCB-1260	11096825	EPA 8082
126	Toxaphene	8001352	EPA 8081A

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

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

Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
Benzo (a) Anthracene	10	5		
1,2 Dichlorobenzene (semivolatile)	2	2		
1,2 Diphenylhydrazine		1		
1,2,4 Trichlorobenzene	1	5		
1,3 Dichlorobenzene (semivolatile)	2	1		
1,4 Dichlorobenzene (semivolatile)	2	1		
2 Chlorophenol	2	5		
2,4 Dichlorophenol	1	5		
2,4 Dimethylphenol	1	2		
2,4 Dinitrophenol	5	5		
2,4 Dinitrotoluene	10	5		
2,4,6 Trichlorophenol	10	10		
2,6 Dinitrotoluene		5		
2- Nitrophenol		10		
2-Chloroethyl vinyl ether	1	1		
2-Chloronaphthalene		10		
3,3' Dichlorobenzidine		5		
Benzo (b) Fluoranthene		10	10	
3-Methyl-Chlorophenol	5	1		
4,6 Dinitro-2-methylphenol	10	5		
4- Nitrophenol	5	10		
4-Bromophenyl phenyl ether	10	5		
4-Chlorophenyl phenyl ether		5		
Acenaphthene	1	1	0.5	
Acenaphthylene		10	0.2	
Anthracene		10	2	
Benzidine		5		
Benzo(a) pyrene		10	2	
Benzo(g,h,i)perylene		5	0.1	
Benzo(k)fluoranthene		10	2	
bis 2-(1-Chloroethoxyl) methane		5		
bis(2-chloroethyl) ether	10	1		
bis(2-Chloroisopropyl) ether	10	2		
bis(2-Ethylhexyl) phthalate	10	5		
Butyl benzyl phthalate	10	10		
Chrysene		10	5	
di-n-Butyl phthalate		10		
di-n-Octyl phthalate		10		
Dibenzo(a,h)-anthracene		10	0.1	
Diethyl phthalate	10	2		
Dimethyl phthalate	10	2		
Fluoranthene	10	1	0.05	
Fluorene		10	0.1	
Hexachloro-cyclopentadiene	5	5		

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

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

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

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

Techniques:

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

ATTACHMENT 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
14	Free Cyanide	220,000	2.01	441,362	22	0.32	7.06	5.2	0.53	2.74	2.74	1.55	4.26	3.11	8.54	4.3	8.5