Kennedy/Jenks Consultants

2775 North Ventura Road, Suite 100
Oxnard, California 93036
805-973-5700
FAX: 805-973-1440

Ventura Wastewater Reclamation Facility Recycled Water Project

Initial Study and Negative Declaration

October 2015

Prepared for

City of Ventura

Ventura Water
P.O. Box 99
Ventura, CA 93001

K/J Project No. 1444238*00

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Acronyms

CARB	California Air Resources Board
CAPCOA	California Air Quality Pollution Control Officers Association
CEQA	California Environmental Quality Act
CMXD	Coastal Mixed Use
EIR	Environmental Impact Report
ETS	Effluent Transfer Station
GHG	Greenhouse Gas
HC	Harbor Commercial
HCP	Habitat Conservation Plan
LARWQCB	Los Angeles Regional Water Quality Control Board
mgd	million gallons per day
ND	Negative Declaration
NPDES	National Pollutant Discharge Elimination System
RWQCB	Regional Water Quality Control Board
SCAQMD	South Coast Air Quality Management District
SCR	Santa Clara River
SWRCB	State Water Resources Control Board
TDS	Total Dissolved Solids
VCAPCD	Ventura County Air Pollution Control District
WRF	Water Reclamation Facility

Section 1: Negative Declaration

1.1 Project Information

Project Title: Ventura Wastewater Reclamation Facility Recycled Water Management Program

Lead Agency Name and Address: City of Ventura, Ventura Water Utility, 1400 Spinnaker Drive, Ventura, CA 93001

Contact Person and Phone Number: Gina Dorrington, Wastewater Utility Manager, Ventura Water. Email: gdorrington@venturawater.net, Office: 805.677.4131

Project Location: The City of San Buenaventura (City or Ventura) is located 62 miles north of Los Angeles and 30 miles south of Santa Barbara along the California coastline. The City currently occupies about 21 square miles being bound by the City of Oxnard to the south, by unincorporated Ventura County to the east and north, and by the Pacific Ocean to the west. The City provides water and wastewater services through the City's water utility, Ventura Water, which has operated the Ventura Water Reclamation Facility (WRF) since 1980.

General Plan Designation: All

Zoning: All

Description of Project: Due to current and anticipated drought conditions over the coming years, the City of San Buenaventura (Ventura, City) is expecting increased frequency and duration of potable water shortages. As such, the City is proposing to allow access to the Ventura WRF to obtain tertiary treated water for uses permitted under Regional Water Quality Control Board (RWQCB) Order No. 87-45, which allows for the delivery of recycled water for irrigation of golf courses, cemeteries, freeway landscapes, and landscapes in other areas where the public has similar access or exposure. The City has received multiple requests to obtain recycled water from their existing WRF by entities such as AERA Energy LLC, and the Ventura County Transportation Department, as well as residents within the community of Ventura. All entities have requested the use of recycled water, in lieu of potable water for their dust control and irrigation needs. One customer of the City for example, the City of Ventura Parks, Recreation and Community Partnerships Department (Parks Department), has requested additional recycled water to irrigate park trees. Without recycled water the irrigation of park trees may result in violation of drought conservation requirements and/or the loss of park trees. Users currently receive recycled water from existing infrastructure/pipelines throughout the City. This project will allow for users to obtain recycled water from the WRF from an existing fill station via mobile transport.

Surrounding land uses and setting: The project site is currently occupied by the Ventura WRF, a City owned-facility consisting of mostly industrial and harbor commercial disturbed land adjacent to the Santa Clara River Estuary. The WRF is located on Harbor Blvd and Spinnaker Drive within the City Boundaries. Use of recycled water would be utilized on landscapes throughout the City and unincorporated County.

Other Public Agencies whose approval is required:

The City would be in charge of overseeing recycled water distribution as part of the currently operating WRF, and no expansion of the WRF is required for the intended uses of this program. Any increase in recycled water use will result in a likewise decrease in the amount of wastewater discharge to the Santa Clara River Estuary. Because there is a decrease in discharge, the City is seeking a Wastewater Change Petition (WW0083) from the State Water Resources Control Board (SWRCB) Division of Water Rights documenting that the decrease will not result in significant environmental impacts or affect downstream users (which there are none). The wastewater change petition process requires a CEQA evaluation which the SWRCB will review prior to approving the petition. The City is also consulting with the SWRCB Division of Drinking Water (formerly the California Department of Public Health) for approval of the on-site fill station.

Implementation of the project will require that the City:

- Obtain approval from the SWRCB Division of Drinking Water for the expanded delivery of recycled water. The SWRCB, Division of Drinking Water has regulatory approval over public health and safety associated with recycled water use;

- Obtain a wastewater change petition (WW0083) from SWRCB, Division of Water Rights, as required under Water Code section 1211, for the decrease in wastewater discharge resulting from increased recycled water use from the Ventura WRF; and

- Obtain approval from the SWRCB Division of Drinking Water for the implementation of a residential and commercial fill station at the WRP facility.

The City filed Wastewater Change Petition WW0083 with the SWRCB Division of Water Rights on April 17, 2015, pursuant to Water Code section 1211. The notice was posted for thirty days, ending on May 18, 2015. The petition seeks to change the place of use of recycled water, currently on local golf courses and parks, to allow for expansion of uses to additional areas within the City for dust control and irrigation, thereby reducing the amount of treated wastewater the City WRF currently discharges to the SCR Estuary. During the SWRCB's noticing of the petition, no protests were received.

Part of the change petition process is the evaluation of the environmental impacts of the proposed uses, which is done through the California Environmental Quality Act (CEQA) process. The City will be the CEQA Lead Agency for the project.

Public Review: The public review period began on X, 2015 and ends on X, 2015.

Mitigation Measures: Mitigation measures are not included in the Negative Declaration as no significant impacts were identified in the Initial Study.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially significantly affected by this Project as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agricultural & Forestry Resources	☒ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology/Soils
☒ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials	☐ Hydrology/Water Quality
☐ Land Use/Planning	☐ Mineral Resources	☐ Noise
☐ Population/Housing	☐ Public Services	☐ Recreation
☒ Transportation/Traffic	☐ Utilities/Service Systems	☒ Mandatory Findings of Significance

DETERMINATION: (To be completed by the Lead Agency)

This Negative Declaration has been prepared in accordance with the CEQA Guidelines and relevant provisions of the California Environmental Act (CEQA) of 1970, as amended, and in accordance with City CEQA process and procedures. The analysis below is presented in the form of an Initial Study. Section 15063(c) of the CEQA Guidelines defines an Initial Study as the proper preliminary method of analyzing the potential environmental consequences of a project. Among the purposes of an Initial Study are:

1. To provide the Lead Agency (the City of San Buenaventura) with the necessary information to decide whether to prepare an Environmental Impact Report (EIR) or a Negative Declaration;

2. To enable the Lead Agency to modify a project, mitigating adverse impacts, thus avoiding the need to prepare an EIR (if possible); and

3. Assist in the preparation of an EIR, if one is required.

On the basis of this evaluation:

☒ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed Project, nothing further is required.

Signature	12/22/15 Date
General Manager Title	For

1.2 Organization of this Initial Study/Negative Declaration

This ND is comprised of five sections and technical appendices:

- **Section 1 – Negative Declaration.** This section provides a summary of the project and the City's determination pursuant to CEQA.
- **Section 2 – Project Description.** This section provides a discussion of the project location, a summary of the existing environmental conditions, and a detailed description of the proposed project.
- **Section 3 – Background Information.** This section provides background information for the project, the rules and regulations that govern the project, and a summary of associated reports and studies.
- **Section 4 – Environmental Checklist.** This section contains the CEQA checklist form that provides an overview of the project's potential impacts, as well as detailed analyses of the anticipated project-related and cumulative environmental impacts. This section also includes the mandatory findings of significance, as required by CEQA.
- **Section 5 – References.** This section identifies those references used in preparation of the Initial Study/Negative Declaration.
- **Section 6 – List of Preparers.** This section lists report authors and reviewers, including staff from Ventura Water and Kennedy/Jenks Consultants.

Section 2: Project Description

City of Ventura (Ventura Water) provides treatment services to approximately 98% of City residences, with a total population of over 109,000. Ventura Water also performs wastewater collection and treatment services. Residences and businesses within the City generate about 8 to 9 million gallons of wastewater per day (mgd), which is carried by more than 300 miles of sewer mains and 14 lift stations to the Ventura Water Reclamation Facility (WRF). The Ventura WRF is a tertiary treatment plant, located in the Ventura Harbor area near the mouth of the Santa Clara River, where the river meets the Pacific Ocean.

Currently, following a three-step treatment process at the facility, most of the treated wastewater is discharged into the Santa Clara River Estuary (Estuary) after flowing through a series of wildlife ponds for about four days or delivered to reclaimed water customers.

The WRF includes pump stations and pipelines for water reclamation, with an average of over 700,000 gallons (approximately 3% of total wastewater flow) reclaimed daily. The reclaimed water system provides water for irrigation of nearby golf courses, parks and similar landscape areas as permitted by the RWQCB Order No. 87-45. This reuse is an integral part of the water efficiency program and represents a reduction in demand on the drinking water supply each year of approximately 300 million gallons.

Due to current and anticipated drought conditions over the coming years, the City is expecting increased frequency and duration of potable water shortages. Recently the City has received multiple requests to obtain recycled water from the WRF, to serve commercial and industrial entities such as AERA Energy LLC, and the Ventura County Transportation Department, the Parks Department as well as residents within the community. All entities have requested the use of recycled water, in lieu of potable water, for their dust control and irrigation needs.

As such, the City is proposing to allow access to the Ventura WRF to obtain tertiary treated water for uses permitted under RWQCB Order No. 87-45 via an existing fill-station at the WRF property.

Users would be allowed to obtain recycled water from the WRF via tanker trucks and vehicles.

The current production level of the City's WRF is an average of 8.5 million gallons per day (mgd). Current recycled water uses utilize on average 0.5 mgd. Additional uses discussed in this analysis increase the recycled water use to about 1.25 mgd, well within the ability of the facility to provide the additional volume.

As part of the project, the City is proposing to expand the current uses of recycled water, by allowing residential and commercial customers to an existing fill station where residents and commercial users can haul recycled water from the WRF for their use. The City would be in charge of overseeing recycled water distribution as part of the currently operating WRF, and no expansion of the WRF is required.

The purpose of this report is to provide information on the City's WRF, planned uses of recycled water including additional truck transportation for such water, evaluate the environmental

impacts, and demonstrate the reduction in discharge to the Estuary and the use of the on-site fill station impacts are less than significant.

2.1 Ventura Water Reclamation Facility

The City owns and operates the Ventura WRF, which discharges tertiary treated municipal wastewater to the Santa Clara River Estuary (Estuary) just south of the City near the mouth of the Santa Clara River (Figure 1 in Appendix A). The design capacity of the WRF is 14 mgd but discharge is limited to 9 mgd[1]. This City is currently undertaking multiple studies to investigate the appropriate amount of effluent discharge from the WRF for protection of habitat and ecology of the Estuary. These studies are briefly discussed in Section 3.2. Current permitting of the facility allows for the continuation of the discharge to the Estuary, but requires the City to perform the mentioned extensive studies. While these studies are related to the project being proposed, they regard the existing NPDES permit (CA0053651) and how that permit will be changed in the future. The proposed uses evaluated here do not interfere with that process. Importantly, the current findings from these studies demonstrate that the potential decrease in discharge to the Estuary from the proposed project will not harm beneficial uses of the Estuary.

The Ventura WRF produces Title 22 tertiary treated water Recycled water from the Ventura WRF is used for general irrigation of golf courses, parks and similar landscape areas. Existing recycled water customers include: golf courses - Olivas Links Golf Course and Buenaventura Golf Course; parks - Marina Park; and landscape irrigation near Olivas Drive and in the Harbor area. If regulatory limits are met, Ventura WRF recycled water is approved for unrestricted irrigation of golf courses, parks, playgrounds, school yards, and other landscaped areas with similar public access (unrestricted reuse).

The remaining treated wastewater is conveyed via the effluent transfer station (ETS) to a 20-acre system of wildlife ponds and flows from west to east through "Bone," "Snoopy" and "Lucy" (see Figure 2 in Appendix A) prior to being discharged through the outfall junction structure to the Santa Clara River Estuary via an effluent channel. There are losses due to evaporation and percolation in the wildlife ponds prior to final discharge of effluent to the Estuary. The average annual effluent flow (as measured at the ETS) from 2007 to 2014 was 8.5 mgd (Ventura Water Annual Reports, 2007-2014).

Differences between the influent flows and the effluent flows are due to recycled water streams and the diversion of water to the existing reuse system.

[1] The design flow of 14 mgd is limited to 9 mgd discharge to the Santa Clara River Estuary, the 2000-2008 annual average flow, at which time the Regional Water Board mandated studies to determine if the estuary water quality and beneficial uses were enhanced by the effluent.

2.2 Current Recycled Water Users and Demands

Recycled water from the Ventura WRF is used for general irrigation of golf courses, parks and similar landscape areas. Existing recycled water customers are listed in below. See Figure 3 in Appendix A for location information.

- Buena Ventura Golf Course
- Olivas Links Golf Course
- MBL Golf Course LLC
- Harbortown Point
- Ventura Port District (2 sites)
- Marina Park
- MBL Properties Stormwater Detention Basin
- MBL Olivas at Bunsen
- MBL Olivas at Seaborg
- Olivas Adobe
- Four Points Sheraton Hotel
- San Buenaventura Outside Irrigation Contracts
- Holiday Inn Express

The recycled water demand varies seasonally with minimum demands in the winter and maximum demands in the summer. Monthly demands range from approximately 0.07 mgd to 1 mgd, with an average demand of 0.5 mgd. The demands vary significantly across the recycled water customers. Two golf course customers, Olivas Links Golf Course and the Buenaventura Golf Course, account for between 78 percent and 91 percent of the total recycled water demand. As a result of this project, the increase in landscape irrigation is anticipated to increase to about 1.25 mgd, and correspondingly, the reduction in effluent to the Santa Clara River Estuary by the same amount, a small change from existing conditions. Please refer to Appendix B for the proposed recycled water use calculations.

2.3 Proposed Change in Recycled Water Use

With California facing one of the most severe droughts on record, Governor Brown declared a drought State of Emergency in January of 2014 and directed state officials to take all necessary actions to prepare for water shortages. To do so, the City has put mandatory water restrictions in place that limit the amount of potable water that residents can use, which include both indoor and outdoor uses. As a result, many water users are requesting to investigate use recycled water to offset activities currently served potable water such as dust control, median irrigation, etc. This section provides a summary of the proposed additional uses of recycled water from the Ventura WRF. No change is being proposed to the current discharge location; discharges will still flow to the Estuary. However, increased use of recycled water will result in a reduction in discharge to the Estuary. The City has retained all rights to use recycled water produced from wastewater originating in its service area. Treated wastewater discharged to the Estuary is not subject to downstream water rights, as there are no users of the SCR located downstream of the Ventura WRF discharge to the Santa Clara River Estuary. No construction is involved with the enhanced uses, only the use of vehicles to haul the recycled water from the Ventura WRF to their intended use areas via an existing fill-station at the WRF facility.

The Ventura WRF filling station is within the WRF plant premises, on the main plant road at the Buena Pump Station, as shown in Figure 4 in Appendix A. In order to make the filling station accessible to trucks and vehicles, minor changes to appurtenances is required. To access the filling station, trucks will enter and exit the plant from Spinnaker Drive. The designated truck route through the plant to the filling station is also shown on Figure 4.

2.3.1 AERA Energy, LLC

AERA Energy, LLC (AERA) is an oil and gas production facility with multiple locations within California; including an onshore facility that covers approximately 4,300 acres in Ventura County (see Figure 5 in Appendix A). AERA is requesting recycled water for dust control purposes on some of its oilfield operations to minimize their use of potable water for the same purpose. AERA proposes to designate 6 water trucks to carry the recycled water, each holding up to 4,000 gallons. Each truck fills up approximately 3-5 times per day. To begin, all 6 trucks are proposed for use at the start of the day with recycled water. If the need to save potable water increases as a result of the drought, AERA would consider increasing the number of times per day that recycled water is utilized could increase with approval by the City.

AERA is proposing to use a minimum of 0.07 mgd to a maximum of 0.12 mgd is proposed for recycled water use. This is approximately 0.82 to 1.4% of the Ventura WRF's annual average effluent discharge of 8.5 mgd. See Appendix B for the proposed use calculations.

2.3.2 City of Ventura, Ventura County, and State Department Requests

Departments in both the City and the County are requesting to replace a portion of the potable water currently used for dust control and irrigation with recycled water for the same purposes. One such entity, the Ventura County Department of Transportation (Transportation Department) is responsible for planning, designing, funding, building, operating and maintaining approximately 544 miles of roadway, bridges, drainage and related transportation facilities in Ventura County. The Transportation Department is requesting to utilize recycled water for dust control and maintenance of unimproved, earth, shoulder areas that are used as staging areas for construction projects and for emergency equipment and personnel. They are proposing to designate 2 water trucks that hold 3,000 gallons each for the recycled water application.

The Transportation Department purchases water for construction from various purveyors. In FY 2013-2014 they purchased approximately 790,000 gallons. In FY 2012-2013 they purchased 478,000 gallons. And in FY 2011-2012 they purchased 400,000 gallons. Review of records for the County's two water trucks for the recent period (July 2014 to April 2015) indicates that on any given day typically only one water truck delivery is made to any of the construction areas. In the recent past no more than three water truck trips were used on any day.

Based on this usage, the Transportation Department is proposing to use 0.003 mgd at a minimum to a maximum of 0.009 mgd recycled water from the Ventura WRF. This is approximately 0.011 to 0.024% of the Ventura WRF's annual effluent flow of 8.5 mgd. See Appendix B for the proposed use calculations.

The locations of the proposed construction areas are located on multiple medians and shoulders, located throughout Ventura. The location information for these areas are provided in Figure 6 in Appendix A. The Department's trucks will utilize the same filling station within the WRF plant premises, as shown on Figure 4.

Similarly, the Ventura City Department of Parks, Recreation and Community Partnerships (City Parks Department) as well as the San Buenaventura State Park's Department requested recycled water from the City's WRF. The City Parks Department is a current recycled water user, and their use averages 0.61 mgd over the period of 2007-2014. Currently, the continued water conservation requirements are forcing the City to either pay penalty fees for continued irrigation or suffer costs in losing trees. The trees contribute to the beautification of the City and enhance the green areas and overall wellbeing of the community. The City Parks Department is therefore requesting to utilize additional recycled water for irrigation purposes and is proposing to designate 1 water truck that holds 4,000 gallons each for the recycled water application. The truck would fill up between 1 to 5 times per day. See Figure 7 in Appendix A for use areas.

The San Buenaventura State Park's Department proposes to use between 200 to 300 gallons per day for irrigation, or about 0.00025 mgd.

Based on these entities current usage of potable water for irrigation they are proposing to use an additional 0.004 mgd at a minimum to a maximum of 0.02 mgd recycled water from the Ventura WRF. This is approximately 0.05 to 0.24% of the Ventura WRF's annual effluent flow of 8.5 mgd. See Appendix B for the proposed use calculations. See Figure 8 in Appendix A for a schematic of all proposed users.

2.3.3 Ventura Residential Users

Demand data from the 2010 City of Ventura Urban Water Management Plan (UWMP) (Kennedy/Jenks, 2011) was used to estimate the amount of recycled water that could come from the residential sector of the City. According to the 2010 UWMP, the residential sector of the City is comprised of approximately 23,200 single family and 2,400 multi-family residential accounts, represents approximately 61 percent of the City's total water consumption. Year 2015 total residential water use is estimated at 13,800 AF. Typically, in southern California, 75% of residential water use is used outdoors, which would equate to about 10,350 AF. For this analysis, it is proposed that at minimum residents may supplement 5% of their outdoor water use with recycled water, equaling 518 AF. At maximum, if they supplement their outdoor use by 20% it would equate to 2,070 AF. See Appendix B for the proposed use calculations.

Similar types of residential recycled water distribution programs have recently been approved for the Las Virgenes Municipal Water District in Southern California and in Northern California by the Dublin San Ramon Services District (Dublin).

The Dublin program served by its Residential Fill Station is roughly 154,450 persons. However, unlike most agencies with fill stations they allow anyone (whether or not they are in their service area to use their fill stations). Dublin assumes approximately 95% of their users are within their service area, for a population of 146,728 persons. As of October 2015, they have about 3,557 people who have filled out User Agreements to use the fill stations (personal communication, Levi Fuller, October 8, 2015), approximately 2.5% of their population. Depending on time of

year and weather, they have between 300 and 1,200 customer trips each day, with a summer average of about 900 customer trips each day (or about 25% of residents with user agreements).

Using a similar analysis for the City's residential program, an estimated 2,960 persons could sign up to take recycled water from the City's fill-station at the WRP; this is 2.5% of the City's residential 2015 population (118,416 persons). If 25% of those made trips to the WRP each day, that would be an average of approximately 740 trips per day. Please see Appendix B for calculations.

2.4 Recycled Water Fill Station and Training

The recycled water fill station is located at the WRF location, located at 1400 Spinnaker Drive in Ventura. All entities wishing to obtain recycled water from the WRF must undergo training on the safe use of recycled water prior to handling Title 22 tertiary-treated recycled water. All users are also responsible for following and implementing stipulations contained in Sections B, C and D of Order No. 87-45.

The City will submit to the RWQCB Division of Drinking Water a program description and procedures for operation of the fill station. The information is provided in draft form in Appendix E.

2.5 Traffic Management

The proposed additional uses would require truck or vehicular transport to pick up and deliver the recycled water to the proposed use sites. AERA Energy, LLC proposes to designate 6 water trucks that will each fill up approximately 3-5 times per day in order to use recycled water in-lieu of potable water for dust control purposes. With up to 5 fill-ups per day, this new use of recycled water from the WRF would result in approximately 420 additional vehicle miles driven (6 trucks x 5 trips x 14 miles round trip = 420 miles) per day. The Ventura County Department of Transportation is proposing to designate 2 water trucks to haul the recycled water from its Saticoy location to its numerous sites within the City. Since the sites of use are in multiple locations within and around the City of Ventura, including some within the general vicinity of the WRF, the trip to pick up recycled water from the WRF is not considered to add substantial vehicle miles driven to normal operations.

The City Parks Department will utilize 1 truck at minimum 1 time per day to up to 5 times per day, above existing uses to irrigate trees throughout the City limits. At a maximum of 5 fill-ups per day to use sites not currently receiving recycled water via existing pipe, this new use of recycled water from the WRF is estimated at approximately 50 additional vehicle miles driven (1 truck x 5 trips x 10 miles round trip (estimate) = 50 miles) per day.

The transportation of recycled water by these residential homeowners may result in additional car trips, however the number of additional vehicle miles driven associated with these car trips is uncertain. It is difficult to discern whether or not vehicle miles driven for recycled water transports will be entirely new and whether vehicle miles traveled will significantly increase as a result of the project. It is possible, for example, that transportation of the recycled water could be combined with car trips already undertaken under existing conditions. Although the increase in the number of people and/or trucks visiting the Ventura WRF created by the project could

potentially introduce more traffic, the project includes provisions to minimize risk. However, in order to provide a potential estimate of residential car trips a calculation was made based on the usage at a similar facility in northern California, at the Dublin San Ramon Water District. That program assumes on average 900 trips per day in the summertime, which is about 25% of the total number of persons that are signed up for their program. Using this as a guide, the City's program could potentially have 2,960 user agreements, equating to a similar 740 trips per day on average.

The City Traffic Department was consulted regarding the proposed traffic to and from WRF resulting from the project. Video documentation was provided to the City to document road conditions and potential sensitive receptors along the proposed routes that the trucks with recycled water would take. While the City found no apparent impact of significance as a result of the project, they have requested the inclusion of the following traffic management measures to ensure associated traffic is managed appropriately (Personal Communication, Rick Gallegos, City of Ventura Traffic Engineering and Parking, May 22, 2015). The City Traffic Department confirmed and agreed with the assessment that traffic impacts will be negligible, and therefore no need for a full Level of Service (LOS) evaluation is required.

The following are traffic control measures that will be a part of the proposed project. Additional information pertaining to operation of a truck filling station at the WRP is provided in Appendix E.

- Proper signage will be posted on all vehicles utilized to haul recycled water in accordance with Ventura Water guidelines, as well as posted along areas where recycled water will be used. See http://www.compliancesigns.com/recycled-water.shtml for example signage.

- Signage indicating truck turning and truck crossing, such as the one below from the Manual of Traffic Signs (http://www.trafficsign.us/650/warn/w8-6.gif) shall be posted along Spinnaker Boulevard to alert pedestrian traffic of intermediate truck traffic to and from the Ventura WRF.

- Truck traffic shall be confined to off-peak hours of 8:30am to 3:30pm, Monday through Friday only.

- Before any expansion of the recycled water program, the City will be required to consult with the City Traffic Department and put in place recommendations from the Department including but not limited to a Traffic Control program that conforms and abides by the C.V.C. and Park 6 of the California Manual of Uniform Traffic Control Devices.

- While not anticipated due to the minor increase in truck traffic to and from the Ventura WRF, any damage to the City roadway surfaces as a result of the project shall be repaired at the City's expense, including job-site ingress/egress points and all streets used as a haul route.

- Tank trucks must be equipped with an air gap.

- Truck owners must show proof of valid truck registration (a copy for each truck must be attached to permit application).

- Before trucks can be filled for the first time, all truck owners and/or drivers are required to attend a brief on-site orientation/training in order to learn about using the filling station and the proper handling and use of recycled water.

Section 3: Background Information

3.1 Rules and Regulations

The SWRCB and Los Angeles Regional Water Quality Control Board (LARWQCB) have regulatory authority over projects using recycled water. The following sections summarize existing regulations that govern recycled water use by the City.

3.1.1 California Code of Regulations, Title 22

Recycled water in California is regulated by the State Water Resources Control Board (SWRCB) Division of Drinking Water[2] and the individual RWQCBs. Requirements are contained in the California Code of Regulations, Title 22, Division 4, Chapter 3 Water Recycling Criteria (Division of Drinking Water, 2014). Recycled water produced at the Ventura WRP meets Title 22 requirements for tertiary treated recycled water, defined as:

"Disinfected tertiary recycled water" means a filtered and subsequently disinfected wastewater that meets the following criteria: (a) The filtered wastewater has been disinfected by either: (1) A chlorine disinfection process following filtration that provides a CT (the product of total chlorine residual and modal contact time measured at the same point) value of not less than 450 milligram-minutes per liter at all times with a modal contact time of at least 90 minutes, based on peak dry weather design flow; or (2) A disinfection process that, when combined with the filtration process, has been demonstrated to inactivate and/or remove 99.999 percent of the plaque forming units of F-specific bacteriophage MS2, or polio virus in the wastewater. A virus that is at least as resistant to disinfection as polio virus may be used for purposes of the demonstration. (b) The median concentration of total coliform bacteria measured in the disinfected effluent does not exceed an MPN of 2.2 per 100 milliliters utilizing the bacteriological results of the last seven days for which analyses have been completed and the number of total coliform bacteria does not exceed an MPN of 23 per 100 milliliters in more than one sample in any 30 day period. No sample shall exceed an MPN of 240 total coliform bacteria per 100 milliliters."

3.1.2 Los Angeles Regional Water Quality Control Board Order 87-45

LARWQCB Order No. 87-45 regulates the conditions under which the City is allowed to distribute recycled water to users. Order No. 87-45 indicates that recycled water may be used for the irrigation of golf courses, cemeteries, freeway landscapes, and landscapes in other areas where the public has similar access or exposure. Order No. 87-45 also includes recycled water quality monitoring and reporting requirements. Allowed recycled water use areas and provisions under which users are permitted and inspected are described by the Order.

Under Order No. 87-45, the City is the party responsible for ensuring recycled water is of sufficient quality and for notifying the LARWQCB of any violations. It is the City's responsibility to document effluent quality and file reports on effluent quality and water usage by permitted users in reports to the Regional Board. The City is also responsible for inspecting and

[2] The Drinking Water Program for the California Department of Public Health (CDPH) moved to the SWRCB and was renamed the Division of Drinking Water as of July 1, 2014.

documenting that recycled water users are in compliance with order requirements. This permit is provided as Appendix C.

3.1.3 Los Angeles Regional Water Quality Control Board Order R4-2013-0174 (NPDES No. CA0053651)

The Ventura WRF has been granted a National Pollutant Discharge Elimination System (NPDES) permit to discharge tertiary treated wastewater to the Santa Clara River Estuary from the LARWQCB. The Ventura WRF currently discharges to the Estuary under existing NPDES permit (CA0053651) which was adopted by the LARWQCB on March 6, 2008, and updated in November of 2013. The next update of the permit is due in 2019.

Under the Water Quality Control Policy for the Enclosed Bays and Estuaries of California, discharges of municipal wastewater to enclosed bays and estuaries are to be phased out except in circumstances where the discharge is shown to enhance the quality of receiving waters. To address this issue regarding a finding of enhancement, the LARWQCB required the City to complete the "Special Studies for the Santa Clara River Estuary" as a condition of the City's 2013 NPDES discharge permit (CA0053651). See section 3.2 for brief details on these additional studies. This permit is provided as Appendix D.

3.2 Previous Reports and Studies

As mention above, the Ventura WRF treats the wastewater generated by the City's 30,000 homes and businesses to stringent standards before releasing the clean water to the Santa Clara River Estuary. This discharge, regulated by NPDES permit CA00053651, is renewed every five years. During the 2008 re-issuance process, controversy arose on whether or not the City should be permitted to continue release of its current discharge volume into the Estuary, or stop it all together. The City is currently evaluating all alternatives for proposed discharge to allow for the best ecologically sustainable alternative since the discharge supports the Estuary's endangered species and enhancement of its habitat value. The NPDES permit thus allows continuation of the discharge to the Estuary, but requires the City to perform three technical studies briefly described below.

The current findings of the special studies suggest that an average annual volume of 4 to 5 mgd of Ventura WRF effluent should remain as discharge, via treatment wetlands, to the Estuary to protect beneficial uses. The study is ongoing and recommendations from the RWQCB will be outlined in the next iteration of the WRF's NPDES permit.

As the demand for the proposed project is estimated to increase the recycled water use by an average 1.3 mgd to a maximum of 2.0 mgd, the resulting decrease in effluent discharge to the Estuary would be an average 7.2 mgd to a maximum decrease of 6.5 mgd. Therefore, there is more than adequate recycled water production and effluent flow to discharge 4 to 5 mgd per the recommended studies. See Appendix B for use calculations.

In addition, while these studies are related to the project being proposed, they regard the NPDES permit and how that permit will be changed in the future. Thus the outcomes of these studies do not affect the current proposed uses at this time as the expected increase in recycled water and resulting decrease in effluent is well within the parameters of these studies. The

study results of the following reports will be discussed in the updated NPDES permit in 2019. The findings of these studies demonstrate that the potential decrease in discharge to the Estuary from the proposed project will not harm the Estuary.

The City set up a website for the Santa Clara River Special Studies which can be accessed here http://www.cityofventura.net/rivers.

3.2.1 Treatment Wetlands Feasibility Study

This study (Carollo, 2010a) evaluated the feasibility of implementing a constructed treatment wetland to further improve the water quality of the Ventura WRF tertiary discharge by reducing nutrients and other constituent concentrations to further promote receiving water quality. The study found that treatment wetlands could provide additional nutrient reduction for the Ventura WRF discharge thus improving the quality of the water that is discharged to the Estuary. In addition, wetlands could provide beneficial use through creation of wetland habitat.

3.2.2 Estuary Subwatershed Study

This study (Carollo, 2011) evaluated the physical and biological function of the Estuary affected by the discharge to determine whether the discharge to the Estuary provides an ecological enhancement now or under different conditions such as a decreased discharge to the Estuary.

3.2.3 Recycled Water Market Study (Phase 1)

This study (Carollo, 2010b) evaluated and quantified the feasibility of expanding the City's existing recycled water system through evaluation of potential users within a five-mile radius of the Ventura WRF.

3.2.4 Recycled Water Market Study (Phase 2)

This study (Carollo, 2014) builds on the Phase 1 study and identifies additional potential uses/market for recycled water through discussion with City staff and through stakeholder input.

3.2.5 Nutrient and Toxicity Special Study and Groundwater Special Study

In October 2014, the LARWQCB approved the work plans for two additional studies; a nutrient and toxicity special study, and a groundwater special study. The nutrient and toxicity study will identify the cause of nutrient, dissolved oxygen and toxicity impairments in the Estuary. The groundwater study will document the interaction between the estuary, discharge and groundwater and evaluate the beneficial use of water impacted by the WRF discharge.

3.2.6 Tertiary Treated Consent Decree

Related to the studies mentioned above is the Tertiary Treated flows Consent Decree and Stipulated Dismissal with Heal the Bay and Ventura Coastkeeper, effective March 30, 2012. The settlement sets a goal to identify, select, plan, design, engineer, environmentally review,

permit and construct infrastructure projects that have the capacity to reduce, by 2025, the amount of water entering the Estuary by up to 100 percent (subject to regulatory, technical and financial feasibility) by diverting it to other recycled and reclaimed water uses, including uses that improve local supply and enhance conservation. At the same time, however, the Consent Decree obligates and allows the City to reduce discharges to the Estuary only by that amount approved and permitted by state and federal regulatory agencies with jurisdiction over discharges, the Estuary, and the endangered and threatened species and habitats of the Estuary. These documents can be found on the City of Ventura's website at: http://www.cityofventura.net/water/wastewater.

Section 4: Environmental Checklist

The City of Ventura, as the CEQA Lead Agency, has prepared this Initial Study/Negative Declaration to identify potential environmental impacts associated with the proposed project. This document includes a checklist for each resource topic, supporting explanations, and a discussion of mitigation measures that have been incorporated into the proposed project design to minimize potential impacts in each resource area.

A brief explanation is provided for all answers. Responses take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

A "No Impact" answer is adequately supported if the referenced information source(s) show that the impact simply does not apply to projects like the one involved (e.g., the Project falls outside a fault rupture zone). A "No Impact" answer is explained where it is based on project-specific factors as well as general standards (e.g., the Project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

When determined that a particular physical impact may occur, the checklist response indicates whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

When determined that a physical impact may occur, but that the level of effect has been demonstrated to be less than potentially significant, the checklist response may indicate if the impact is "Less Than Significant Impact" based on substantial evidence. "Less Than Significant With Mitigation Incorporated" would apply where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." As appropriate, mitigation measures are identified along with a brief explanation how they reduce the effect to a less than significant level.

Earlier CEQA analyses may be relied upon to provide the necessary analysis for the project when a project potential environmental effect has been adequately analyzed in an earlier EIR or negative declaration (pursuant to CEQA Guidelines Section 15063(c)(3)(D)). Mitigation measures from earlier CEQA analyses may be incorporated to make a finding that a potential environmental impact of the project will be "Less Than Significant With Mitigation Incorporated." References to information sources for potential impacts (e.g., general plans, zoning ordinances) and/or previously prepared CEQA documents are identified in each environmental issue category, with the full reference list at the end of the analysis.

4.1.1 Aesthetics

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Resource Evaluation

a) and c) Scenic resources within the study area, which are of considerable value include the coastline of the Pacific Ocean to the West, the mountains and rock formations in the northeastern portion of the City of Ventura, as well as open areas along the major local riparian systems, such as the Santa Clara River. The City of Ventura General Plan EIR describes the Santa Clara River as an important visual element in creating a scenic approach to the City from the south (City of Ventura, 2005). The WRF is located approximately one quarter mile to the east of the nearest coastline and adjacent to the Santa Clara River Estuary. Sites of recycled water use are scattered throughout the City and portions of the unincorporated County. Intermittent truck traffic occurs regularly in this area, and the small increase in anticipated truck trips will not impact the aesthetic quality of surrounding vistas.

The proposed Project will involve recycled water filling operations at the facility's existing filling station, as well as truck or other vehicle transport of the recycled water from the WRF to locations of use. The Project will not involve construction of facility improvements that may obstruct existing views of the local scenic resources or otherwise considerably change the visual characteristics of the existing site. In addition, increased vehicle traffic related to the hauling and transportation of the recycled water would be negligible in comparison to existing traffic conditions, as the majority change resulting from the project would be the switch from hauling potable water to hauling reclaimed water. Thus the traffic doesn't necessarily increase, rather the routes of existing traffic is changed and would therefore not result in substantially adverse effects on scenic views, or substantially degrade the existing visual character or quality of the study site. Please see Section 2.5 and Appendix B. Impacts are less than significant.

b) The Project will not involve activities, such as construction, which would result in damage to scenic resources. Traffic related to the hauling of recycled water would be limited to existing roadways and would not have potential for damage to scenic resources. A portion of State Highway 33 is the only officially designated State Scenic Highway within Ventura County. However, the designated portion stretches from northwest of the City of Ojai to the western County boundary and thereby lies outside of the anticipated areas of use. There are no associated impacts.

d) The WRF has existing lighting features, including nighttime safety lighting, as part of normal operations. Additional lighting fixtures will not be added as part of the Project. Levels of lighting from vehicles that haul the recycled water are not anticipated to be substantially different from existing conditions. Therefore, the Project is not anticipated to contribute a new source of substantial light or glare to the site. Impacts are less than significant.

Mitigation Measures

No mitigation measures are necessary for aesthetic resources.

4.1.2 Agricultural and Forestry Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing	☐	☐	☐	☒

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?				

Resource Evaluation

a) through e) The Project does not involve any activities, such as construction, which would convert current land uses or conflict with current land uses, including agricultural lands or forest lands. The existing WRF is an already developed site, which would continue to operate within its existing land use designation. Recycled water use sites may be located within areas dominated by agricultural land uses, however the transport and use of the recycled water related to the Project would not require a change of zoning, conflict with existing land use designations or otherwise impact existing land use designations. Further, recycled water from the WRF is tertiary treated and the resulting water quality is suitable for agricultural operations. There would be no impacts to agricultural, farmland or forest resources within the project vicinity.

Mitigation Measures

No mitigation measures are necessary for agricultural and forestry resources.

4.1.3 Air Quality

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒

Resource Evaluation

a) through e) The Ventura WRF currently provides Title 22 compliant tertiary-treated water for general irrigation of golf courses, parks and similar landscape areas. The remaining tertiary treated wastewater is discharged to the Santa Clara River Estuary. As part of this project the WRF will continue normal treatment operations and will enable expanded use of recycled water for activities, such as dust control and median irrigation, and other irrigation needs. Ongoing WRF operations that will occur in order to provide the tertiary treated water will therefore not result in the generation of additional emissions above current conditions, create new odors or release new air pollutants.

The transport of recycled water from the Ventura WRF will result in a change in normal travel habits of proposed recycled water users, however overall changes to vehicle miles travelled as a result of this project are not anticipated to be significant. Please see Section 2.5 and Appendix B.

Overall, it is not anticipated that car trips associated with the project will result in the generation of greenhouse gas emissions that would have significant individual or cumulative impacts. The Project's incremental impact is not considered to be cumulatively considerable, i.e. significant when viewed in connection with the effects of past, existing and/or probable future projects.

The use of recycled water in and of itself would not create or emit odors or air pollutants different from potable water currently used for irrigation and dust control purposes. The water quality of recycled water compared to potable water generally differs in the levels of total dissolved solids (TDS), with higher concentrations found in recycled water than potable water. TDS are not associated with objectionable odors and generally, the recycled water use related to this Project is not expected to result in increases in air pollutants.

Mitigation Measures

No mitigation measures are necessary for air quality.

4.1.4 Biological Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have substantial adverse effects, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☒	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?	☐	☐	☐	☒

Resource Evaluation

a), b) and d) The Project will not have substantial adverse effects, either directly or through habitat modifications on listed wildlife species. Habitat will not be modified, as the project will not involve ground disturbing activities or stream channel modifications. Discharge from the WRF to the Santa Clara River will be reduced as a result of the Project, but recent studies (see Section 3.2 above) suggest that flows will still be above suggested minimum flows to protect stream habitat.

The proposed uses of recycled water range from a minimum of 0.5 mgd to 2.0 mgd (the average is 1.25 mgd), or 6 to 23% of the WRF's annual average effluent flow of 8.5 mgd respectively. This would reduce effluent discharge at minimum to 8.0 mgd, to a maximum of 6.5 mgd.

Preliminary studies undertaken by the City (Carollo 2014) indicated that a discharge flow into the Estuary of 4 to 5 mgd would provide the greatest (or near greatest) habitat for the impacted species. This is the current concurrence from the community. This number, the amount of recycled water discharged to the Estuary is the current focus of one of many studies (identified in Section 3.2). Results will be provided with the RWQCB's issuance of a new NPDES permit, expected in 2019. Thus for now, the assumption of leaving 4 to 5 mgd is the best scientific assumption to base planning assumptions. As such, the proposed changes in recycled water use would result in flows still greater than the recommended flows in the Carollo (2014) investigation.

The Project will maintain discharge flows above 5mgd, what has been preliminarily identified as minimum flows to provide greatest habitat benefits. Therefore, the Project is not anticipated to interfere substantially with the movement of any native or migratory fish or other wildlife species.

c) The Project will not involve dredging or filling or otherwise result in hydrological interruption to protected wetlands. As mentioned above, the Project will result in reduced discharge flows to the Santa Clara River Estuary, however these reductions are not anticipated to result in significant adverse impacts to the existing stream system.

e) and f) Current arboricultural resources within the City include a range of upland, riparian and introduced trees, the majority of which are non-native. Dense stands of eucalyptus trees, pine trees, and olive trees among others are scattered throughout the City. Some native coast live oak is sparsely located within the edges of the coastal sage scrub habitats. The City of Ventura

has no ordinances that protect the trees, however are seeking the use of recycled water to irrigate those that have become affected by the required conservation watering requirements in order to keep them alive. Therefore, the project would not conflict with any tree preservation regulations, or other local policy or ordinance protecting biological resources. The irrigation with recycled water will also not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Mitigation Measures

No mitigation measures are necessary for biological resources.

4.1.5 Cultural Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☐	☐	☒
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒

Resource Evaluation

a) through d)The Project does not involve earth-disturbing activities that have the potential to adversely impact, expose, damage or otherwise disturb cultural resources. Recycled water will be provided from an existing, fully developed water reclamation facility with an existing fill-station, the Ventura WRF. Transportation of the recycled water to use sites will occur on already established City and County roads. No impacts to cultural resources are associated with this project.

Mitigation Measures

No mitigation measures are necessary for cultural resources.

4.1.6 Geology and Soils

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

Resource Evaluation

a) The Project is located within southern California, a seismically active region. A review of the most recent Alquist-Priolo Earthquake Fault Zone Map (California Department of Conservation, 2007) found that the City is underlain by the east-west trending Ventura Fault, which has the

potential for large magnitude earthquakes. This fault is identified as an Official Earthquake Fault Zone by the California Geological Survey. The vicinity is otherwise characterized by west-trending folds, thrust faults, and fault-bounded valleys (CDC, 2003). As a result, people and/or structures located within the project vicinity are exposed to fault rupture and ground shaking. However, the project will not pose additional related risks compared to existing conditions because the project will not involve construction or installment of new structures, or otherwise increase exposure to such hazards.

Liquefaction is the process in which poorly consolidated, sandy soils take on the properties of a liquid when subjected to strong ground shaking. While there may be potential for liquefaction in the project vicinity, project activities will occur on previously developed and paved land and roads and the project itself will not pose additional risks related to liquefaction compared to existing conditions.

Landslide potential exists within the project vicinity as shown on the Ventura Quadrangle landslide map from the California Department of Conservation. However, similar to earthquake and liquefaction hazards, the project will not result in additional exposure to landslide risks above existing conditions as the project will not involve development or otherwise activities in previously undeveloped or unused areas.

b) through d) The project will occur within previously developed and paved land and roads. The Project will not involve soil disturbing activities, such as construction. As a result, the project is not anticipated to result in substantial soil erosion, loss of topsoil or risks associated with unstable substrate or expansive soils.

e) The project does not include the use of septic tanks or other onsite subsurface disposal systems not associated with municipal sewer collection and disposal systems. Therefore, no impacts would occur related to soils incapable of adequately supporting septic or other alternative wastewater disposal systems.

Mitigation Measures

No mitigation measures are necessary for geology and soils.

4.1.7 Greenhouse Gas Emissions

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gasses?	☐	☐	☐	☒

Resource Evaluation

a) Neither the Ventura County Air Pollution Control District (VCAPCD) nor the City of Ventura has adopted a plan, policy or regulations for the purpose of reducing Greenhouse Gas (GHG) emissions to a level that would be considered less than significant under CEQA. As no such plan, policy or regulation has been adopted, the proposed project cannot conflict with an adopted plan, policy or regulation for the purpose of reducing the emissions of greenhouse gases. The South Coast Air Quality Management District (SCAQMD) and California Air Quality Pollution Control Officers Association (CAPCOA) have each proposed thresholds of significance for GHGs. The SCAQMD has proposed quantitative significance thresholds for GHGs. The SCAQMD has also convened a GHG CEQA Significance Threshold Working Group, the goal of which is to develop and reach consensus on an acceptable CEQA significance threshold for GHG emissions that would be utilized on an interim basis until the California Air Resources Board (CARB) or another state agency develops statewide guidance on assessing the significance of GHG emissions under CEQA.

The Project involves the expanded use of recycled water produced at the Ventura WRF for activities, such as dust control, median irrigation and maintenance, and other irrigation needs. Greenhouse gas emission impacts have been assessed similarly to air quality impacts. The main source of potential greenhouse gas emission would be from additional vehicle miles driven as a result of the project.

As described in section 2.5, the transport of recycled water from the Ventura WRF will result in a change in normal travel habits of proposed recycled water users. The City Traffic Department was consulted regarding the proposed traffic to and from the requested recycled water user initial locations to and from the WRF. Video documentation was provided to the City to document road conditions and potential sensitive receptors along the proposed routes that the trucks with recycled water would take. While the City found no apparent impact that would be of significance as a result of the project, they requested the inclusion of traffic management measures in the project description.

Residential homeowners are also requesting use of recycled water from the Ventura WRF to meet their private irrigation needs, in-lieu of potable water. The transportation of recycled water by these residential homeowners may result in additional car trips, but the quantity of new emissions associated with these car trips is uncertain. It is difficult to discern whether or not vehicle miles and resulting emissions associated with transportation of recycled water as part of this project will be entirely new or whether vehicle miles traveled will significantly increase as a result of the project. It is possible, for example, that transportation of the recycled water could be made in combination with other trips commonly taken under existing conditions. However, in order to provide a potential estimate of residential car trips a calculation was made based on the usage at a similar facility in northern California, at the Dublin San Ramon Water District. That program assumes on average 900 trips per day in the summertime, which is about 25% of the total number of persons that are signed up for their program. Using this as a guide, the City's program could potentially have 2,960 user agreements, equating to a similar 740 trips per day on average.

The neighboring South Coast Air Quality Management District (SCAQMD) has adopted quantitative significance thresholds for GHGs. One of the thresholds recommended by SCAQMD is 6.6 metric tons of carbon dioxide equivalents per year (MT CO_2E/yr) per service

population as a 2020 target and 4.1 MT CO_2E/yr per service population as a 2035 target (SCAQMD, September 2010). Service population is the sum of residential and employee populations.

The service area population for this project would be the City of Ventura, or 118,416 persons. The proposed project is anticipated to generate approximately 814 trips a day (740 passenger car trips, and up to 74 truck trips). If each of these trips was 10 miles the vehicle miles traveled daily would be 8,140 and the annual vehicle miles traveled would be 2,116,400 (5 days a week x 52 weeks x 8140 miles). Based on the air quality modeling for Olivas Park Drive Extension Project (done using CalEEMod version 2011.1), 76,894,963 annual vehicle miles travelled would generate 30,713.7 MT CO_2E/year. The proposed project could therefore be expected to generate 845 MT CO_2E/year. Given the service population of the City (118,416 persons), the proposed project would have greenhouse gas emissions per service area population of 0.007 MT CO_2E/year, well below the SCAQMD recommended thresholds.

Overall, it is not anticipated that car trips associated with the project will result in the generation of greenhouse gas emissions that would have significant individual or cumulative impacts, i.e. significant when viewed in connection with the effects of past, existing and/or probable future projects.

b) Significance thresholds, quantitative or otherwise have not been adopted by the VCAPCD or the City of Ventura. Overall, the project will not conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gasses.

Mitigation Measures

No mitigation measures are necessary for greenhouse gas emissions.

4.1.8 Hazards and Hazardous Materials

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☒
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within	☐	☐	☐	☒

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
one-quarter mile of an existing or proposed school?				
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

Resource Evaluation

a) through c) The project does not involve the use, transport or disposal of hazardous materials. The project will allow use of expanded recycled water, which is currently being produced at the Ventura WRF. The project will not create hazards involving hazardous materials.

d) The Ventura WRF from which the recycled water will be picked up is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

e) and f) The project will not pose a safety hazard related to a private or public airport. The project will allow use of recycled water from the WRF, which is not located within the immediate vicinity of an airport or private airstrip.

g) The project will not impair implementation or physically interfere with an adopted emergency response plan or evacuation plan. Operations at the Ventura WRF will continue to occur in compliance with existing health and safety plans. Truck and car traffic associated with this project is not anticipated to increase significantly above existing conditions and will not have the potential to interfere with emergency evacuation routes beyond existing conditions.

h) The City of Ventura includes areas of very high fire hazard severity zones, in which some of the proposed recycled water use sites are located. The Ventura WRF itself is not located within a high fire hazard severity zone (CAL FIRE MAP, 2010). Due to the nature of the Project, there will be no additional exposure of people or structures to significant fire related hazards beyond existing conditions.

Mitigation Measures

No mitigation measures are necessary for hazards and hazardous materials.

4.1.9 Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☐	☒
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or offsite?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a	☐	☐	☒	☐

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?				
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☒	☐

Resource Evaluation

a) The City of Ventura is within the jurisdiction of the Los Angeles RWQCB, which has regulatory authority over projects using recycled water. Los Angeles RWQCB Order No. 87-45 regulates the conditions under which the City is allowed to distribute recycled water to users. Order No. 87-45 indicates that recycled water may be used for the irrigation of golf courses, cemeteries, freeway landscapes, and landscapes in other areas where the public has similar access or exposure shall be at all times an adequately disinfected, oxidized wastewater. Order No. 87-45 also includes recycled water quality monitoring and reporting requirements. Allowed recycled water use areas and provisions under which users are permitted and inspected are described.

Under Order No. 87-45, the City is responsible for ensuring recycled water is of sufficient quality and for notifying the LARWQCB of any violations. It is the City's responsibility to document effluent quality and file reports on effluent quality and water usage by permitted users in reports

to the Regional Board. The City is also responsible for inspecting and documenting that recycled water users are in compliance with order requirements. For additional information, see Appendix C for a copy of Order No. 87-45 and Appendix E which provides information applicable to the recycled water use.

The Ventura WRF currently discharges to the Santa Clara River Estuary under an existing NPDES permit (CA0053651) which was adopted by the LARWQCB on March 6, 2008, and updated in November of 2013. The project will be conducted in compliance with LARWQCB Order No. 87-45 and NPDES permit CA0053651.

The proposed project will not alter the quality of the City's recycled water. b) The project will enable expanded use of recycled water for activities, such as dust control and median irrigation, and other irrigation needs, which are currently being met by potable water supplies. Since groundwater makes up approximately half of the City's potable water supplies (City of Ventura, 2011), by replacing potable water demands with recycled water, this project will help reduce depletion of groundwater supplies. The project will not substantially deplete groundwater supplies or interfere with groundwater recharge.

c) and d) The project does not involve activities, such as land disturbance, that would alter the existing drainage pattern of the project site or vicinity in a manner that would result in erosion or flooding.

Recycled water discharges to the Santa Clara River Estuary will be reduced by between approximately 6 to 23% of existing discharge flows of 8.5 mgd (annual average from 2007-2014). This reduction in discharge to the Estuary is not anticipated to cause significant changes to the course of the river, which in turn could result in substantial erosion or flooding. Discharge to the Estuary with the additional proposed uses will still remain between 6.5 and 8.0 mgd, well above the recommended threshold of 4 to 5 mgd (Carollo, 2014) to maintain ecological health of the Estuary. The final determination of the amount of effluent that will be required to flow into the Estuary will not be determined until the update of the NPDES permit in 2019. The anticipated flow reductions are well within the permit and within the current recommendations for effluent flows.

Proposed recycled water uses will replace existing potable water uses for irrigation, dust control or other landscape maintenance. As a result, the project is not anticipated to substantially increase runoff flows that could cause flooding or substantial alteration of existing drainage patterns.

e) and f) The project is not anticipated to create or contribute runoff to stormwater drainage systems beyond existing conditions. The recycled water used as part of this project will replace potable water already being applied at the proposed use sites. It is assumed that water application rates of the recycled water would remain consistent with potable water under existing conditions.

Recycled water generally has higher TDS and nutrient levels than found in potable water supplies. However, the recycled water proposed by the Ventura WRF is tertiary-treated, making it a high quality resource. As a result, application of recycled water for irrigation on landscapes is not anticipated to increase salt and nutrient loadings on the soils. The recycled water use proposed by this project will occur in compliance with the LARWQCB Order 87-45 which

regulates the City's use of recycled water and requires the City to ensure recycled water is of sufficient quality and for notifying the LARWQCB of any violations. It is the City's responsibility to document effluent quality and file reports on effluent quality and water usage by permitted users in reports to the Regional Board. Refer to Appendix C for a copy of the Order No. 87-45.

Proper training and permitting is required of all recycled water users (see section 2.4). Implementation of these practices and continued compliance with applicable water resource regulations will avoid the potential impacts on water quality.

g) The project does not directly or indirectly involve housing or housing resources, nor a use that contributes to the flood plain, but use of water on parcels which may already be within the flood plain, therefore, it has no potential to expose housing to 100-year flood hazards. There would be no impact.

h) The project does not involve construction or otherwise placement of structures, which could impeded or redirect flood flows within a 100-year flood hazard area. There would be no impact.

i) There are no levees or dams in proximity to the WRF site. The project would not increase exposure to hazards resulting from levee or dam failure.

j) The WRF site lies within less than one mile from the coastline and a portion of the facility falls within a tsunami inundation area, according to Tsunami Inundation Maps for Emergency Planning for the project vicinity (CDC, 2013). Recycled water users will only temporarily be on-site to pick up the recycled water and while on-site they will be subject to local evacuation plans. As a result, the project is not anticipated to result in significant exposure to a tsunami.

The WRF site is not located in the immediate vicinity of a water body or stream, where a seiche or mudflows could originate that might cause inundation. End use sites are general irrigation of areas already irrigated with potable water, on medians, and for dust control purposes.

Mitigation Measures

No mitigation measures are necessary for hazards and hazardous materials.

4.1.10 Land Use and Planning

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Resource Evaluation

a) and b) The project does not involve construction or alteration to existing land uses. There would be no effect on an established community and no conflict with an applicable land use plan, policy, or regulation, including the City of Ventura General Plan and zoning ordinances. No impacts would occur.

c) The project will not conflict with any habitat conservation plan or natural community conservation plan. Currently, there is no regional habitat conservation plan or natural community conservation plan applicable to the project area. Some identified recycled water use sites proposed by the project lie within areas covered by the draft Ventura River Habitat Conservation Plan (HCP) (2007) and the United Water Conservation District HCP, which is in the process of being developed. There is no conflict with these plans.

Mitigation Measures

No mitigation measures are necessary related to land use planning.

4.1.11 Mineral Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Resource Evaluation

a) and b) The project involves the expanded use of recycled water produced at the Ventura WRF for activities, such as dust control, median irrigation and maintenance, and other irrigation needs. The project will not have any impacts on the availability of mineral resources or mineral resource recovery sites.

Mitigation Measures

No mitigation measures are necessary related to mineral resources.

4.1.12 Noise

Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	☒
b) Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?	☐	☐	☐	☒
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project	☐	☐	☐	☒

Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above level, existing without the project	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Resource Evaluation

a) through d) The project will involve continued normal treatment operations at the WRF in addition to car and truck transport of recycled water to site of use. The project will have a minimal effect on car and truck trips (please see Section 2.5 and Appendix B). Vehicular transport will occur along established roads already in use for such traffic. The project will not result in the generation or exposure of new noise, whether temporary or permanent, nor will the project generate or result in exposure to excessive ground-borne vibration or ground-borne noise levels. There would be no impact.

e) and f) The WRF is not located within an airport land use plan or the vicinity of a private airstrip. The project would not expose people in the project area to excessive noise levels or levels beyond existing conditions.

Mitigation Measures

No mitigation measures are necessary related to noise.

4.1.13 Population and Housing

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Resource Evaluation

a) The Project will not directly or indirectly induce substantial population growth and there would be no impact. Recycled water used as part of this project will be used for existing irrigation and maintenance demands. The requests for recycled water via car and truck was borne from a response to current severe drought conditions and the need to replace potable water with recycled water for irrigation and dust control purposes primarily. Once drought restrictions are lifted use of the recycled water filling station is likely to go down. Unlike a recycled water pipeline, this project does not provide a reliable long-term method for offsetting potable water. Hauling of this water would not create a long-term reliable water supply to support growth and development. There would be no impact.

b) and c) The project will not involve the construction of facilities or structures, or other activities that could result in the displacement of existing housing or people. There would be no impacts.

Mitigation Measures

No mitigation measures are necessary related to population and housing.

4.1.14 Public Services

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i. Fire protection?	☐	☐	☐	☒
ii. Police protection?	☐	☐	☐	☒
iii. Schools?	☐	☐	☐	☒
iv. Parks?	☐	☐	☐	☒
v. Other public facilities?	☐	☐	☐	☒

Resource Evaluation

a) The project involves the expanded use of recycled water produced at the Ventura WRF for irrigation and maintenance needs, and will not result in a change in land uses, increase in the number of residential units or overall population, or otherwise create activities that would increase demand on public services beyond that anticipated in the existing General Plan. Changes in vehicle miles driven are anticipated to be negligible compared to existing conditions and are not anticipated to result in impacts on existing public services. In addition, recycled water users picking up water supplies from the WRF will be subject to orientation, training and appropriate staff oversight that will minimize the potential for situations that could require public service response, including fire protection.

Mitigation Measures

No mitigation measures are necessary related to public services.

4.1.15 Recreation

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Resource Evaluation

The project would allow for maintenance of trees and landscaping in existing parks. The project would not increase the use of existing parks or recreational facilities, and would not introduce new housing or population that would require use of such facilities. The project does not propose recreational facilities or require the construction or expansion of recreational facilities. Accordingly, there would be no impacts.

Mitigation Measures

No mitigation measures are necessary related to recreation.

4.1.16 Transportation/Traffic

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

Resource Evaluation

a) and b) The project will involve a minimal increase in truck and car transport of recycled water from the Ventura WRF to proposed sites of use (please see Section 2.5 and Appendix B). To access the WRF and the recycled water fill station vehicles would use Highway 101, Spinnaker Drive, Olivas Park Drive, and Harbor Boulevard. U.S. Highway 101, located along the northern boundary of the study-area, is a multi-lane freeway which serves as a major arterial for the City and is the principal inter-city route along this portion of the Pacific Coast. The segment of U.S. Highway 101 adjacent to the study area is a 6- to 12-lane freeway including auxiliary lanes. Access to the freeway from the study area is provided via the interchange at Seward/Harbor Boulevard. Spinnaker Drive is a 2- to 4-lane arterial providing access to areas of the Ventura Harbor. Olivas Park Drive is a 2- to 4-lane east-west roadway extending east of Spinnaker Drive. Harbor Boulevard is a 4 lane north-south roadway originating south of Highway 101 and extending to the City of Oxnard. The other major arterials for the City include Freeway 33 and Freeway 126, which may be used by customers of the recycled water filling station. Freeway 33 is a 4 lane north-south roadway and Freeway 126 is a four-lane east-west freeway that extends from U.S. Highway 101 to Santa Paula.

US Highway 101 carries an average daily traffic of 111,000 vehicles. Spinnaker Drive and Olivas Park Drive carry an average daily traffic of 8,651 vehicles. Harbor Boulevard carries an average daily traffic of 23,871. Freeway 33 in the City of Ventura has an average daily traffic of 40,000 vehicles and Freeway 126 has an average daily traffic of 36,500 (City of Ventura, 2007).

The majority of the transport would be consistent with normal truck operations or would be indistinguishable from car trips under existing conditions and is therefore not anticipated to result in substantial increases in overall traffic. Truck and car traffic associated with the project would be consistent with existing traffic plans and ordinances or policies (see Appendix E for more detail). The City Traffic Department was consulted regarding the proposed changes in traffic from the project. Video documentation was provided to the City to document road conditions and potential sensitive receptors along the proposed routes that the trucks with recycled water would take. The City found no apparent impact that would be of significance as a result of the project. The traffic management aspects of the project are discussed in section 2.5.

c) The project does not include any aviation components or other activities that would result in a change of air traffic patterns or substantial safety risks. There would be no impact.

d) The project does not involve construction and would therefore not increase a hazard due to design features or incompatible uses. Truck and car traffic would use established routes and would not result in incompatible uses.

e) Operations at the Ventura WRF will continue to occur in compliance with existing health and safety plans. Truck and car traffic associated with this project is not anticipated to increase significantly above existing conditions and will not have the potential to interfere with emergency evacuation routes beyond existing conditions. Overall the project would not result in inadequate emergency access.

f) The project would not conflict with adopted policies, plans and programs supporting alternative transportation or otherwise decrease the performance or safety of such facilities.

Mitigation Measures

No mitigation measures are necessary related to traffic and transportation.

4.1.17 Utilities and Services Systems

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the projects projected demand in addition to the providers existing commitments?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the projects solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

Resource Evaluation

a) The Ventura WRF currently discharges to the Santa Clara River Estuary under existing NPDES permit (CA0053651) which was adopted by the LARWQCB on March 6, 2008, and updated in November of 2013. The WRF will continue to operate in compliance with this permit which requires that the facility not exceed its current annual average discharge of about 9 mgd. The project will not result in the exceedance of wastewater treatment requirements of the LAWRQCB.

b) The project will involve the use of tertiary treated wastewater from the existing Ventura WRF for irrigation needs by commercial and residential users. The project will not require treatment above existing conditions that would in turn require expansion of the WRF.

The current production level of the City's WRF is an average of 8.5 mgd. Current recycled water uses utilize on average 0.5 mgd. Additional uses discussed in this analysis increase the recycled water use to a maximum of 2.0 mgd, well within the ability of the facility to provide the additional volumes.

The project will not otherwise require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities. Guidelines for the use of recycled water by commercial entities and residential users is provided in Appendix E.

c) The project is not anticipated to result in substantial runoff that would require construction of new stormwater drainage facilities or expansion of existing facilities.

d) The project does not involve new housing or induce population growth that could result in increased water demands and will not result in the need for new or expanded water entitlements.

e) The project would not generate any wastewater or indirectly result in increased wastewater production. The City of Ventura is the wastewater treatment provider in the area and is the owner and operator of the WRF.

f) and g) The project will involve the expanded use of recycled water and will not result in new solid waste disposal needs or compliance issues with solid waste statutes or regulations.

Mitigation Measures

No mitigation measures are necessary related to utilities and service systems.

4.2 Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	☒
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

a) As discussed in Section 4.1.4, *Biological Resources*, implementation of the proposed project would not have substantial adverse effects, either directly or through habitat modifications on listed wildlife species. Habitat will not be modified, as the project will not involve ground disturbing activities or stream channel modifications. Discharge from the WRF to the Santa Clara River will be reduced as a result of the project, but flows will still be above suggested minimum flows to protect stream habitat. The project is not projected to impact the new 2019 NPDES permit which when is in effect, will consider the recommended effluent discharge to the Estuary necessary to protect biological resources. Additionally, as discussed in Section 4.1.5, *Cultural Resources*, the project does not involve earth-disturbing activities that have the potential to adversely impact, expose, damage or otherwise disturb cultural resources. Recycled water will be provided from an existing, fully developed water reclamation facility, the Ventura WRF. Transportation of the recycled water to use sites will occur on already established City and County roads. Therefore, no impacts to cultural resources are associated with this project.

b) Given the current drought conditions within the state and recent regulations calling for the decrease in potable water use, it is foreseeable that the requests for recycled water from the Ventura WRF will increase. However, the amount of recycled water made available through this project will be limited. The City will not provide recycled water in a manner that would reduce effluent discharge to be 5 mgd. A high estimate of potential demand for hauled recycled water is 2.0 mgd. The cumulative demands and environmental effects of hauling a maximum of 2.0 mgd have been analyzed throughout this Initial Study/Negative Declaration and determined to be less than significant. Therefore, the projects cumulative impacts would also be less than significant.

c) Residents of the community and the City's water system would benefit from the replacement of some potable water uses with recycled water created by the proposed project. Although the increase in the number of people and/or trucks visiting the Ventura WRF created by the project could potentially introduce more traffic, the project includes provisions to minimize risk.

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Section 6: List of Preparers

Gina Dorrington, Ventura Water, Utilities General Manager

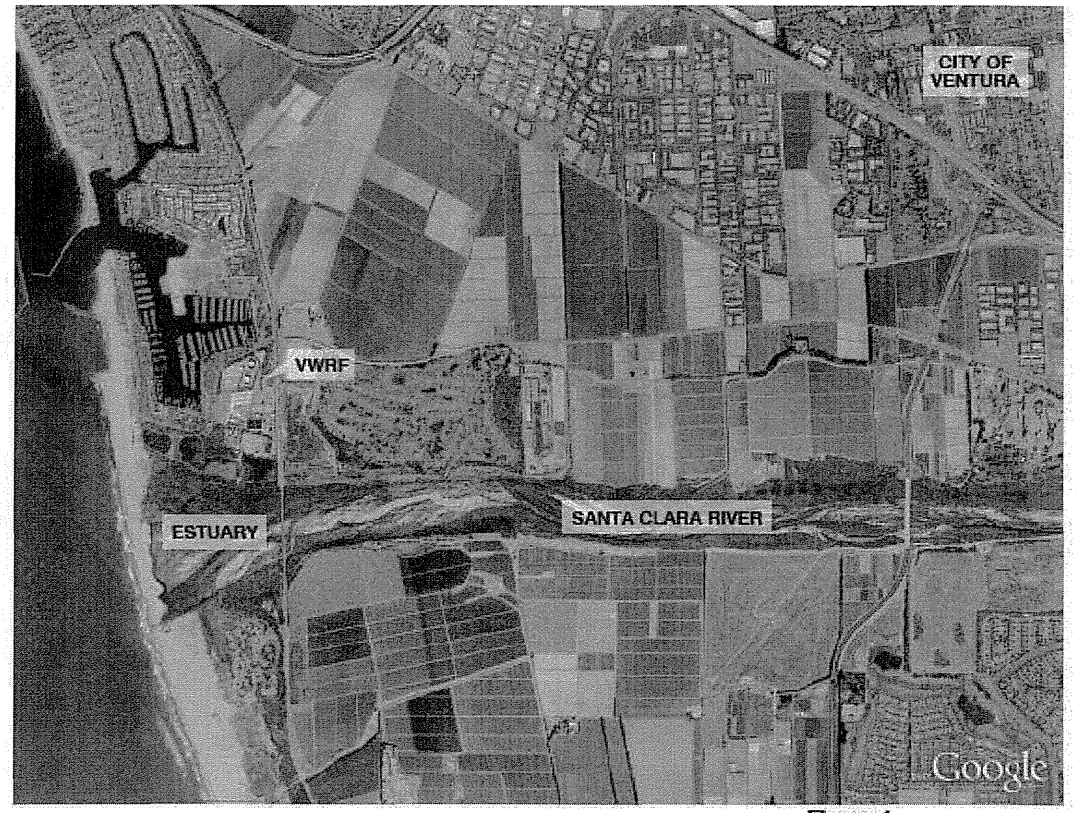
Lauren Everett, Kennedy/Jenks Consultants, Water Resources Project Manager

Catrina Paez, Kennedy/Jenks Consultants, Water Resources Planner

Meredith Clement, Kennedy/Jenks Consultants, Water Resources Project Manager

Appendix A: Figures

Figure 1 City of Ventura WRF Location



Source: Carollo Treatment Wetlands Feasibility Study, March 2010

Figure 2 Ventura WRF Process Flow Schematic

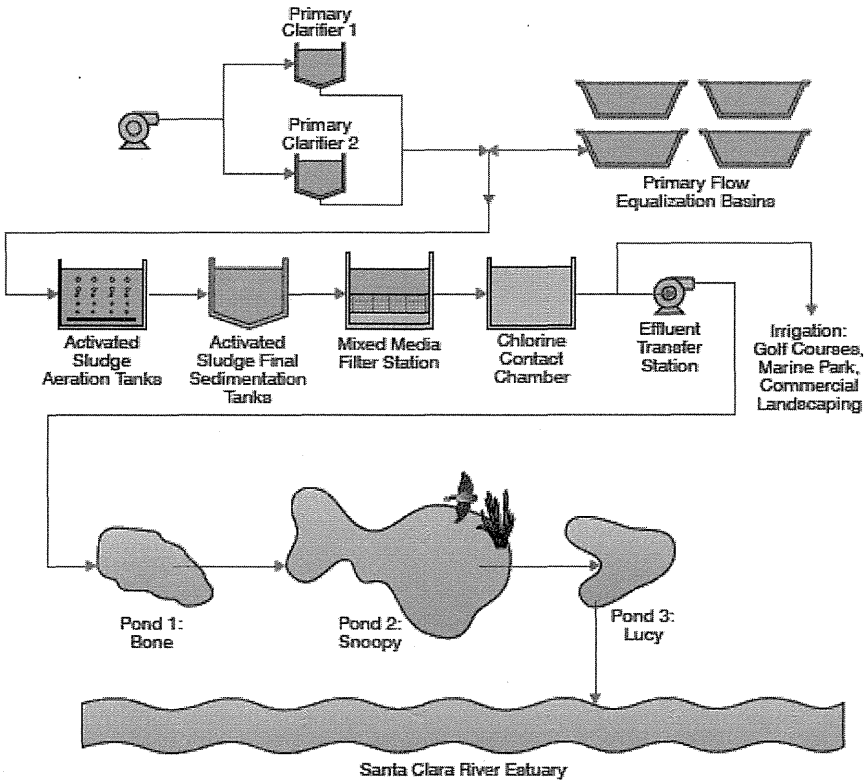


Figure 3 Current Recycled Water Users

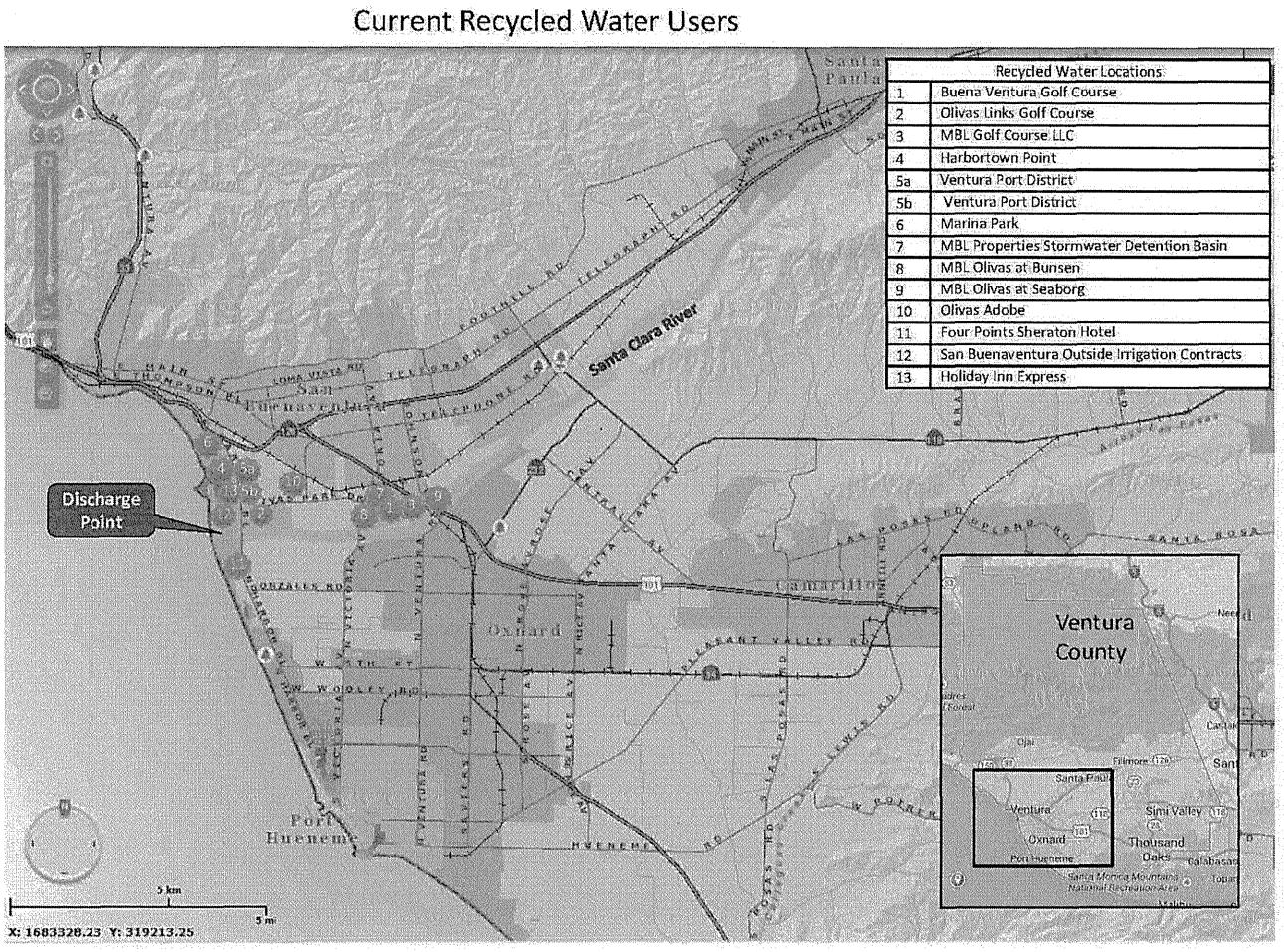


Figure 4 Ventura WRF Truck Filling Station Location

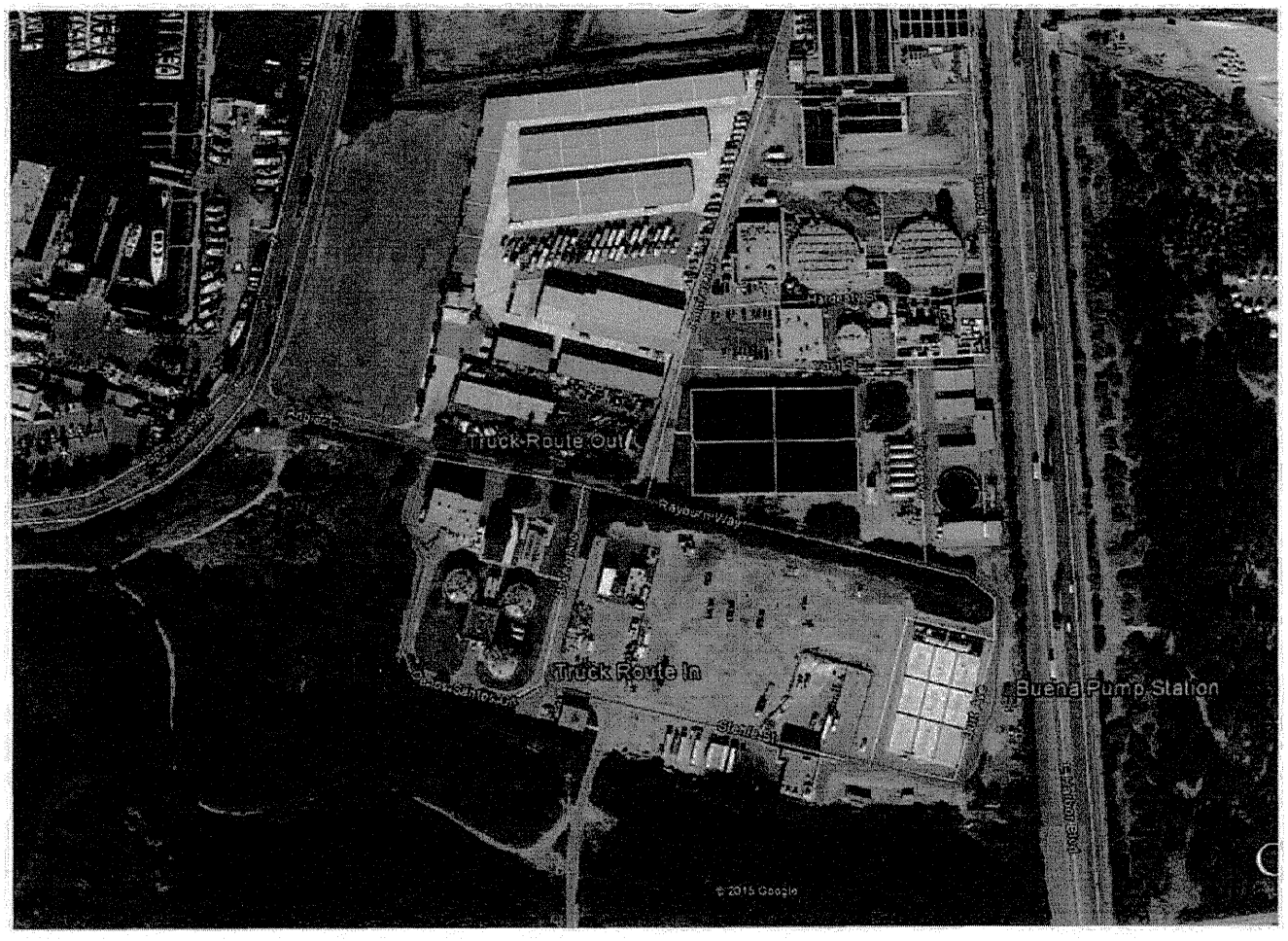
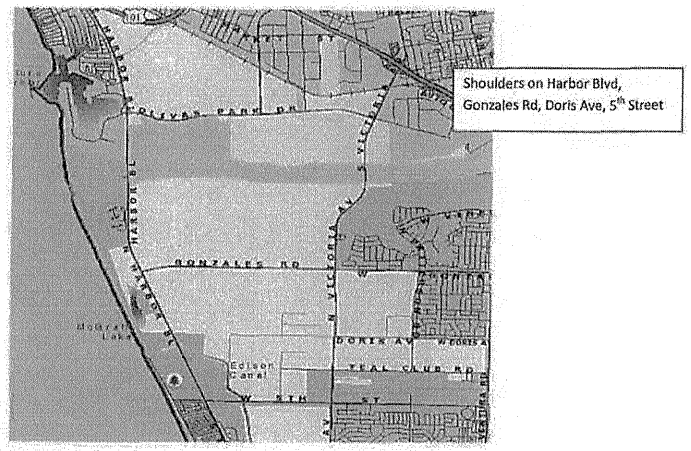
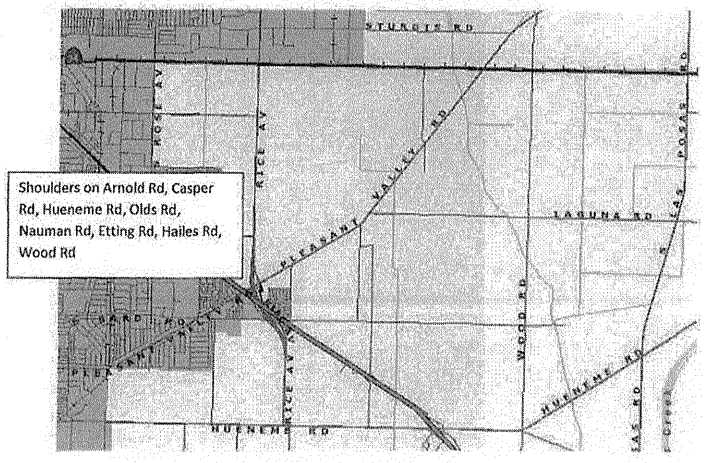


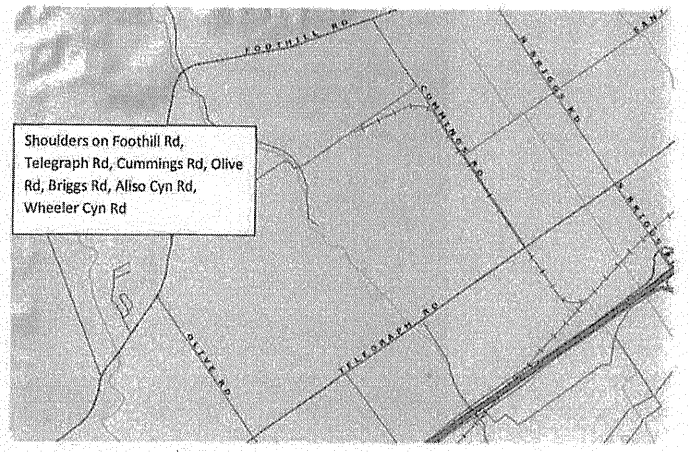
Figure 5 (PDF) AERA Energy, LLC Location

Google earth miles 4 km 7

Figure 6: Ventura County Department of Transportation Proposed Locations for Use of Recycled Water







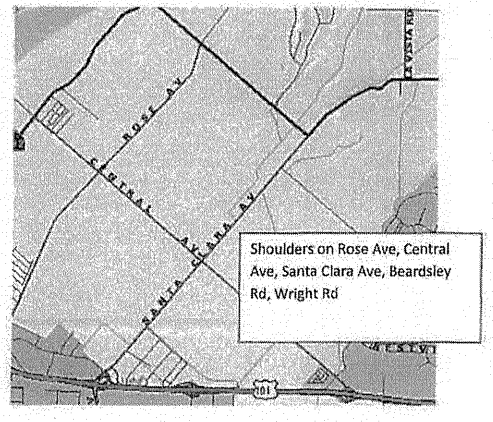
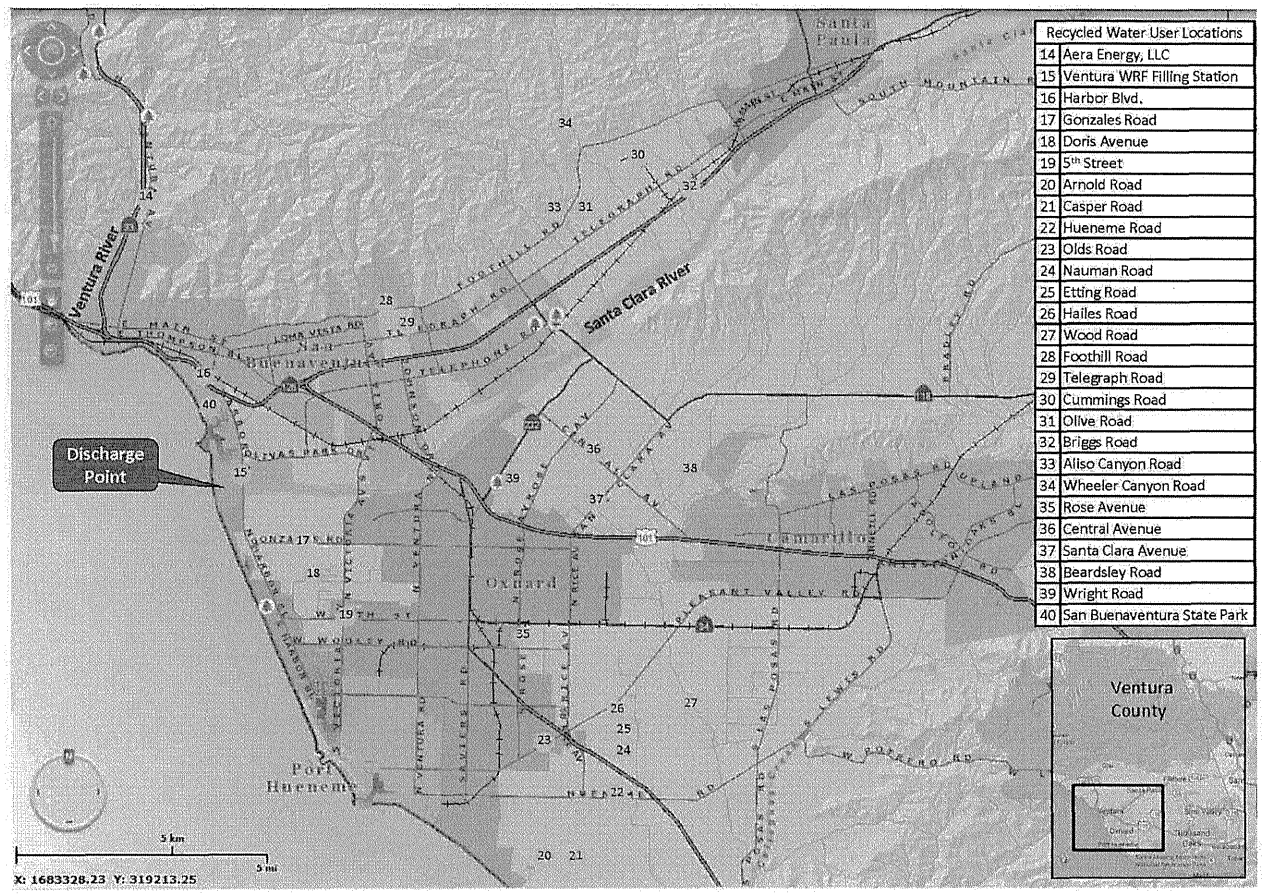


Figure 7: Ventura City Department of Parks, Recreation and Community Partnerships Proposed Recycled Water Locations

Planned Recycled Water Users



Recycled Water User Locations	
14	Aera Energy, LLC
15	Ventura WRF Filling Station
16	Harbor Blvd.
17	Gonzales Road
18	Doris Avenue
19	5th Street
20	Arnold Road
21	Casper Road
22	Hueneme Road
23	Olds Road
24	Nauman Road
25	Etting Road
26	Hailes Road
27	Wood Road
28	Foothill Road
29	Telegraph Road
30	Cummings Road
31	Olive Road
32	Briggs Road
33	Aliso Canyon Road
34	Wheeler Canyon Road
35	Rose Avenue
36	Central Avenue
37	Santa Clara Avenue
38	Beardsley Road
39	Wright Road
40	San Buenaventura State Park

Appendix B: Recycled Water Calculations

AERA Energy, LLC

Proposed Use:	Dust control for oil field operations; currently using potable water					
No. of Trucks for RW	6					
Truck Volume	4,000	Gallons/Each				
Minimum Truck Frequency	3	Trips/Day				
Maximum Truck Frequency	5	Trips/Day				
Proposed Usage						
Minimum Use	**72,000**	**Gallons/Day**	**0.072**	**MGD**		
Maximum Use	**120,000**	**Gallons/Day**	**0.120**	**MGD**		
Average	**96,000**	**Gallons/Day**	**0.096**	**MGD**		

Ventura Transportation Department

Proposed Use:	Dust control; currently using potable water					
No. of Trucks for RW	2					
Truck Volume	3,000	Gallons/Each				
Actual Usage						
FY 13/14 Usage	**790,000**	**Gallons/Year**	**2,164**	**Gallons/Day**	**0.0022**	**MGD**
FY 12/13 Usage	**478,000**	**Gallons/Year**	**1,310**	**Gallons/Day**	**0.0013**	**MGD**
FY 11/12 Usage	**400,000**	**Gallons/Year**	**1,096**	**Gallons/Day**	**0.0011**	**MGD**
Proposed Usage						
Minimum Truck Frequency (assumed based on FY11/12 past usage)	0.18	Trips/Day				
Maximum Truck Frequency (assumed based on FY13/14 past usage)	0.36	Trips/Day				
Minimum Use (assumed based on past usage)	**1,096**	**Gallons/Day**	**0.001**	**MGD**		
Maximum Use (assumed based on past usage)	**2,164**	**Gallons/Day**	**0.002**	**MGD**		
Average	**1,630**	**Gallons/Day**	**0.002**	**MGD**		

Ventura Parks Department

Proposed Use:	Dust control; currently using potable water					
No. of Trucks for RW	1					
Truck Volume	4,000	Gallons/Each				
Weight of Truck	40,000 lbs					
Estimated usage (maximum)	20,000	gallons/day				
Truck Frequency	5	trips/day				
Minimum Usage (based on 1 trip per day)	1	trip/day	4000	**gallons/day**	0.004	MGD
Maximum Usage (based on 5 trips per day)	5	trips/day	20000	gallons/day	0.02	MGD

Residential Water Use Assessment

Proposed use:	Irrigation				No of persons	
2015 Residential Use	13,800	AFY		MGD	2015 Population	118,416
Assume 75% Outdoor	10,350	AFY		MGD	Minimum Use (5%)	5,921
Minimum Use (5%)	518	AFY	0.46	MGD	Maximum Use (20%)	23,683
Maximum Use (20%)	2,070	AFY	1.85	MGD	Average	14,802
Average	1,294	AFY	1.15	MGD		

Additional Water Users

State parks – max	300	gallons/day	0.0003	MGD
State parks – min	200	gallons/day	0.0002	

Total Proposed Use from AERA, Ven Transportation, and Residential, and Parks AND NEW USES

Minimum RW Usage	0.54	MGD
Maximum RW Usage	**1.97**	**MGD**
Average RW Usage	**1.25**	**MGD**

City of Ventura Existing WDR and NPDES

Treatment Level	Tertiary	
Discharge Location	SCR Estuary via Wildlife Ponds	
Annual average effluent flow from 2007-2014	8.5	MGD

Percent Change	Value (MGD)	Percent of current annual average discharge
Minimum RW Usage	0.54	6.3%
Maximum RW Usage	1.97	23.2%
Average RW Usage	1.25	14.7%

Resulting Discharge	MGD
Minimum RW Usage	8.0
Maximum RW Usage	6.5
Average RW Usage	7.2

Conversion Factors

1	AF	1	CFS	1	CFS	1	MG	1	MGD
325,850	Gallons	449	GPM	646,315	GPD	3	AF	1,120	AFY
43,560	Cubic Feet	26,930	GPHour	2	AFD				

Appendix C: Ventura Water Reclamation Facility Water Reclamation Requirements Order No. 87-45

STATE OF CALIFORNIA
GEORGE DEUKMEJIAN, Governor
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
LOS ANGELES REGION
107 SOUTH BROADWAY, SUITE 4027
LOS ANGELES, CALIFORNIA 90012-4596
(213) 620-4460

July 9, 1987

Mr. Dan Rayburn
Sanitation Superintendent
City of San Buenaventura
P. O. Box 99
Ventura, California 93002

WATER RECLAMATION REQUIREMENTS - VENTURA WATER RENOVATION FACILITY.
(File No. 57-68; CI No. 6190)

Reference is made to our letter dated May 4, 1987 which transmitted the requirements for your reuse of treated effluent.

By mistake, the copy transmitted did not include the revisions made on April 10, 1987. Enclosed is the corrected copy of the requirements as adopted by the Board on April 27, 1987.

We regret any inconvenience this may have caused.

If you have any questions, please call Gregg Kwey at (213) 620-2784.

J. E. Ross
Senior Water Resource
Control Engineer

cc: See attached mailing list

Enclosures

RECEIVED
JUL 15 1987
SANITATION DIV.

Mr. Dan Rayburn
Mailing List

State Water Resources Control Board, Division of Water Quality, Attn: Archie Matthews
Department of Water Resources
Department of Health Services, Sanitary Engineering Section, Santa Babara
Ventura County Planning Commission
Ventura County Department of Environmental Health Services
Ventura County Department of Public Works, Water and Sanitation Division
Ventura County Department of Public Works, Flood Control and Drainage Division

State of California
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, LOS ANGELES REGION

ORDER NO. 87-45

WATER RECLAMATION REQUIREMENTS
FOR

CITY OF SAN BUENAVENTURA
(Ventura Water Renovation Facility)
(File No. 57-68)

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

1. City of San Buenaventura (hereinafter referred to as "Reclaimer") operates the Ventura Water Renovation Facility, located at 1400 Spinnaker Drive, Ventura, California, with a design flow capacity of 14 million gallons per day (mgd). The plant discharges all or part of its treated effluent to Olivas Park and Buenaventura Municipal golf courses to be used for recreational impoundment and turf irrigation, and to the Ventura Port District for landscape irrigation under requirements contained in Order 80-34, adopted by this Board on July 28, 1980. The Average flow for 1986 was 8.64 mgd to the Santa Clara Tidal Prism and 0.67 mgd for irrigation purpose.

2. Surface water discharge to the Santa Clara Tidal Prism is in accordance with a National Pollution Discharge Elimination System permit (NPDES Permit No. CA0053651) adopted by this Board.

3. The water reclamation treatment consists of primary sedimentation, activated sludge, biofiltration, secondary sedimentation, filtration, chlorination, dechlorination, and ponding for storage.

4. A review of the current requirements has been conducted by Board staff in accordance with California Administration Code, Title 23, Chapter 3, Subchapter 9, Article 2, Section 2232.2.

5. The areas of irrigation and impoundment reuse overlie ground water in the Oxnard Hydrologic Subarea. Ground waters in the Oxnard Hydrologic Subarea are beneficially used for municipal and domestic supply, agricultural supply, and industrial service and process supply. However, the ground waters of the shallow semiperched zone are of very poor quality and are not beneficially used in any significant amounts.

March 23, 1987
Revised April 10, 1987

quality and are not beneficially used in any significant amounts.

6. The Board adopted a Revised Water Quality Control Plan for Santa Clara River Basin on March 27, 1978. The Plan contains water quality objectives for ground water in the Oxnard Hydrologic Subarea. The requirements contained in this Order, as they are met, will be in conformance with the goals of the Water Quality Control Plan.

7. Section 13523 of the California Water Code provides that a Regional Board, after consulting with and receiving the recommendations of the State Department of Health Services and after any necessary hearing, shall, if it determines such action to be necessary to protect the public health, safety, or welfare, prescribe water reclamation requirements for water which is used or proposed to be used as reclaimed water. Section 13523 further provides that such requirements shall include, or be in conformance with, the statewide reclamation criteria.

8. The use of reclaimed water for impoundments or for irrigation could affect the public health, safety, or welfare; requirements for such use are therefore necessary in accordance with Section 13523 of the Water Code.

9. This project involves an existing facility and as such is exempt from the provisions of the California Environmental Quality Act in accordance with California Administrative Code, Title 14, Chapter 3, Section 15301.

The Board has notified the Reclaimer and interested agencies and persons of its intent to prescribe water reclamation requirements for this facility and has provided them with an opportunity to submit their written views and recommendations.

The Board in a public meeting heard and considered all comments pertaining to the direct beneficial use and to the tentative water reclamation requirements.

IT IS HEREBY ORDERED, that City of San Buenaventura, shall comply with the following:

A. Reclaimed Water Limitations

1. Reclaimed water shall be limited to treated municipal wastewater only, as proposed.

2. Reclaimed water shall not contain constituents in excess of the following limits:

Constituent	Unit	Maximum Limitations
Total dissolved solids	mg/l	3,000
Chloride	mg/l	500
Sulfate	mg/l	1,000
Boron	mg/l	--

3. The pH of reclaimed water shall at all times be within the range 6.0 to 9.0.

4. Reclaimed water shall not contain trace constituents or other substances in concentrations exceeding the limits contained in the current edition of the California Department of Health Services Drinking Water Standards.

5. Radioactivity shall not exceed the limits specified in Title 22, Chapter 15, Article 5, Sections 64441 and 64443, California Administrative Code, or subsequent revisions.

6. Reclaimed water shall not cause the nitrogen content in the receiving ground water to exceed the objectives in the Water Quality Control Plan.

7. Reclaimed water, used for agricultural supply, shall not contain concentrations of chemical constituents in amounts that adversely affect such beneficial use.

B. Specifications for Use of Reclaimed Water

1. Reclaimed water used for the irrigation of golf courses, cemeteries, freeway landscapes, and landscapes in other areas where the public has similar access or exposure shall be at all times an adequately disinfected, oxidized wastewater.

   The wastewater shall be considered adequately disinfected if the median number of coliform organisms in the effluent does not exceed 23 per 100 milliliters, as determined from the bacteriological results of the last 7 days for which analyses have been completed, and the number of coliform organisms does not exceed 240 per 100 milliliters in any two consecutive samples.

Oxidized wastewater means wastewater in which the organic matter has been stabilized, is nonputrescible, and contains dissolved oxygen.

Disinfected wastewater means wastewater in which the pathogenic organisms have been destroyed by chemical, physical or biological means.

2. Reclaimed water used for the irrigation of parks, playgrounds, schoolyard, and other areas where the public has similar access or exposure shall be at all times an adequately disinfected, oxidized, coagulated, clarified, filtered wastewater or a wastewater treated by a sequence of unit processes that will assure an equivalent degree of treatment and reliability.

The wastewater shall be considered adequately disinfected if the median number of coliform organisms in the effluent does not exceed 2.2 per 100 milliliters, as determined from the bacteriological results of the last 7 days for which analyses have been completed, and the number of coliform organisms does not exceed 23 per 100 milliliters in any sample.

A coagulated wastewater means an oxidized wastewater in which colloidal and finely divided suspended matter have been destabilized and agglomerated by the addition of suitable floc-forming chemicals or by an equally effective method.

A filtered wastewater means an oxidized, coagulated, clarified wastewater which has been passed through natural undisturbed soils or filter media, such as sand or diatomaceous earth, so that the turbidity as determined by an approved laboratory method does not exceed an average operating turbidity of 2 turbidity units and does not exceed 5 turbidity units more than 5 percent of the time during any 24-hour period.

3. Reclaimed water used as a source of supply in a nonrestricted recreational impoundment shall be at all times an adequately disinfected, oxidized, coagulated, clarified, filtered wastewater.

The wastewater shall be considered adequately disinfected if at some location in the treatment process the median number of coliform organisms does not exceed 2.2 per 100 milliliters and the number of coliform organisms does not exceed 23 per 100

milliliters in more than one sample within any 30-day period. The median value shall be determined from the bacteriological results of the last 7 days for which analyses have been completed.

4. Reclaimed water used as a source of supply in a restricted recreational impoundment shall be at all times an adequately disinfected, oxidized wastewater.

   The wastewater shall be considered adequately disinfected if at some location in the treatment process the median number of coliform organisms does not exceed 2.2 per 100 milliliters, as determined from the bacteriological results of the last 7 days for which analyses have been completed.

5. Reclaimed water used as a source of supply in a landscape impoundment shall be at all times an adequately disinfected, oxidized wastewater.

   The wastewater shall be considered adequately disinfected if at some location in the treatment process the median number of coliform organisms does not exceed 23 per 100 milliliters, as determined from the bacteriological results of the last 7 days for which analyses have been completed.

6. Reclaimed water shall not be directly used for uses other than those enumerated above until requirements for these uses have been established by this Board in accordance with Section 13523 of the California Water Code, unless the Board waives such requirements or finds that the above cited standards are applicable to these uses.

7. Reclaimed water uses shall meet the requirements specified in the "Guidelines for Use of Reclaimed Water" issued by the State Department of Health Services.

8. Reclaimed water used for irrigation shall be retained on the areas of use and shall not be allowed to escape as surface flow except as provided for in a National Pollutant Discharge Elimination System Permit.

   For the purpose of this requirement, however, minor amounts of irrigation return water from peripheral areas shall not be considered a violation of this Order provided the discharge meets the requirements contained

in a National Pollutant Discharge Elimination System Permit issued to the City of San Buenaventura (Ventura Water Renovation Facility).

9. Reclaimed water shall be applied at such a rate and volume as not to exceed vegetative demand and soil moisture conditions. Special precautions must be taken to prevent clogging of spray nozzles, to prevent overwatering and to exclude the production of runoff. Pipelines shall be maintained so as to prevent leaks.

10. Reclaimed water used for irrigation shall not be allowed to run off into recreational lakes unless it meets the criteria for such lakes.

C. General Requirements

1. The discharge or use of raw or inadequately treated sewage at any time is prohibited.

2. Reclaimed water shall not be used for irrigation during periods of extended rainfall and/or runoff.

3. Standby or emergency power facilities and/or sufficient capacity shall be provided for reclaimed water storage during rainfall or in the event of plant upsets or outages, and at times when spray irrigation cannot be practiced.

4. Reclaimed water use or disposal shall not result in earth movement in geologically unstable areas.

5. Adequate facilities shall be provided to protect the sewage treatment and reclamation facilities from damage by storm flows and runoff.

6. Adequate freeboard shall be maintained in reclaimed water storage pond to ensure that direct rainfall will not cause overtopping.

7. Neither treatment of waste nor any reclaimed water use or disposal shall cause pollution or nuisance.

8. Water reclamation and reuse or disposal shall not result in problems due to breeding of mosquitoes, gnats, midges, or other pests.

9. Reclaimed water use or disposal shall not impart

tastes, odors, color, foaming, or other objectionable characteristics to receiving ground waters.

10. Reclaimed water use or disposal which could affect receiving ground waters shall not contain any substance in concentrations toxic to human, animal, or plant life.

11. Odors of sewage origin shall not cause a nuisance.

D. Provisions

1. A copy of these requirements shall be maintained at the reclamation facility so as to be available at all times to operating personnel.

2. In the event of any change in name, ownership, or control of these waste treatment and reclamation facilities, the Reclaimer shall notify this Board of such change and shall notify the succeeding owner or operator of the existence of this Order by letter, copy of which shall be forwarded to the Board.

3. In accordance with Section 13522.5 of the Water Code and Section 60323 of the Wastewater Reclamation Criteria, the Reclaimer shall file an engineering report, prepared by a properly qualified engineer registered in California, of any material change or proposed change in character, location or volume of the reclaimed water or its uses to the Board and State Department of Health Services.

4. The Reclaimer shall file with the Board technical reports on self monitoring work performed according to the detailed specifications contained in the Monitoring and Reporting Programs, as directed by the Executive Officer.

5. The Reclaimer shall notify this Board by telephone within 24 hours of any violations of reclaimed water use conditions or any adverse conditions as a result of the use of reclaimed water from this facility; written confirmation shall follow within one week.

6. The Reclaimer shall notify Board staff by telephone immediately of any confirmed coliform counts that could cause a violation of the 7-day median limit, including the date(s) thereof. This information shall be confirmed in the next monitoring report; in addition,

for any actual coliform limit violations that occurred, the report shall also include the reasons for the high coliform results, the steps being taken to correct the problem (including dates thereof), and the steps being taken to prevent a recurrence.

7. These requirements do not exempt the Reclaimer from compliance with any other laws, regulations, or ordinances which may be applicable; they do not legalize this reclamation facility, and they leave unaffected any further restraint on the use of reclaimed water at this site which may be contained on other statutes or required by other agencies.

8. The Reclaimer shall be responsible to insure that all users of reclaimed water comply with the specifications and requirements for such use.

9. This Order does not alleviate the responsibility of the Reclaimer to obtain other necessary local, state, and federal permits to construct facilities necessary for compliance with this Order; nor does this Order prevent imposition of additional standards, requirements, or conditions by any other regulatory agency. Expansion of this facility from its current capacity shall be contingent upon issuance of all necessary permits, including a conditional use permit.

10. Supervisors and operators of this publicly owned wastewater treatment plant shall possess a certificate of appropriate grade as specified in California Administrative Code, Title 23, Chapter 3, Subchapter 14, Section 2455 and 2460.

11. The Reclaimer shall provide to each user of reclaimed water from Ventura Water Renovation Facility a copy of these requirements, to be maintained at the user's facility as to be available at all times to operating personnel.

12. For any extension of the reclaimed water system, the Reclaimer shall submit a report detailing the extension for the approval of the Executive Officer. Following construction, as built drawings shall be submitted to the Executive Officer for approval prior to use of reclaimed water.

13. The Reclaimer shall submit to the Board within 60 days

of the adoption of this Order, a fail-safe procedure for approval by the Executive Officer.

14. Order No. 80-34 adopted by this Board on July 28, 1980, is hereby rescinded.

I, Robert P. Ghirelli, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on April 27, 1987.

Robert P. Ghirelli

ROBERT P. GHIRELLI, D.Env.
Executive Officer

GK/

State of California
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, LOS ANGELES REGION

MONITORING AND REPORTING PROGRAM NO. 6190
FOR

CITY OF SAN BUENAVENTURA
(Ventura Water Renovation Facility)
(File No. 57-68)

The Reclaimer shall implement this monitoring program on the effective date of this Order.

Monitoring reports shall be submitted by the dates in the following schedule:

Reporting period	Report Due
January - March	May 15
April - June	August 15
July - September	November 15
October - December	February 15

The first monitoring report under this program shall be submitted by August 15, 1987.

By March 1 of each year, the Reclaimer shall submit an annual report to the board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year. In addition, the Reclaimer shall discuss the compliance record and the corrective actions taken or planned which may be needed to bring the discharge into full compliance with the Requirements.

Values obtained for the NPDES monitoring report during periods of discharge to surface waters may be reported here in lieu of duplicate testing, if representative. However, non-NPDES self-monitoring reports shall be submitted separately from the NPDES monitoring reports.

Reclaimed Water Monitoring

A sampling station shall be established where representative samples of reclaimed water can be obtained. Reclaimed water samples may be obtained at a single station provided that station is representative of the quality at all discharge points. Each sampling station shall be identified. The following shall constitute the reclaimed water monitoring program:

Constituent	Units	Type of Sample	Minimum Frequency of Analysis
Turbidity[1]	NTU	continuous	-----
Total flow[2]	gallon	continuous	-----
Coliform group[3]	MPN/100ml	grab	daily
pH	pH units	grab	daily
Total dissolved solids	mg/l	24-hr composite	monthly
Chloride	mg/l	24-hr composite	monthly
Boron	mg/l	24-hr composite	monthly
Sulfate	mg/l	24-hr composite	monthly
Arsenic	mg/l	24-hr composite	quarterly
Barium	mg/l	24-hr composite	quarterly
Cadmium	mg/l	24-hr composite	quarterly
Chromium	mg/l	24-hr composite	quarterly
Lead	mg/l	24-hr composite	quarterly
Mercury	mg/l	24-hr composite	quarterly
Selenium	mg/l	24-hr composite	quarterly
Silver	mg/l	24-hr composite	quarterly
Cyanide	mg/l	24-hr composite	quarterly
Nitrate	mg/l	24-hr composite	quarterly
Fluoride	mg/l	24-hr composite	quarterly
Radioactivity	pCi/l	24-hr composite	quarterly

[1]Required only for applications having a turbidity limit. The average value recorded each day and amount of time that 5 NTU was exceeded each day shall be reported. Turbidity samples may be obtained anywhere in the treatment process subsequent to the filtration procedure.

[2]Shall report the daily volume of reclaimed water used at each site of use.

[3]Samples shall be obtained at some point in the treatment process at a time when wastewater flow and characteristics are most demanding on the treatment facility and disinfection procedures. The location(s) of the sampling point(s) and any changes thereto must be approved by the Executive Officer, and proposed changes shall not be made until such approval has been granted. If reclaimed water is used for irrigation of golf courses, cemeteries, freeway landscapes, parks, playgrounds, schoolyards, or other areas where the public has similar access or exposure, samples shall be obtained subsequent to the chlorination procedure. Coliform values obtained must meet the strictest requirement specified for all uses during periods of multiple use, unless separate coliform analyses are obtained at each particular point of use.

Total identifiable chlorinated hydrocarbon	ug/l	grab	quarterly
Priority Pollutants	ug/l	grab	semi-annually

General Provisions for Sampling and Analysis

All sampling, sample preservation, and analyses shall be performed in accordance with the latest edition of "Guidelines Establishing Test Procedures for Analysis of Pollutants", promulgated by the United States Environmental Protection Agency.

All chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the State Water Resources Control Board or approved by the Executive Officer.

General Provisions for Reporting

For every item where the requirements are not met, the Reclaimer shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time and submit a timetable for correction.

The Reclaimer shall maintain all sampling and analytical results, including strip charts; date, exact place, and time of sampling; dates analyses were performed; analyst's name; analytical techniques used; and results of all analyses. Such records shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Board.

In reporting the monitoring data, the Reclaimer shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized to demonstrate compliance with Water Reclamation Requirements and, where applicable, shall include results of receiving water observations.

The Reclaimer shall file a report with this Board describing the purposes for which reclaimed water from this facility is used, estimating quantities used for each type of use, depicting on a map or drawing the area(s) of use, and stating the name and address of each user of reclaimed water if other than the Reclaimer. This report shall be updated at least annually, and shall be included with the annual report due March 1 each year.

Each quarterly report shall include a statement that all reclaimed water was used only as specified in the requirements during the quarter.

If no water was delivered for reuse during the quarter, the report shall so state.

Monitoring reports shall be signed by:

a. In the case of corporations, by a principal executive officer at least of the level of vice-president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which discharge originates;

b. In the case of a partnership, by a general partner;

c. In the case of a sole proprietorship, by the proprietor;

d. In the case of municipal, state or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.

Each report shall contain the following completed declaration:

"I declare under penalty of perjury that the foregoing is true and correct.

Executed on the _____ day of _____ at _____.

_____(Signature)

_____(Title)"

Ordered by Robert P. Murelli
Executive Officer

April 27, 1987
Date

GK/

Appendix D: Ventura Water Reclamation Facility Order R4-2013-0174, NPDES No. CA0053651

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

320 West 4th Street, Suite 200
(213) 576-6660 • Fax (213) 576-6640
http://www.waterboards.ca.gov

ORDER R4-2013-0174
NPDES NO. CA0053651

WASTE DISCHARGE REQUIREMENTS FOR THE CITY OF VENTURA, VENTURA WATER RECLAMATION FACILITY DISCHARGE TO THE SANTA CLARA RIVER ESTUARY VIA DISCHARGE OUTFALL NO. 001

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

Table 1. Discharger Information

Discharger	**City of Ventura**
Name of Facility	**Ventura Water Reclamation Facility**
Facility Address	**1400 Spinnaker Drive**
	Ventura, CA 93001
	Ventura County

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001	Tertiary-treated wastewater	34 °, 14', 21.72" N	119 °, 15', 31.33" W	Santa Clara River Estuary via Wildlife Ponds

Table 3. Administrative Information

This Order was adopted on:	November 7, 2013
This Order shall become effective on:	January 1, 2014
This Order shall expire on:	December 31, 2018
The Discharger shall file a Report of Waste Discharge as an application for reissuance of WDRs 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:	180 days prior to the Order expiration date
The U.S. Environmental Protection Agency (USEPA) and the California Regional Water Quality Control Board, Los Angeles Region have classified this discharge as follows:	Major

I, Samuel Unger, 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, Los Angeles Region, on November 7, 2013.

Samuel Unger

Samuel Unger, P.E., Executive Officer

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I. FACILITY INFORMATION

Information describing the Ventura Water Reclamation Facility (VWRF or Facility) is summarized in Table 1 and in sections I and II of the Fact Sheet (Attachment F). Section I of the Fact Sheet also includes information regarding the Facility's permit application.

II. FINDINGS

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

A. **Legal Authorities.** This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (CWC)(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 USEPA and chapter 5.5, division 7 of the CWC (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this facility to surface waters.

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

C. **Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet.

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

E. This permit is not intended as evidence of intent by the Regional Water Board to sanction a nuisance for purposes of providing immunity to the Discharger from liability otherwise authorized by law for flooding caused by the discharge.

THEREFORE, IT IS HEREBY ORDERED that this Order supersedes Order R4-2008-0011 as amended by Order No. R4-2008-0208, except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the CWC (commencing with section 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

III. DISCHARGE PROHIBITIONS

A. The discharge from the Facility may not exceed its current annual average of 9 million gallons per day (mgd)[1]. This prohibition shall remain in effect pending the results of studies specified in section VI.C.1.i.vi. of this Order.

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

C. The bypass or overflow of untreated wastewater or wastes to surface waters or surface water drainage courses is prohibited, except as allowed in Standard Provision I.G. of Attachment D, Standard Provisions.

D. The maximum daily flow of influent from the collection system to the headworks of the Facility shall not exceed the design capacity of 14 mgd. This prohibition is not applicable during wet weather storm events.

E. The Discharger shall not cause degradation of any water supply, except as consistent with State Water Board Resolution No. 68-16.

F. The treatment or disposal of wastes from the Facility shall not cause pollution or nuisance as defined in section 13050, subdivision (l) and (m) of the CWC.

G. The discharge of any substances in concentrations toxic to animal or plant is prohibited.

H. The discharge of any radiological, chemical, or biological warfare agent or high level radiological waste is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point Effluent Transfer Station M-001

1. Final Effluent Limitations – Discharge Point Effluent Transfer Station M-001

j. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point Effluent Transfer Station M-001, with compliance measured at Monitoring Location M-001 as described in the Monitoring and Reporting Program, Attachment E:

Table 4. Effluent Limitations

Parameter	Units	Effluent Limitations [2]				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Major Wastewater Constituents						
Biochemical Oxygen Demand 5-day @ 20°C	mg/L	20	30	45	--	--
	lbs/day[3]	2,340	3,500	5,260	--	--
Total Suspended Solids (TSS)	mg/L	15	40	45	--	--
	lbs/day	1,750	4,670	5,250	--	--
pH	standard units	--	--	--	6.5	8.5
Oil and Grease	mg/L	10	--	15	--	--

[1] Footnote deleted
[2] Effluent limitations of all parameters, except summer and winter ammonia nitrogen, apply all year around
[3] The mass emission rates are based on the flowrate of 14 mgd for TBELs BOD and TSS and capped at 9 mgd, and are calculated as follows: Flow (mgd) x Concentration (mg/L) x 8.34 (L·lbs/mg·mg) = lbs/day. During wet-weather storm events in which the flow exceeds the design capacity, the mass discharge rate limitations shall not apply, and concentration limitations will provide the only applicable effluent limitations.

Parameter	Units	Effluent Limitations [2]				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Major Wastewater Constituents						
	lbs/day	750	--	1,100	--	--
Settleable Solids	ml/L	0.1	--	0.3	--	--
Total Residual Chlorine	mg/L		--	0.1	--	--
	lbs/day		--	7.5	--	--
MBAS	mg/L	0.5	--	--	--	--
	lbs/day	38	--	--	--	--
Aquatic Life Toxicants						
Summer Total Ammonia[4] (May to October)	mg/L	1.07	--	1.17	--	--
	lbs/day	80	--	88	--	--
Winter Total Ammonia (November to April)	mg/L	1.3	--	1.4	--	--
	lbs/day	98	--	105	--	--
Nitrate + Nitrite as Nitrogen	mg/L	10[5]	--	--	--	--
	lbs/day	750	--	--	--	--
Nitrite as Nitrogen	mg/L	1	--	--	--	--
	lbs/day	75	--	--	--	--
Nitrate as Nitrogen	mg/L	10	--	--	--	--
	lbs/day	750	--	--	--	--
Copper	µg/L	6.1	--	14	--	--
	lbs/day	0.45	--	1.1	--	--
Selenium	µg/L	2.9	--	8.2	--	--
	lbs/day	0.22	--	0.62	--	--
Lead	µg/L	7.0	--	14	--	--
	lbs/day	0.52	--	1.1	--	--
Nickel	µg/L	7.2	--	18.8	--	--
	lbs/day	0.54	--	1.4	--	--

k. The average monthly percent removal of BOD 5-day 20°C and total suspended solids (TSS) shall not be less than 85 percent.

l. The temperature of wastes discharged shall not exceed 86°F, except as a result of external ambient temperature.

m. Radioactivity of the wastes discharged shall not exceed the limits specified in title 22, chapter 15, article 5, section 64443, of the California Code of Regulations (CCR), or subsequent revisions.

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[4] Total ammonia means sum of unionized ammonia (NH_3) and ionized ammonia (NH_4^+). The total ammonia nitrogen effluent limitation is the translated effluent limitation based on the water quality objective for ammonia in the current Basin Plan, Chapter 3, which resulted from Resolution 2004-022 *Saltwater Ammonia Objectives for Inland Surface Waters* and 2008-2013 salinity receiving water evidence that the estuary salinity is greater than 1 but less than 10 parts per thousand. Therefore, the applicable objectives are the more stringent of the freshwater or saltwater.

[5] The 10 mg/L nitrate plus nitrite average monthly concentration is prescribed by the Basin Plan.

n. The wastes discharged to water courses shall at all times be adequately disinfected. For the purpose of this requirement, the wastes shall be considered adequately disinfected if the median number of total coliform bacteria in the disinfected effluent does not exceed a Most Probable Number (MPN) or Colony Forming Units (CFU) of 2.2 per 100 milliliters, and the number of total coliform bacteria does not exceed an MPN or CFU of 23 per 100 milliliters in more than one sample within any 30-day period. No sample shall exceed an MPN or CFU of 240 total coliform bacteria per 100 milliliters. The median value shall be determined from the bacteriological results of the last 7 days for which an analysis has been completed. Samples shall be collected at a time when wastewater flow and characteristics are most demanding on treatment facilities and disinfection processes.

o. For the protection of the water contact recreation beneficial use, the wastes discharged to water courses shall have received adequate treatment, so that the turbidity of the wastewater does not exceed any of the following: (a) an average of 2 Nephelometric turbidity units (NTUs) within a 24-hour period; (b) 5 NTUs more than 5 percent of the time (72 minutes) within a 24-hour period; and (c) 10 NTU at any time.

p. To protect the underlying groundwater basins, pollutants shall not be present in the wastes discharged at concentrations that might degrade groundwater quality.

q. Acute Toxicity Limitation

i. The acute toxicity of the effluent shall be such that:

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

(b) No single test produces less than 70 percent survival.

ii. If either of the above requirements, is not met, the Discharger shall conduct 6 additional tests, approximately every 2 weeks, over a 12-week period. The Discharger shall ensure that results of a failing acute toxicity test are received by the Discharger within 24 hours of completion of the test and the additional tests shall begin within 5 business days of receipt of the result. If the additional tests indicate compliance with acute toxicity limitation, the Discharger may resume regular testing. However, if the results of any 2 of the 6 accelerated tests are less than 90 percent survival, then the Discharger shall begin a Toxicity Identification Evaluation (TIE). The TIE shall include all reasonable steps to identify the sources of toxicity. Once the sources are identified, the Discharger shall take all reasonable steps to reduce toxicity to meet the objective.

iii. If the initial test and any of the additional 6 acute toxicity bioassay tests results are less than 70 percent survival, the Discharger shall immediately implement an Initial Investigation Toxicity Reduction Evaluation (TRE) Work plan.

iv. The Discharger shall conduct acute toxicity monitoring as specified in the MRP.

r. Chronic Toxicity Trigger and Requirements:

i. The chronic toxicity of the effluent shall be expressed and reported in toxic units(TU_c), where:

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

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

ii. There shall be no chronic toxicity in the effluent discharge.

iii. If the chronic toxicity of the effluent exceeds the monthly trigger median of 1.0 TUc, the Discharger shall immediately implement accelerated chronic toxicity testing according to MRP section V.B.3. If any 3 out of the initial test and the 6 accelerated tests results exceed 1.0 TUc, the Discharger shall initiate a TIE and implement the Initial Investigation TRE Work Plan, as specified in MRP section V.D.

iv. The Discharger shall conduct chronic toxicity monitoring as specified in Attachment E, the Monitoring and Reporting Program (MRP).

B. Recycling Specifications

Ventura Water Reclamation Facility is recycling wastewater under separate Waste Discharge Requirements (WDRs) and Water Recycling Requirements (WRRs) contained in Order No. 87-45, CI number 6190. The Discharger is in the process of planning an expansion of the recycled water system. Once the plans are completed the California Department of Public Health (CDPH) has approved of the expansion, the WDR/WRR will be renewed.

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

Receiving water limitations are based on water quality objectives (WQOs) contained in the Basin Plan and are a required part of this Order. Determinations of compliance with receiving water limitations will take into account data collected from the receiving water monitoring locations set forth in Attachment E, as well as data collected from the discharge point monitoring point, location M-001. The discharge shall not cause the following in receiving water:

1. For waters designated with a warm freshwater habitat (WARM) beneficial use, the temperature of the receiving water at any time or place and within any given 24-hour period shall not be altered by more than 5^0F above the natural temperature (or above 70^0F if the ambient receiving water temperature is less than 60^0F) due to the discharge of effluent at the receiving water station located downstream of the discharge. Natural conditions shall be determined on a case-by-case basis. While the Santa Clara Estuary is not designated WARM, it does support EST (estuarine habitat) and MAR (marine habitat) so protection of aquatic life is necessary.

2. If the receiving water temperature, downstream of the discharge, exceeds 86°F as a result of any of the following, then the exceedance shall not be considered a violation:

   a. High temperature in the ambient air; or,

   b. High temperature in the receiving water upstream of the discharge.

3. The pH of bays and estuaries shall not be depressed below 6.5 or raised above 8.5 as a result of wastes discharged. Ambient pH levels shall not be changed more than 0.2 units from natural conditions as a result of wastes discharged. Natural conditions shall be determined on a case-by-case basis.

4. The dissolved oxygen in the receiving water shall not be depressed below 5 mg/L as a result of the wastes discharged.

5. The bacteria concentration in the receiving water shall not exceed the following as a result of wastes discharged:

   a. State/Regional Water Board Contact Standards

      i. 30-day Geometric Mean Limits

         (a) Total coliform density shall not exceed 1,000 per 100 mL.

         (b) Fecal coliform density shall not exceed 200 per 100 mL.

         (c) Enterococcus density shall not exceed 35 per 100 mL.

      ii. Single Sample Limits

         (a) Total coliform density shall not exceed 10,000 per 100 mL.

         (b) Fecal coliform density shall not exceed 400 per 100 mL

         (c) Enterococcus density shall not exceed 104 per 100 mL.

         (d) Total coliform density shall not exceed 1,000 per 100 mL, if the ratio of fecal-to-total coliform exceeds 0.1.

   These limits are based on Resolution 01-018 *Bacteria Objectives* for REC-1 in marine waters.

   b. Implementation Provisions for Bacterial Characteristics

      i. At a minimum, weekly samples shall be collected from each site. The geometric mean values should be calculated using the five most recent sample results. If sampling occurs more frequently than weekly, all samples taken during the previous 30-day period shall be used to calculate the geometric mean.

      ii. If a single sample exceeds any of the single sample median (SSM) standards, repeat sampling at that location shall be conducted to determine the extent and persistence of the exceedance. Repeat sampling shall be conducted within 24 hours of receiving analytical results and continued until the sample result is less than the SSM standard or until a sanitary survey is conducted to determine the source of the high bacterial densities.

      iii. When repeat sampling is required because of an exceedance of any one single sample density, values from all samples collected during that 30-day period will be used to calculate the geometric mean.

      iv. It is state policy that the geometric mean bacterial objectives are strongly preferred for use in water body assessment decisions (for example, in developing the CWA section 303(d) list of impaired waters) because the geometric mean objectives are a more reliable measure of long-term water body conditions. In making assessment decisions on bacterial quality, SSM data must be considered together with any available geometric mean data. The use of only SSM bacterial data is generally inappropriate unless there is a limited data set, the water is subject to short-term spikes in bacterial concentrations, or other circumstances justify the use of only SSM data.

      v. For monitoring stations outside of the defined water-contact recreation zone (REC-1), samples will be analyzed for total coliform only.

6. Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increases in natural turbidity attributable to controllable water quality factors shall not exceed the following limits, as a result of wastes discharged:
   a. Where natural turbidity is between 0 and 50 NTU, increases shall not exceed 20 percent; and,
   b. Where natural turbidity is greater than 50 NTU, increases shall not exceed 10 percent.
7. The wastes discharged shall not produce concentrations of toxic substances in the receiving water that are toxic to or cause adverse physiological responses in human, animal, or aquatic life.
8. The wastes discharged shall not cause concentrations of pollutants to occur at levels that are harmful to human health in waters that are existing or potential sources of drinking water.
9. The concentrations of toxic pollutants in the water column, sediments, or biota shall not adversely affect beneficial uses as a result of the wastes discharged.
10. The wastes discharged shall not contain substances that result in increases in BOD, which adversely affect the beneficial uses of the receiving waters.
11. Waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.
12. The wastes discharged shall not cause the receiving waters to contain any substance in concentrations that adversely affect any designated beneficial use.
13. The wastes discharged shall not alter the natural taste, odor, or color of fish, shellfish, or other surface water resources used for human consumption.
14. The wastes discharged shall not result in problems due to breeding of mosquitoes, gnats, black flies, midges, or other pests.
15. The wastes discharged shall not result in visible floating particulates, foams, or oil and grease in the receiving waters.
16. The wastes discharged shall not alter the color of the receiving waters; create a visual contrast with the existing appearance of the water; nor cause aesthetically undesirable discoloration of the receiving waters.
17. The wastes discharged shall not contain any individual pesticide or combination of pesticides in concentrations that adversely affect beneficial uses of the receiving waters. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life as a result of the wastes discharged.

B. Acute Toxicity Receiving WQO

1. There shall be no acute toxicity in ambient waters as a result of wastes discharged.
2. Receiving water and effluent toxicity testing shall be performed on the same day, as close to concurrently as possible.
3. The acute toxicity of the receiving water at the Stations R-005 and R-003 located upstream and downstream, respectively, of the discharge, shall be such that (i) the average survival in the undiluted receiving water for any 3 consecutive 96-hour static, static-renewal, or continuous flow bioassay tests shall be at least 90 percent, and (ii) no single test producing less than 70 percent survival. Static-renewal bioassay tests may

be used, as allowed by the most current USEPA test method for measuring acute toxicity.

4. If the upstream acute toxicity of the receiving water is greater than the downstream acute toxicity but the effluent acute toxicity is in compliance, the acute toxicity accelerated monitoring in the receiving water specified in MRP section V.A.2. does not apply.

C. Chronic Toxicity Receiving WQO

1. There shall be no chronic toxicity in ambient waters as a result of wastes discharged.
2. Receiving water and effluent toxicity testing shall be performed on the same day, as close to concurrently as possible.
3. If the chronic toxicity in the receiving water at the monitoring station(s) immediately downstream of the discharge exceeds the monthly median of 1.0 TUc trigger in a critical life stage test and the toxicity cannot be attributed to upstream toxicity, as assessed by the Discharger, the Discharger shall immediately implement an accelerated chronic toxicity testing according to MRP section V.B.3. If 2 of the 6 tests exceed a monthly median of 1.0 TUc trigger, the Discharger shall initiate a TIE and implement the Initial Investigation TRE Work Plan.
4. If the chronic toxicity of the receiving water upstream of the discharge is greater than the downstream and the TUc of the effluent chronic toxicity test is less than or equal to a monthly median of 1 TUc trigger, accelerated monitoring need not be implemented.

D. Groundwater Limitations

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

Groundwater limits are not included in this Order. This Order contains a study to better characterize the hydrological connection between the effluent, the Estuary and the groundwater and to identify any existing MUN beneficial uses of the perched and unconfined aquifers of the Oxnard Groundwater Basin in the vicinity of the Estuary. The information will be used by the Regional Water Board to determine if additional groundwater protection is necessary.

VI. PROVISIONS

A. Standard Provisions

1. The Discharger shall comply with all Standard Provisions included in Attachment D.
2. 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. Neither the treatment nor the discharge of pollutants shall create a pollution, contamination, or nuisance as defined by section 13050 of the CWC.
   b. Odors, vectors, and other nuisances of sewage or sludge origin beyond the limits of the treatment plant site or the sewage collection system due to improper operation of facilities, as determined by the Regional Water Board, are prohibited.
   c. All facilities used for collection, transport, treatment, or disposal of "wastes" shall be adequately protected against damage resulting from overflow, washout, or inundation from a storm or flood having a recurrence interval of once in 100 years.
   d. Collection, treatment, and disposal systems shall be operated in a manner that precludes public contact with wastewater.

e. Collected screenings, sludges, and other solids removed from liquid wastes shall be disposed of in a manner approved by the Executive Officer of the Regional Water Board.

f. The provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.

g. Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the discharger from any responsibilities, liabilities or penalties established pursuant to any applicable state law or regulation under authority preserved by section 510 of the CWA.

h. Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the discharger from any responsibilities, liabilities or penalties to which the discharger is or may be subject to under section 311 of the CWA.

i. The Discharger must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of storm water to storm drain systems or other water courses under their jurisdiction; including applicable requirements in municipal storm water management program developed to comply with NPDES permits issued by the Regional Water Board to local agencies.

j. Discharge of wastes to any point other than specifically described in this Order is prohibited, and constitutes a violation thereof.

k. The Discharger shall comply with all applicable effluent limitations, national standards of performance, toxic effluent standards, and all federal regulations established pursuant to sections 301, 302, 303(d), 304, 306, 307, 316, 403, and 405 of the CWA and amendments thereto.

l. These requirements do not exempt the operator of the waste disposal facility from compliance with any other laws, regulations, or ordinances which may be applicable; they do not legalize this waste disposal facility, and they leave unaffected any further restraints on the disposal of wastes at this site which may be contained in other statutes or required by other agencies.

m. Oil or oily material, chemicals, refuse, or other materials which may cause pollution shall not be stored or deposited in areas where they may be picked up by rainfall and carried off of the property and/or discharged to surface waters. Any such spill of such materials shall be contained and removed immediately.

n. A copy of these waste discharge specifications shall be maintained at the Facility so as to be available at all times to operating personnel.

o. If there is any storage of hazardous or toxic materials or hydrocarbons at this Facility and if the Facility is not manned at all times, a 24-hour emergency response telephone number shall be prominently posted where it can easily be read from the outside.

p. The Discharger shall file with the Regional Water Board a ROWD at least 120 days before making any material change or proposed change in the character, location or volume of the discharge.

q. In the event of any change in name, ownership, or control of these waste disposal facilities, the discharger shall notify the Regional Water Board of such change and shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to the Regional Water Board.

r. The discharge of any waste resulting from the combustion of toxic or hazardous wastes to any waste stream that ultimately discharges to waters of the United States is prohibited, unless specifically authorized elsewhere in this Order.

s. The Discharger shall notify the Executive Officer in writing no later than 6 months prior to planned discharge of any chemical, other than the products previously reported to the Executive Officer, which may be toxic to aquatic life. Such notification shall include:

   i. Name and general composition of the chemical;

   ii. Frequency of use;

   iii. Quantities to be used;

   iv. Proposed discharge concentrations; and,

   v. USEPA registration number, if applicable.

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

u. 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.

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

w. CWC section 13385(h)(i) requires the Regional Water Board to assess a mandatory minimum penalty of three-thousand dollars ($3,000) for each serious violation. Pursuant to CWC section 13385(h)(2), a "serious violation" is defined as any waste discharge that violates the effluent limitations contained in the applicable waste discharge requirements for a Group II pollutant by 20 percent or more, or for a Group I pollutant by 40 percent or more. Appendix A of 40 CFR part 123.45 specifies the Group I and II pollutants. Pursuant to CWC section 13385.1(a)(1), a "serious violation" is also defined as "a failure to file a discharge monitoring report required pursuant to section 13383 for each complete period of 30 days following the deadline for submitting the report, if the report is designed to ensure compliance with limitations contained in waste discharge requirements that contain effluent limitations."

x. CWC section 13385(i) requires the Regional Water Board to assess a mandatory minimum penalty of three-thousand dollars ($3,000) for each violation whenever a person violates a waste discharge requirement effluent limitation in any period of six consecutive months, except that the requirement to assess the mandatory minimum penalty shall not be applicable to the first three violations within that time period.

y. Pursuant to CWC section 13385.1(d), for the purposes of section 13385.1 and subdivisions (h), (i), and (j) of section 13385, "effluent limitation" means a numeric restriction or a numerically expressed narrative restriction, on the quantity, discharge rate, concentration, or toxicity units of a pollutant or pollutants that may be discharged from an authorized location. An effluent limitation may be final or interim, and may be expressed as a prohibition. An effluent limitation, for these purposes, does not include a receiving water limitation, a compliance schedule, or a best management practice.

z. CWC section 13387(e) provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this order, including monitoring reports or reports of compliance or noncompliance, or who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained in this order shall be punished by a fine of not more than twenty-five thousand dollars ($25,000), imprisonment pursuant to subdivision (h) of Section 1170 of the Penal Code for 16, 20, or 24 months, or by both that fine and imprisonment. For a subsequent conviction, such a person shall be punished by a fine of not more than twenty-five thousand dollars ($25,000) per day of violation, by imprisonment pursuant to subdivision (h) of Section 1170 of the Penal Code for two, three, or four years, or by both that fine and imprisonment.

aa. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, effluent limitation, or receiving water limitation of this Order, the Discharger shall notify the Watershed Regulatory Section Chief at the Regional Water Board by telephone (213) 576-6616, electronically at dhung@waterboards.ca.gov, or by fax at (213) 576-6660 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Regional Water Board waives confirmation. The written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance and prevent recurrence including, where applicable, a schedule of implementation. The written notification shall also be submitted via email with reference to CI-1822 to losangeles@waterboards.ca.gov. Other noncompliance requires written notification as above at the time of the normal monitoring report.

bb. 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. (CWC section 1211).

B. Monitoring and Reporting Program (MRP) Requirements

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

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, revoked and reissued, or terminated for cause, including, but not limited to, the following:

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

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

   iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

   The filing of a request by the Discharger for an Order modification, revocation and issuance, or termination, or a notification of planned changes or anticipated noncompliances does not stay any condition of this Order.

c. If an applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under section 307(a) of the CWA for a toxic pollutant and that standard or prohibition is more stringent than any limitation on the pollutant in this Order, the Regional Water Board may institute proceedings under these regulations to modify or revoke and reissue the Order to conform to the toxic effluent standard or prohibition.

d. This Order may be reopened and modified to incorporate new limits based on future reasonable potential analyses to be conducted based on on-going monitoring data collected by the Discharger and evaluated by the Regional Water Board.

e. This Order may be modified, in accordance with the provisions set forth in section 40 of the Code of Federal Regulations (40 CFR) parts 122 and 124 to include requirements for the implementation of the watershed protection management approach.

f. This Order may be modified, in accordance with the provisions set forth in 40 CFR parts 122 and 124, to include new Minimum Levels (ML).

g. The Regional Water Board may modify, or revoke and reissue, this Order if present or future investigations demonstrate that the discharge(s) governed by this Order will cause, have the potential to cause, or contribute to adverse impacts on water quality and/or beneficial uses of the receiving waters.

h. This Order may also be modified, revoked and reissued, or terminated in accordance with the provisions of 40 CFR parts 122.44, 122.62 to 122.64, 125.62, and 125.64. Causes for taking such actions include, but are not limited to, failure to comply with any condition of this Order, endangerment to human health or the environment resulting from the permitted activity, or acquisition of newly obtained information which would have justified the application of different conditions if known at the time of Order adoption. The filing of a request by the Discharger for an Order modification, revocation and issuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

i. This Order may be reopened upon completion of the flood management plan described in VI.C.2.b.vi.

j. This Order may be reopened and modified, to add or revise effluent limitations as a result of future Basin Plan Amendments, such as an update of a WQO, or the adoption of a total maximum daily load (TMDL).

k. This Order may be reopened and modified, to revise effluent limitations as a result of the delisting of a pollutant from the 303(d) list.

l. This Order may be reopened and modified to revise the chronic toxicity effluent limitation, to the extent necessary, to be consistent with State Water Board precedential decisions, new policies, new laws, or new regulations.

m. This Order may be reopened to modify final effluent limits, if at the conclusion of necessary studies conducted by the Discharger, the Regional Water Board determines that dilution credits, attenuation factors, water effects ratios (WERs), or metal translators are warranted.

n. This Order may be reopened upon completion of special studies specified in section VI.C.2.b. of this Order.

o. This Order may be reopened upon completion the Estuary Phase 3 special study specified in section VI.C.2.b.i.of this Order , should groundwater impact be identified and groundwater limits found to be necessary to protect this water of the State, upon review by the Regional Water Board

p. This Order may be reopened upon completion a special study specified in section VI.C.2.b.i. of this Order if the special study demonstrates that a revision of the 9 mgd discharge limit, is necessary upon review by the Regional Water Board.

q. This Order may be reopened upon completion of the Nutrient, Dissolved Oxygen and Toxicity Special Study specified in section VI.C.2.b.ii. of this Order or if those studies demonstrates that a revision of the nutrient limits is necessary upon review by the Regional Water Board.

r. This Order may be reopened to incorporate the requirement to develop a pretreatment program pursuant to 40 CFR 403.8(a) when the Regional Water Board Executive Officer determines that a pretreatment program is necessary due to any new introduction of pollutants into the POTW or any substantial change in the volume or character of pollutants being introduced.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Constituents of Emerging Concern (CECs) in the Effluent

i. The Discharger shall conduct a special study to investigate the CECs in the effluent discharge. Within 90 days of the effective date of this Order, the Discharger shall submit to the Executive Officer a CEC special study work plan for approval. Upon approval, the Discharger shall implement the work plan.

ii. The Discharger shall follow the requirements of the work plan, as discussed in the MRP and the Fact Sheet.

b. Estuary Studies

i. Phase 3 Estuary Studies – The Discharger shall perform additional estuary studies to provide sufficient information to allow the Regional Water Board to determine whether or not the continued discharge of effluent enhances the Estuary. The study will clarify the City's water budget analysis for the Santa Clara River Estuary, to determine whether any effluent discharge is needed to sustain the Estuary's native species, and if so how much.

ii. Nutrient, Dissolved Oxygen and Toxicity Special Study - The Discharger must perform a special study to identify the cause of nutrient, dissolved oxygen and toxicity impairments in the Estuary. The Dissolved Oxygen Study will include sufficient monitoring, including diurnal monitoring, to determine the suitability of DO levels for the Estuary's aquatic life. If it is determined that the effluent from the Facility is causing the impairments, the Facility must propose a plan for

reducing nutrient loading, including ammonia, nitrogen and phosphorus loading and toxicity impairments.

iii. Groundwater Special Study – the discharger must perform a special study to document the interaction between the estuary, discharge and groundwater and determine if the beneficial use of MUN applies to the water impacted by the discharge.

iv. The work plans for the Phase 3 Estuary, Nutrient, Dissolved Oxygen and Toxicity and Groundwater special studies shall be submitted 180 days following permit adoption for approval by the Executive Officer. The scope of the work of the Phase 3 Estuary study must be sufficient to support a staff finding concerning enhancement of the estuary in conformance with the Enclosed Bays and Estuary Policy.

v. The Phase 3 Estuary, Special Studies must be completed with final reports submitted no later than January 1, 2018. The Nutrient, Dissolved Oxygen and Toxicity, and Groundwater Special Studies must be completed with final reports submitted no later than 180 days before the expiration of this order.

vi. Flood Management Plan: The Discharger shall work with the Regional Water Board to convene a stakeholder group of all interested parties, including resource agencies, to recommend interim management solutions to the flooding at McGrath State Beach. This recommendation shall be presented to the Regional Water Board at a regularily convened meeting by December 31, 2014.

c. Toxicity Reduction Requirements

The Discharger shall prepare and submit a copy of the Discharger's initial investigation TRE work plan to the Executive Officer of the Regional Water Board for approval within 90 days of the effective date of this permit. If the Executive Officer does not disapprove the work plan within 60 days, the work plan shall become effective. The Discharger shall use USEPA manual EPA/833B-99/002 (municipal), or the most current version, as guidance. At a minimum, the initial investigation TRE work plan must contain the provisions in Attachment G. This work plan shall describe the steps the Discharger intends to follow if toxicity is detected, and should include, at a minimum:

i. A description of the investigation and evaluation techniques that will be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency;

ii. A description of the Facility's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in the operation of the Facility; and,

iii. If a TIE is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor).

If the effluent toxicity test result exceeds the limitation, then the Discharger shall immediately implement accelerated toxicity testing that consists of six additional tests, approximately every two weeks, over a 12-week period. Effluent sampling for the first test of the six additional tests shall commence within five days of receipt of the test results exceeding the toxicity limitation.

If the results of any two of the six tests (any two tests in a 12-week period) exceed the limitation, the Discharger shall initiate a TRE.

If results of the implementation of the Facility's initial investigation TRE work plan (as described above) indicate the need to continue the TRE/TIE, the Discharger shall expeditiously develop a more detailed TRE work plan for submittal to the Executive Officer within 15 days of completion of the initial investigation TRE.

Detailed toxicity testing and reporting requirements are contained in section V of the MRP (Attachment E).

d. Treatment Plant Capacity

The Discharger shall submit a written report to the Executive Officer of the Regional Water Board within 90 days after the "30-day (monthly) average" daily dry-weather flow equals or exceeds 75 percent of the design capacity of waste treatment and/or disposal facilities. The Discharger's senior administrative officer shall sign a letter, which transmits that report and certifies that the discharger's policy-making body is adequately informed of the report's contents. The report shall include the following:

i. The average daily flow for the month, the date on which the peak flow occurred, the rate of that peak flow, and the total flow for the day;

ii. The best estimate of when the monthly average daily dry-weather flow rate will equal or exceed the design capacity of the facilities; and,

iii. A schedule for studies, design, and other steps needed to provide additional capacity for waste treatment and/or disposal facilities before the waste flow rate equals the capacity of present units.

This requirement is applicable to those facilities which have not reached 75 percent of capacity as of the effective date of this Order. For those facilities that have reached 75 percent of capacity by that date but for which no such report has been previously submitted, such a report shall be filed within 90 days of the issuance of this Order.

3. Best Management Practices and Pollution Prevention

a. Storm Water Pollution Prevention Plan (SWPPP)

Within 90 days of the effective date of this Order, the Discharger shall submit an updated SWPPP to the Regional Water Board that describes site-specific management practices for minimizing pollution of storm water runoff and for preventing polluted storm water from being discharged directly to waters of the State. The SWPPP shall be developed in accordance with the requirements in Storm Water Pollution Prevention Plan Requirements (Attachment H). If all storm water is captured and treated on-site and no storm water is discharged or allowed to run off-site from the Facility, the Discharge shall provide certification with descriptions of on-site storm water management to the Regional Water Board.

b. Spill Clean-up Contingency Plan (SCCP)

i. Within 90 days, the Discharger is required to submit a SCCP, which describes the activities and protocols to address clean-up of spills, overflows, and bypasses of untreated or partially treated wastewater from the Discharger's collection system or treatment facilities that reach water bodies, including dry channels and beach sands. At a minimum, the plan shall include sections on spill clean-up and containment measures, public notification, and monitoring. The Discharger shall review and amend the plan as appropriate after each spill from the Facility or in the service area of the Facility. The Discharger shall

include a discussion in the annual summary report of any modifications to the SCCP and the application of the SCCP to all spills during the year.

ii. The updated SCCP shall include a conceptual monitoring protocol for spills greater than 10,000 gallons to beach sands (1) to define the extent of waste discharged to beach sands and adjacent surface waters, and (2) to confirm the conclusion and effectiveness of the clean-up and/or mitigation measures. The SCCP shall include a protocol for coordination with the local health department during such an event. This component of the SCCP shall be posted on the Regional Water Board website for stakeholder review and comment for 30 days prior to Executive Officer approval.

c. Pollutant Minimization Program (PMP)

Reporting protocols in the MRP (Attachment E) section IX.B.4 describe sample results that are to be reported as Detected but Not Quantified (DNQ) or Not Detected (ND). Definitions for a reported Minimum Level (ML) and Method Detection Limit (MDL) are provided in Attachment A.

These reporting protocols and definitions are used in determining the need to conduct a PMP as follows:

i. The Discharger shall develop and conduct a PMP as further described below when there is evidence (e.g., sample results reported as DNQ when the effluent limitation is less than the 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; or, results of benthic or aquatic organism tissue sampling) that a pollutant is present in the effluent above an effluent limitation and either of the following is true:

(a) The concentration of the pollutant is reported as DNQ and the effluent limitation is less than the reported ML; or,

(b) The concentration of the pollutant is reported as ND and the effluent limitation is less than the MDL, using definitions described in Attachment A and reporting protocols described in the MRP.

ii. The goal of the PMP shall be to reduce all potential sources of a pollutant through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost-effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan (PPP), if required pursuant to CWC section 13263.3(d), shall be considered to fulfill the PMP requirements.

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

(a) 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;

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

(c) 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;

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

(e) An annual status report that shall be sent to the Regional Water Board including:

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

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

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

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

4. Construction, Operation and Maintenance Specifications

a. Wastewater treatment facilities subject to this Order shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to CCR, title 23, division 3, chapter 26 (CWC sections 13625 – 13633).

b. The Discharger shall maintain in good working order a sufficient alternate power source for operating the wastewater treatment and disposal facilities. All equipment shall be located to minimize failure due to moisture, liquid spray, flooding, and other physical phenomena. The alternate power source shall be designed to permit inspection and maintenance and shall provide for periodic testing. If such alternate power source is not in existence, the discharger shall halt, reduce, or otherwise control all discharges upon the reduction, loss, or failure of the primary source of power.

c. The Discharger shall provide standby or emergency power facilities and/or storage capacity or other means so that in the event of plant upset or outage due to power failure or other cause, discharge of raw or inadequately treated sewage does not occur.

5. Special Provisions for Municipal Facilities (POTWs Only)

a. Sludge Disposal Requirements

i. All sludge generated at the wastewater treatment plant must be disposed of, treated, or applied to land in accordance with federal regulations contained in 40 CFR part 503. These requirements are enforceable by USEPA.

ii. The Discharger shall ensure compliance with the requirements in State Water Board Order No. 2004-10-DWQ, General WDRs for the Discharge of Biosolids to Land for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural and Land Reclamation Activities for those sites receiving the Discharger's biosolids which a Regional Water Board has placed under this general order, and with the requirements in individual WDRs issued by a Regional Water Board for sites receiving the Discharger's biosolids.

iii. The Discharger shall comply, if applicable, with WDRs issued by other Regional Water Boards to which jurisdiction the biosolids are transported and applied.

iv. The Discharger shall furnish this Regional Water Board with a copy of any report submitted to USEPA, the State Water Board or other Regional Water Board, with respect to municipal sludge or biosolids.

b. Pretreatment Requirements

i. This Order includes the Discharger's Pretreatment Program as previously submitted to this Regional Water Board. Any change to the program shall be reported to the Regional Water Board in writing and shall not become effective until approved by the Executive Officer in accordance with procedures established in 40 CFR part 403.18.

ii. Additional information pertaining to the pretreatment requirements is contained in Attachment P – Pretreatment Reporting Requirements.

c. Collection System Requirements

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 CFR § 122.41(e)). The Discharger must report any non-compliance (40 CFR § 122.41(l)(6) and (7)) and mitigate any discharge from the collection system in violation of this Order (40 CFR § 122.41(d)). See the Order at Standard Provision VI.A.2.c and Attachment D, subsections I.D, V.E, V.H, and I.C, and the following section of this order.

d. Spill Reporting Requirements

Initial Notification: Although State and Regional Water Board staffs do not have duties as first responders, this requirement is an appropriate mechanism 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. For certain spills, overflows and bypasses, the Discharger shall make notifications as required below:

i. In accordance with the requirements of Health and Safety Code section 5411.5, the Discharger shall provide notification to the local health officer or the director of environmental health with jurisdiction over the affected water body of any unauthorized release of sewage or other waste that causes, or probably will cause, a discharge to any waters of the state as soon as possible, but no later than two hours after becoming aware of the release.

ii. In accordance with the requirements of CWC section 13271, the Discharger shall provide notification to the California Emergency Management Agency (Cal EMA) of the release of reportable amounts of hazardous substances or sewage that causes, or probably will cause, a discharge to any waters of the state as soon as possible, but not later than two hours after becoming aware of the release. The CCR, Title 23, section 2250, defines a reportable amount of sewage as being 1,000 gallons. The phone number for reporting these releases to the Cal EMA is (800) 852-7550.

iii. The Discharger shall notify the Regional Water Board of any unauthorized release of sewage from its POTW that causes, or probably will cause, a discharge to a water of the state as soon as possible, but not later than two hours after becoming aware of the release. This initial notification does not need to be made if the Discharger has notified Cal EMA and the local health officer or the director of environmental health with jurisdiction over the affected waterbody. The phone number for reporting these releases of sewage to the Regional Water Board is (213) 576-6657. The phone numbers for after hours

and weekend reporting of releases of sewage to the Regional Water Board are (213) 305-2284 and (213) 305-2253.

iv. At a minimum, the following information shall be provided to the Regional Water Board:

(a) The location, date, and time of the release;

(b) The water body that received or will receive the discharge;

(c) An estimate of the amount of sewage or other waste released and the amount that reached a surface water at the time of notification;

(d) If ongoing, the estimated flow rate of the release at the time of the notification;

(e) The name, organization, phone number and email address of the reporting representative; and,

(f) A certification that the State Office of Emergency Services and the local health officer or directors of environmental health with jurisdiction over the affected water bodies have been notified of the discharge.

e. Monitoring

For spills, overflows and bypasses reported under section VI.C.5.d, the Discharger shall monitor as required below:

To define the geographical extent of the spill's impact, the Discharger shall obtain grab samples (if feasible, accessible, and safe) for all spills, overflows or bypasses of any volume that reach any waters of the State (including surface and ground waters). The Discharger shall analyze the samples for total coliform, fecal coliform, enterococci coliform and E. coli (if fecal coliform test shows positive), and relevant pollutants of concern, upstream and downstream of the point of entry of the spill (if feasible, accessible, and safe). This monitoring shall be done on a daily basis from the time the spill is known until the results of two consecutive sets of bacteriological monitoring indicate the return to the background level or the CDPH authorizes cessation of monitoring.

f. Reporting

The initial notification required under section VI.C.5.d shall be followed by:

i. As soon as possible, but not later than 24 hours after becoming aware of an unauthorized discharge of sewage or other waste from its wastewater treatment plant to a water of the state, the Discharger shall submit a statement to the Regional Water Board by email at aanijielo@waterboards.ca.gov . If the discharge is 1,000 gallons or more, this statement shall certify that Cal EMA has been notified of the discharge in accordance with CWC section 13271. The statement shall also certify that the local health officer or director of environmental health with jurisdiction over the affected water bodies has been notified of the discharge in accordance with Health and Safety Code section 5411.5. The statement shall also include at a minimum the following information:

(a) Agency, NPDES No., Order No., and MRP CI No.1822, if applicable;

(b) The location, date, and time of the discharge;

(c) The water body that received the discharge;

(d) A description of the level of treatment of the sewage or other waste discharged;

(e) An initial estimate of the amount of sewage or other waste released and the amount that reached a surface water;

(f) The Cal EMA control number and the date and time that notification of the incident was provided to Cal EMA; and,

(g) The name of the local health officer or director of environmental health representative notified (if contacted directly); the date and time of notification; and the method of notification (e.g., phone, fax, email).

ii. A written preliminary report five working days after disclosure of the incident is required. Submission to the Regional Water Board of the California Integrated Water Quality System (CIWQS) Sanitary Sewer Overflow (SSO) event number shall satisfy this requirement. Within 30 days after submitting the preliminary report, the Discharger shall submit the final written report to this Regional Water Board. (A copy of the final written report, for a given incident, already submitted pursuant to a statewide General WDRs for Wastewater Collection System Agencies, may be submitted to the Regional Water Board to satisfy this requirement.) The written report shall document the information required, as described below, monitoring results and any other information required in provisions of the Standard Provisions document including corrective measures implemented or proposed to be implemented to prevent/minimize future occurrences. The Executive Officer for just cause can grant an extension for submittal of the final written report.

iii. The Discharger shall include a certification in the annual summary report (due according to the schedule in the MRP) that states that the sewer system emergency equipment, including alarm systems, backup pumps, standby power generators, and other critical emergency pump station components were maintained and tested in accordance with the Discharger's preventive maintenance plan. Any deviations from or modifications to the Plan shall be discussed.

g. Records

i. The Discharger shall develop and maintain a record of all spills, overflows or bypasses of raw or partially treated sewage from its collection system or treatment plant. This record shall be made available to the Regional Water Board upon request and a spill summary shall be included in the annual summary report. The records shall contain:

(a) The date and time of each spill, overflow, or bypass;

(b) The location of each spill, overflow, or bypass;

(c) The estimated volume of each spill, overflow, and bypass including gross volume, amount recovered and amount not recovered, monitoring results as required by section VI.C.5.d;

(d) The cause of each spill, overflow, or bypass;

(e) Whether each spill, overflow, or bypass entered a receiving water and, if so, the name of the water body and whether it entered via storm drains or other man-made conveyances;

(f) Any mitigation measures implemented;

(g) Any corrective measures implemented or proposed to be implemented to prevent/minimize future occurrences; and,

(h) The mandatory information included in SSO online reporting for finalizing and certifying the SSO report for each spill, overflow, or bypass under the SSO WDR.

h. Activities Coordination

In addition, Regional Water Board expects that the POTW's owners/operators will coordinate their compliance activities for consistency and efficiency with other entities that have responsibilities to implement: (i) this NPDES permit, including the Pretreatment Program; (ii) a Municipal Separate Storm Sewer System (MS4) NPDES permit that may contain spill prevention, sewer maintenance, reporting requirements; and, (iii) the Sanitary Sewer Overflow (SSO) WDR.

i. Consistency with SSO WDRs

The CWA prohibits the discharge of pollutants from point sources to surface waters of the United States unless authorized under an NPDES permit. (33 United States Code sections 1311, 1342). The State Water Board adopted General Waste Discharge Requirements for Sanitary Sewer Systems, (WQ Order No. 2006-0003-DWQ; SSO WDR) on May 2, 2006, to provide a consistent, statewide regulatory approach to address sanitary sewer overflows. The SSO WDR requires public agencies that own or operate sanitary sewer systems to apply for coverage under the SSO WDR, develop and implement sewer system management plans, and report all SSO to the State Water Board's online SSOs database. Regardless of the coverage obtained under the SSO WDR, the Discharger's collection system is part of the POTW that is subject to this NPDES permit. As such, pursuant to federal regulations, the Discharger must properly operate and maintain its collection system (40 CFR part 122.41 (e)), report any non-compliance (40 CFR part 122.41(1)(6) and (7)), and mitigate any discharge from the collection system in violation of this NPDES permit (40 CFR part 122.41(d)).

The requirements contained in this Order in sections VI.C.3.b (SCCP Plan section), VI.C.4 (Construction, Operation and Maintenance Specifications section), and VI.C.5.d. (Spill Reporting Requirements section) are intended to be consistent with the requirements of the SSO WDR. The Regional Water Board recognizes that there may be some overlap between these NPDES permit provisions and SSO WDR requirements, related to the collection systems. The requirements of the SSO WDR are considered the minimum thresholds (see finding 11 of State Water Board Order No. 2006-0003-DWQ). To encourage efficiency, the Regional Water Board will accept the documentation prepared by the Permittees under the SSO WDR for compliance purposes as satisfying the requirements in sections VI.C.3.b, VI.C.4, and VI.C.5 provided the more stringent provisions contained in this NPDES permit are also addressed. Pursuant to SSO WDR, section D, provision 2(iii) and (iv), the provisions of this NPDES permit supersede the SSO WDR, for all purposes, including enforcement, to the extent the requirements may be deemed duplicative.

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 RL.

B. Multiple Sample Data

When determining compliance with an average monthly effluent limitation (AMEL), 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 DNQ or 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 may be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger will be considered out of compliance for that calendar month. The Discharger will only be considered out of compliance for days when the discharge occurs. For any 1 calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, does not exceed the AMEL for a given parameter, the Discharger will have demonstrated compliance with the AMEL for each day of that month for that parameter.

If the analytical result of any single sample, monitored monthly, quarterly, semiannually, or annually, exceeds the AMEL for any parameter, the Discharger shall collect up to 4 additional samples within the same calendar month. All analytical results shall be reported in the monitoring report for that month. The concentration of pollutant (an arithmetic mean or a median) in these samples estimated from the "Multiple Sample Data Reduction" section above, will be used for compliance determination.

In the event of noncompliance with an AMEL, the sampling frequency for that parameter shall be increased to weekly and shall continue at this level until compliance with the AMEL has been demonstrated.

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 may be considered out

of compliance for each day of that week for that parameter, resulting in 7 days of non-compliance. If only a single sample is taken during the calendar week and the analytical result for that sample exceeds the AWEL, the Discharger will be considered out of compliance for that calendar week. The Discharger will only be considered out of compliance for days when the discharge occurs. For any 1 calendar week during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar week.

A calendar week will begin on Sunday and end on Saturday. Partial calendar weeks at the end of calendar month will be carried forward to the next month in order to calculate and report a consecutive seven-day average value on Saturday.

E. Maximum Daily Effluent Limitation (MDEL)

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

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 may 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 2 grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in 2 instances of non-compliance with the instantaneous minimum effluent limitation).

G. Instantaneous Maximum Effluent Limitation

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, the Discharger may 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 2 grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in 2 instances of non-compliance with the instantaneous maximum effluent limitation).

H. Six-month Median Effluent Limitation

If the median of daily discharges over any 180-day period exceeds the six-month median effluent limitation for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for each day of that 180-day period for that parameter. The next assessment of compliance will occur after the next sample is taken. If only a single sample is taken during a given 180-day period and the analytical result for that sample exceeds the six-month median, the discharger will be considered out of compliance for the 180-day period. For any 180-period during which no sample is taken, no compliance determination can be made for the six-month median effluent limitation.

I. Percent Removal

The average monthly percent removal is the removal efficiency expressed in percentage across a treatment plant for a given pollutant parameter, as determined from the 30-day average values of pollutant concentrations (C in mg/L) of influent and effluent samples collected at about the same time using the following equation:

Percent Removal (percent) = $[1-(C_{Effluent}/C_{Influent})] \times 100$ percent

When preferred, the Discharger may substitute mass loadings and mass emissions for the concentrations.

J. Mass and Concentration Limitations

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 determined from that sample concentration shall also be reported as ND or DNQ.

K. Compliance with Single Constituent Effluent Limitations

Dischargers may be considered out of compliance with the effluent limitation if the concentration of the pollutant (see section B "Multiple Sample Data Reduction" above) in the monitoring sample is greater than the effluent limitation and greater than or equal to the RL.

L. Compliance with Effluent Limitations Expressed as a Sum of Several Constituents

Dischargers may be considered out of compliance with an effluent limitation which applies to the sum of a group of chemicals (e.g., PCBs) if the sum of the individual pollutant concentrations is greater than the effluent limitation. Individual pollutants of the group will be considered to have a concentration of zero if the constituent is reported as ND or DNQ.

M. Mass Emission Rate

The mass emission rate shall be obtained from the following calculation for any calendar day:

$$\text{Mass emission rate (lb/day)} = \frac{8.34}{N} \sum_{i=1}^{N} QiCi$$

$$\text{Mass emission rate (kg/day)} = \frac{3.79}{N} \sum_{i=1}^{N} QiCi$$

in which N is the number of samples analyzed in any calendar day. Qi and Ci are the flow rate (mgd) and the constituent concentration (mg/L), respectively, which are associated with each of the N grab samples, which may be taken in any calendar day. If a composite sample is taken, Ci is the concentration measured in the composite sample and Qi is the average flow rate occurring during the period over which samples are composited.

The daily concentration of all constituents shall be determined from the flow-weighted average of the same constituents in the combined waste streams as follows:

$$\text{Daily concentration} = \frac{1}{Q_t} \sum_{i=1}^{N} QiC\,i$$

in which N is the number of component waste streams. Qi and Ci are the flow rate (mgd) and the constituent concentration (mg/L), respectively, which are associated with each of the N waste streams. Qt is the total flow rate of the combined waste streams.

N. Bacterial Standards and Analysis

1. The geometric mean used for determining compliance with bacterial standards is calculated with the following equation:

   Geometric Mean = (C1 x C2 x ... x Cn)1/n

   where n is the number of days samples were collected during the period and C is the concentration of bacteria (MPN/100 mL or CFU/100 mL) found on each day of sampling.

2. For bacterial analyses, sample dilutions should be performed so the expected range of values is bracketed (for example, with multiple tube fermentation method or membrane filtration method, 2 to 16,000 per 100 ml for total and fecal coliform, at a minimum, and 1 to 1000 per 100 ml for enterococcus). The detection methods used for each analysis shall be reported with the results of the analyses.

3. Detection methods used for coliforms (total and fecal) shall be those presented in Table 1A of 40 CFR part 136 (revised May 18, 2012), unless alternate methods have been approved by USEPA pursuant to 40 CFR part 136, or improved methods have been determined by the Executive Officer and/or USEPA.

4. Detection methods used for enterococcus shall be those presented in the USEPA publication EPA 600/4-85/076, Test Methods for Escherichia coli and Enterococci in Water By Membrane Filter Procedure or any improved method determined by the Executive Officer and/or USEPA to be appropriate.

O. Single Operational Upset (SOU)

A SOU) that leads to simultaneous violations of more than one pollutant parameter shall be treated as a single violation and limits the Discharger's liability in accordance with the following conditions:

1. A SOU is broadly defined as a single unusual event that temporarily disrupts the usually satisfactory operation of a system in such a way that it results in violation of multiple pollutant parameters.

2. A Discharger may assert SOU to limit liability only for those violations which the Discharger submitted notice of the upset as required in provision V.E.2(b) of Attachment D.

3. For purpose outside of CWC section 13385, subdivisions (h) and (i), determination of compliance and civil liability (including any more specific definition of SOU, the requirements for Dischargers to assert the SOU limitation of liability, and the manner of counting violations) shall be in accordance with USEPA Memorandum Issuance of Guidance Interpreting Single Operational Upset (September 27, 1989).

4. For purpose of CWC section 13385 (h) and (i), determination of compliance and civil liability (including any more specific definition of SOU, the requirements for Dischargers to assert the SOU limitation of liability, and the manner of counting violations) shall be in accordance with CWC section 13385 (f)(2).

ATTACHMENT A – DEFINITIONS

Acute Toxicity
Acute Toxicity (TUa) as expressed in Toxic Units Acute (TUa)

$$TUa = \frac{100}{96\text{-hr LC } 50\%}$$

Lethal Concentration 50% (LC 50): LC 50 (percent waste giving 50% survival of test organisms) shall be determined by static or continuous flow bioassay. When it is not possible to measure the 96-hour LC 50 due to greater than 50 percent survival of the test species in 100 percent waste, the toxicity concentration shall be calculated by the expression:

$$TUa = \frac{\log (100 - S)}{1.7}$$

where: S = percentage survival in 100% waste. If S > 99, TUa shall be reported as zero.

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

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

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

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

Best Management Practice (BMP)
BMPs are schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs may include, but are not limited to, treatment requirements, operating procedures, or practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Best Professional Judgment (BPJ)
BPJ is the method used by permit writers to develop technology-based NPDES permit conditions on a case-by-case basis using all reasonably available and relevant data.

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.

Bioassay
A test used to evaluate the relative potency of a chemical or a mixture of chemicals by comparing its effect on a living organism with the effect of a standard preparation on the same type of organism.

Biochemical Oxygen Demand (BOD)
A measurement of the amount of oxygen utilized by the decomposition of organic material, over a specified time period (usually 5 days) in a wastewater sample; it is used as a measurement of the readily decomposable organic content of a wastewater.

Biosolids
Sewage sludge that is used or disposed through land application, surface disposal, incineration, or disposal in a municipal solid waste landfill.

Bypass
Bypass means that the intentional diversion of waste streams from any portion of a treatment (or pretreatment) facility whose operation is necessary to maintain compliance with the terms and conditions of this order and permit.

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

Chlordane
Shall mean the sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.

Chlorinated Phenolic Compounds
Chlorinated phenolic compounds shall mean the sum of 2-chlorophenol, 2,4-dichlorophenol, 4-chloro-3-methylphenol, 2,4,6-trichlorophenol, and pentachlorophenol.

Clean Water Act (CWA)
The Clean Water Act is an act passed by the United States congress to control water pollution. It was formerly referred to as the Federal Water Pollution control Act of 1972 or Federal Water Pollution Control Act Amendments of 1972 (Public Law 92-500), 33 United States Code 1251 et seq., as amended by: Public Law 96-483; Public Law 97-117; Public Laws 95-217, 97-117, 97-440, and 100-04.

Chronic Toxicity
This parameter shall be used to measure the acceptability of waters for supporting a healthy marine biota until improved methods are developed to evaluate biological response. Chronic Toxicity (TUc) is expressed as Toxic Units Chronic (TUc)

$$TUc = \frac{100}{NOEL}$$

No Observed Effect Level (NOEL): The NOEL is expressed as the maximum percent effluent or receiving water that causes no observable effect on a test organism, as determined by the result of a critical life stage toxicity test.

Code of Federal Regulation (CFR): A codification of the final rules published daily in the Federal Register. Title 40 of the CFR contains the environmental regulations.

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.

Composite sample means, for other than flow rate measurement,

a. A combination of at least eight individual portions obtained at equal time intervals for 24 hours, or the duration of the discharge, whichever is shorter. The volume of each individual portion shall be directly proportional to the discharge flow rate at the time of sampling; or,

b. A combination of at least eight individual portions of equal volume obtained over a 24-hour period. The time interval will vary such that the volume of wastewater discharged between sampling remains constant.

The compositing period shall equal the specified sampling period, or 24 hours, if no period is specified.

For 24-hour composite samples, if the duration of the discharge is less than 24 hours but greater than 8 hours, at least eight flow-weighted samples shall be obtained during the discharge period and composited. For discharge durations of less than eight hours, individual "grab samples" may be substituted. A grab sample is an individual sample collected in less than 15 minutes.

Conventional Pollutants
Pollutants typical of municipal sewage, and for which municipal secondary treatment plants are typically designed; defined at 40 CFR part 401.16 as BOD, TSS, fecal coliform, bacteria, oil and grease, and pH.

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.

DDT (Dichlorodiphenyltrichloroethane)
Shall mean the sum of 4,4'DDT, 2,4'DDT, 4,4'DDE, 2,4'DDE, 4,4'DDD, and 2,4'DDD.

Degrade
Degradation shall be determined by comparison of the waste field and reference site(s) for characteristic species diversity, population density, contamination, growth anomalies, debility, or supplanting of normal species by undesirable plant and animal species. Degradation occurs if there are significant differences in any of three major biotic groups, namely, demersal fish, benthic invertebrates, or attached algae. Other groups may be evaluated where benthic species are not affected, or are not the only ones affected.

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.

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

Enclosed Bays
Enclosed Bays means indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, 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.

Endosulfan
The sum of endosulfan-alpha and -beta and endosulfan sulfate.

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

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

Grab Sample
Grab Sample is defined as any individual sample collected in a short period of time not exceeding 15 minutes. Grab samples shall be collected during normal peak loading conditions for the parameter of interest, which may or may not be during hydraulic peaks. It is used primarily in determining compliance with the maximum daily effluent limitations and the instantaneous maximum effluent limitations.

Halomethanes
The sum of bromoform, bromomethane (methyl bromide) and chloromethane (methyl chloride).

Hazardous Substance means any substance designated under 40 CFR part 116 pursuant to section 311 of the Clean Water Act and/or a hazardous waste, as defined in 40 CFR part 116 pursuant to section 311 of the Clean Water Act and/or a hazardous waste, as defined in 40 CFR part 261.3

HCH
The sum of the alpha, beta, gamma (lindane) and delta isomers of hexachlorocyclohexane.

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

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

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

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

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

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

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

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

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

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

PAHs (polynuclear aromatic hydrocarbons)
The sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1;12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene and pyrene.

PCBs (polychlorinated biphenyls)
The sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.

PCB derivatives
At a minimum, PCB congeners whose analytical characteristics resemble those of PCB-18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, and 206 shall be individually quantified.

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

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

Pollution Prevention
Pollution Prevention means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in CWCsection 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 Regional Water Board.

Pretreatment: The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a publicly owned treatment works (40 CFR part 403.3(q)).

Priority Pollutants are those constituents referred to in 40 CFR part 401.15; a list of these pollutants is provided as Appendix A to 40 CFR part 423.

Publicly Owned Treatment Works (POTW): A treatment works, as defined by section 212 of the CWA that is owned by the 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 (40 CFR part 403.3).

Rare, threatened or Endangered species (RARE) means that one or more rare species utilize all ocean, bays, estuaries, and coastal wetlands for foraging and/or nesting.

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 Regional Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

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

Shellfish
Organisms identified by the California Department of Health Services as shellfish for public health purposes (i.e., mussels, clams and oysters).

Significant Difference
Defined as a statistically significant difference in the means of two distributions of sampling results at the 95 percent confidence level.

Sludge
The solids, semi-liquid suspensions of solids, residues, screenings, grit, scum, and precipitates separated from, or created in, wastewater by the unit processes of a treatment system. It also includes, but is not limited to, all supernatant, filtrate, centrate, decantate, and thickener overflow/underflow in the solids handling parts of the wastewater treatment system.

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

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

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

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

Toxicity Reduction Evaluation (TRE)
TRE is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and

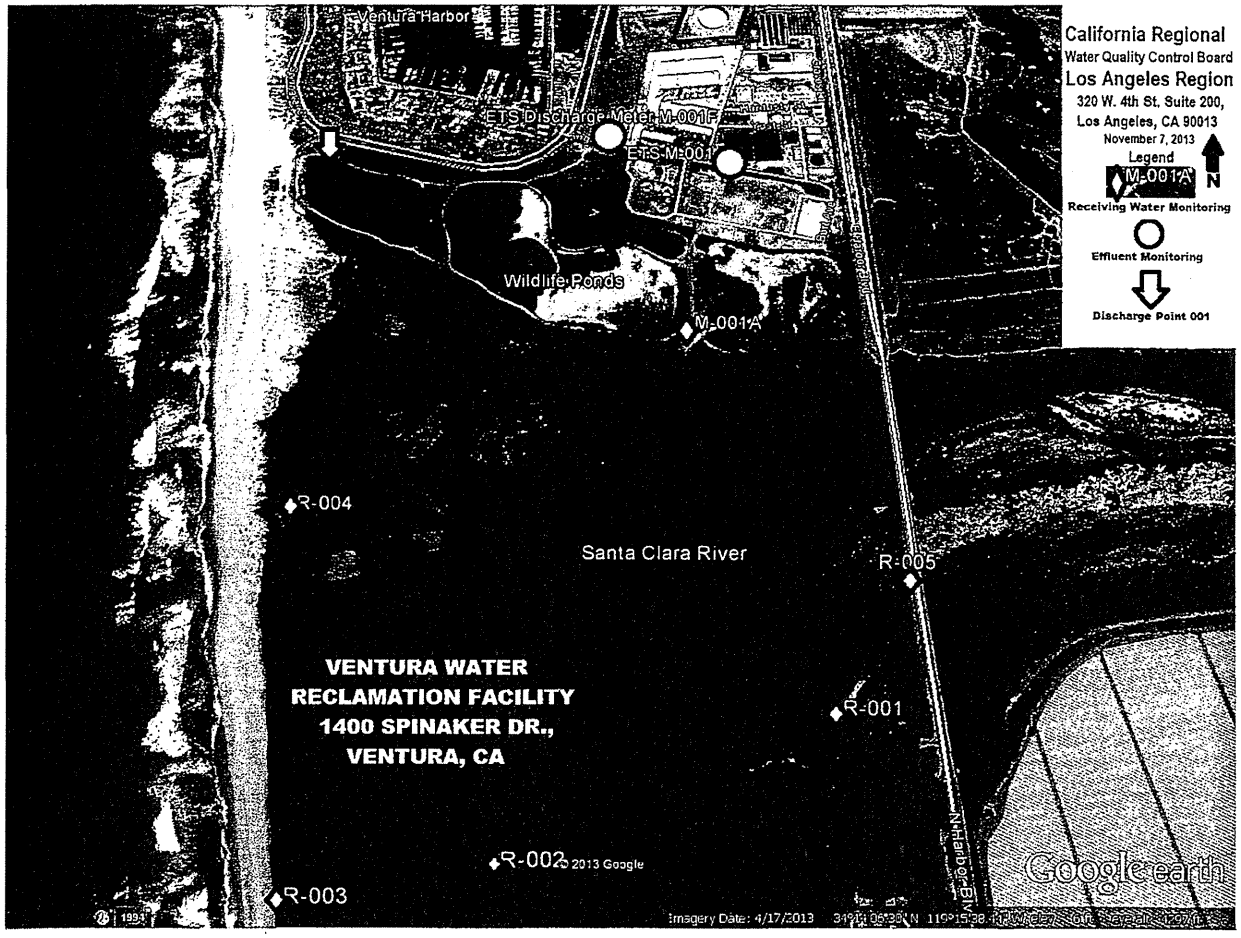
maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

Water Effect Ratio (WER)
A criteria adjustment factor accounting for the effect of site-specific water characteristics for certain metals from national and state aquatic life criteria that were originally developed using laboratory toxicity data. These aquatic life criteria for metals are intended to protect the aquatic life in most, but not all, surface waters. In some cases, such a criterion might not adequately protect the aquatic life at a given site. More commonly, though, these criteria are overprotective because most surface waters have greater hardness and often higher pH than the laboratory water which was used in toxicity tests which formed the basis for the standard.

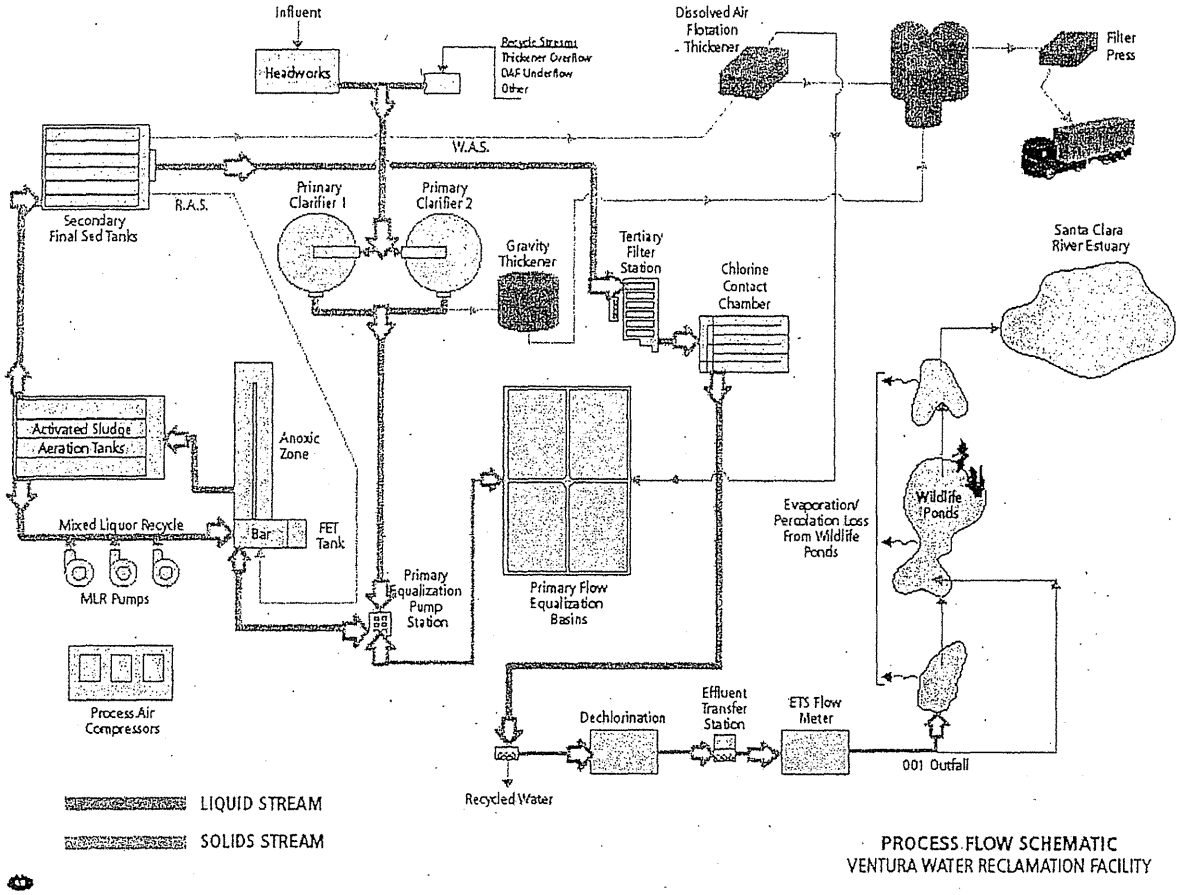
Water Reclamation
The treatment of wastewater to render it suitable for reuse, the transportation of treated wastewater to the place of use, and the actual use of treated wastewater for a direct beneficial use or controlled use that would not otherwise occur.

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

ATTACHMENT B – MAP



ATTACHMENT C – FLOW SCHEMATIC



PROCESS FLOW SCHEMATIC
VENTURA WATER RECLAMATION FACILITY

ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the terms, requirements, and conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA), its regulations, and the California Water Code (CWC) and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. (Title 40, Code of Federal Regulations (40 CFR) part 122.41(a); California Water Code (CWC) sections 13261, 13263, 13264, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)

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 CFR § 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 CFR § 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 CFR § 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 CFR § 122.41(e).)

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 CFR § 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 CFR § 122.5(c).)

F. Inspection and Entry

The Discharger shall allow the Regional Water Board, State Water Board, USEPA, and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, , to (33 USC section 1318(a)(4)(B); 40 CFR part 122.41(i); CWC sections 13267 and 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 (33 USC section 1318(a)(4)(B)(i); 40 CFR part 122.41(i)(1); CWC sections 13267 and 13383);
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (33 USC section 1318(a)(4)(B)(ii); 40 CFR part 122.41(i)(2); CWC sections 13267 and 13383)
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (33 USC section 1318(a)(4)(B)(ii); 40 CFR part 122.41(i)(3); CWC sections 13267 and 13383);
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(33 USC section 1318(a)(4)(B); 40 CFR part 122.41(i)(4); CWC sections 13267 and 13383)

G. Bypass

1. Definitions
   a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR § 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 CFR § 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 CFR § 122.41(m)(2).)
3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless (40 CFR § 122.41(m)(4)(i)):
   a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR § 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 CFR § 122.41(m)(4)(i)(B)); and
   c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 CFR § 122.41(m)(4)(i)(C).)
4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three

conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 CFR § 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 CFR § 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 CFR § 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 CFR § 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 CFR § 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 CFR § 122.41(n)(3)):

   a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 CFR § 122.41(n)(3)(i));

   b. The permitted facility was, at the time, being properly operated (40 CFR § 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 CFR § 122.41(n)(3)(iii)); and

   d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 CFR § 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 CFR § 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 CFR § 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 CFR § 122.41(b).)

C. Transfers

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

III. STANDARD PROVISIONS – MONITORING

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 CFR § 122.41(j)(1).)

B. Monitoring results must be conducted according to test procedures under 40 CFR part 136 or, in the case of sludge use or disposal, approved under 40 CFR part 136 unless otherwise specified in 40 CFR part 503 unless other test procedures have been specified in this Order. (40 CFR § 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 CFR part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time. (40 CFR § 122.41(j)(2).)

B. Records of monitoring information shall include:

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

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

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

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Regional Water Board, State Water Board, or USEPA within a reasonable time, any information which the Regional Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and

reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 CFR § 122.41(h); Water Code, § 13267. and 13383)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 CFR part 122.41(k).)

2. *Signatory requirements for a municipality, State, Federal, or other public agency.* All applications submitted to the Regional Water Board shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (40 CFR part 122.22(a)(3).).

3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 CFR part 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 CFR part 122.22(b)(2)); and

   c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 CFR part 122.22(b)(3).)

4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 CFR part 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 CFR § 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 CFR § 122.41(l)(4).)
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 CFR § 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 CFR part 136, or another method required for an industry-specific waste stream under 40 CFR 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 Regional Water Board. (40 CFR § 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 CFR § 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 CFR § 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 CFR § 122.41(l)(6)(i).)
2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 CFR § 122.41(l)(6)(ii)):
   a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 CFR § 122.41(l)(6)(ii)(A).)
   b. Any upset that exceeds any effluent limitation in this Order. (40 CFR § 122.41(l)(6)(ii)(B).)
3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 CFR § 122.41(l)(6)(iii).)

F. Planned Changes

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

3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 CFR§ 122.41(l)(1)(iii).)

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Regional Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with this Order's requirements. (40 CFR § 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 CFR § 122.41(l)(7).)

I. Other Information

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

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13268,13385, 13386, and 13387.

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

serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions (40 CFR part 122.41(a)(2)); CWC section 13385 and 13387).

C. Any person may be assessed an administrative penalty by the Administrator of USEPA, the Regional Water Board, or State Water Board for violating section 301, 302, 306, 307, 308, 318 or 405 of this CWA, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the CWA. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000. (40 CFR part 122.41(a)(3)).

D. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than two years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four years, or both. (40 CFR part 122.41(j)(5)).

E. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both. (40 CFR part 122.41(k)(2)).

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Regional Water Board of the following (40 CFR § 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 CFR § 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 CFR § 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 CFR § 122.42(b)(3).

ATTACHMENT E – MONITORING AND REPORTING PROGRAM, CI NO. 1822

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

Section 308(a) of the federal Clean Water Act and sections 122.41(h), (j)-(l), 122,44(i), and 122.48 of Title 40 of the Code of Federal Regulations (40 CFR) require that all NPDES permits specify monitoring and reporting requirements. California Water Code (CWC) sections 13267 and 13383 also authorizes the Regional Water Quality Control Board (Regional Water Board) to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. This MRP establishes monitoring, reporting, and recordkeeping requirements that implement the federal and California laws and/or regulations.

I. GENERAL MONITORING PROVISIONS

A. All samples shall be representative of the waste discharge under conditions of peak load. Quarterly effluent analyses shall be performed during the months of February, May, August, and November. Semiannual analyses shall be performed during the months of February and August. Annual analyses shall be performed during the month of August. Should there be instances when monitoring could not be done during these specified months, the Discharger must notify the Regional Water Board, state the reason why monitoring could not be conducted, and obtain approval from the Executive Officer for an alternate schedule. Results of quarterly, semiannual, and annual analyses shall be reported in the monthly monitoring report following the analysis.

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

C. Pollutants shall be analyzed using the analytical methods described in 40 CFR parts 136.3, 136.4, and 136.5 (revised May 18, 2012), which establish test procedures for the analysis of pollutants; or where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board. Laboratories analyzing effluent samples and receiving water samples shall be certified by the California Department of Public Health (CDPH) Environmental Laboratory Accreditation Program (ELAP) or approved by the Executive Officer and must include quality assurance/quality control (QA/QC) data in their reports. A copy of the laboratory certification shall be provided each time a new certification and/or renewal of the certification is obtained from ELAP.

D. Water/wastewater samples must be analyzed within allowable holding time limits as specified in 40 CFR part 136.3 (revised May 18, 2012). All QA/QC analyses must be run on the same dates that samples are actually analyzed. The Discharger shall retain the QA/QC documentation in its files and make available for inspection and/or submit them when requested by the Regional Water Board. Proper chain of custody procedures must be followed and a copy of that documentation shall be submitted with the monthly report.

E. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments and to ensure accuracy of measurements, or shall ensure that both equipment activities will be conducted.

F. For any analyses performed for which no procedure is specified in the United States Environmental Protection Agency (USEPA) guidelines, or in the MRP, the constituent or parameter analyzed and the method or procedure used must be specified in the monitoring report.

G. Each monitoring report must affirm in writing that "all analyses were conducted at a laboratory certified for such analyses by the CDPH or approved by the Executive Officer and in accordance with current USEPA guideline procedures or as specified in this MRP."

H. The monitoring report shall specify the USEPA analytical method used, the method detection limit (MDL) and the reporting level (RL) [either the minimum level (ML) or the reported minimum level (RML)] for each pollutant. The MLs are those published by the State Water Board in the *Policy for the Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP),* February 9, 2005, Appendix 4. The ML represents the lowest quantifiable concentration in a sample based on the proper application of all method-based analytical procedures and the absence of any matrix interference. When all specific analytical steps are followed and after appropriate application of method specific factors, the ML also represents the lowest standard in the calibration curve for that specific analytical technique. When there is deviation from the method analytical procedures, such as dilution or concentration of samples, other factors may be applied to the ML depending on the sample preparation. The resulting value is the reported ML.

I. The Discharger shall select the analytical method that provides a ML lower than the National Pollutant Discharge Elimination System (NPDES) permit limit established for a given parameter, unless the Discharger can demonstrate that a particular ML is not attainable, in accordance with procedures set forth in 40 CFR part 136, and obtains approval for a higher ML from the Executive Officer, as provided for in section J. below. If the effluent limitation is lower than all the MLs in Appendix 4 of the SIP, the Discharger must select the method with the lowest ML for compliance purposes. The Discharger shall include in the annual summary report a list of the analytical methods employed for each test.

J. The Discharger shall instruct its laboratories to establish calibration standards so that the ML (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. In accordance with Attachments K, L, M and N, the Discharger's laboratory may employ a calibration standard lower than the ML in Appendix 4 of the SIP.

K. In accordance with section 2.4.3 of the SIP, the Regional Water Board Executive Officer, in consultation with the State Water Board's Quality Assurance Program Manager, may establish an ML that is not contained in Appendix 4 of the SIP to be included in this Order in any of the following situations:

1. When the pollutant under consideration is not included in Appendix 4 of the SIP;
2. When the Discharger and the Regional Water Board agree to include in the NPDES permit a test method that is more sensitive than those specified in 40 CFR part 136 (revised as of May 18, 2012);
3. When the Discharger agrees to use an ML that is lower than those listed in Appendix 4 of the SIP;
4. When the Discharger demonstrates that the calibration standard matrix is sufficiently different from that used to establish the ML in Appendix 4 of the SIP and proposes an appropriate ML for the matrix; or,
5. When the Discharger uses a method with quantification practices are not consistent with the definition of the ML. Examples of such methods are USEPA-approved method 1613 for dioxins, method 1624 for volatile organic substances, and method 1625 for semi-volatile organic substances. In such cases, the discharger, the Regional Water Board, and the State Water Board shall agree on a lowest quantifiable limit and that limit will substitute for the ML for reporting and compliance determination purposes.

If there is any conflict between foregoing provisions and the SIP, the provisions stated in the SIP (section 2.4) shall prevail.

L. If the Discharger samples and performs analyses (other than for process/operational control, startup, research, or equipment testing) on any influent, effluent, or receiving water constituent more frequently than required by this MRP using approved analytical methods, the results of those analyses shall be included in the monitoring reports. These results shall be reflected in the calculation of the average used in demonstrating compliance with average effluent, receiving water, etc., limitations.

M. The Discharger shall develop and maintain a record of all spills or bypasses of raw or partially treated sewage from its collection system or treatment plant according to the requirements in this Order. This record shall be made available to the Regional Water Board upon request and a spill summary shall be included in the annual summary report.

N. For all bacteriological analyses, sample dilutions should be performed so the expected range of values is bracketed (for example, with multiple tube fermentation method or membrane filtration method, 2 to 16,000 per 100 ml for total and fecal coliform, at a minimum, and 1 to 1000 per 100 ml for enterococcus). The detection methods used for each analysis shall be reported with the results of the analyses.

1. Detection methods used for coliforms (total and fecal) shall be those presented in Table 1A of 40 CFR part 136 (revised May 18, 2012), unless alternate methods have been approved in advance by the USEPA pursuant to 40 CFR part 136.
2. Detection methods used for enterococcus shall be those presented in Table 1A of 40 CFR part 136 (revised May 18, 2012) or in the USEPA publication EPA 600/4-85/076, *Test Methods for Escherichia coli and Enterococci in Water By Membrane Filter Procedure*, or any improved method determined by the Regional Water Board to be appropriate.

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
Influent Monitoring Station		
Inf-001	Influent Pump Station	Located in the main stream of the influent channel prior to the headworks adjacent to Harbor Boulevard. Latitude: 34^0, 14', 25.44" N Longitude: 119^0, 15', 25.53" W
Effluent Monitoring Station		
M-001	Effluent Transfer Station (All constituents but flow)	Located downstream of all treated effluent passing through this station, including the final disinfection process, and above the wildlife ponds. Latitude: 34^0, 14', 21.72" N Longitude: 119^0, 15', 31.33" W
M-001F	Effluent Transfer Station – Flow Meter	Located downstream from M-001A. Latitude: 34^0, 14', 23.31" N Longitude: 119^0, 15', 38.66" W
Receiving Water Monitoring Station		
R-001	Receiving Water Sample Station	Located on the southeast shoreline of the Santa Clara River Estuary (Estuary). It may not be accessible when the Estuary is flooded. Latitude: 34^0, 13', 55.58" N Longitude: 119^0, 15', 27.59" W
R-002	Receiving Water Sample Station	Located at the south shoreline of the Santa Clara River Estuary. It may not be accessible when the Estuary is flooded. Latitude: 34^0, 13', 47.37" N Longitude: 119^0, 15', 43.15"

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
R-003	Receiving Water Sample Station	Located at the west shoreline of the Santa Clara River Estuary. (variable at the mouth of the outlet, where breaching has most recently occurred[1])
R-004	Receiving Water Sample Station	Located at the northwest shoreline of the Santa Clara River Estuary, immediately downstream of the discharge point to the Estuary. Latitude: 34°, 14', 04.15" N Longitude: 119°, 15', 54.19" W
R-005	Receiving Water Sample Station	Located at the Harbor Boulevard Bridge crossing of the Santa Clara River at the Estuary boundary. R-005 was labeled as Station L-5 in the previous permit. This sampling location is for river water flowing into the Estuary, except when the Estuary is flooded. Latitude: 34°, 14', 01.63" N Longitude: 119°, 15', 23.79" W
M-001A	Receiving Water Sample Station	Located below the wildlife ponds at an existing structure with the approximate location of: Latitude: 34°, 14', 11.9868" N Longitude: 119°, 15', 32.421" W

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

III. INFLUENT MONITORING REQUIREMENTS

Influent monitoring is required to determine compliance with NPDES permit conditions, assess treatment plant performance and assess effectiveness of the Pretreatment Program.

A. Monitoring Location Inf-001

1. The Discharger shall monitor influent to the facility at the Influent Pump Station as follows:

Table E-2. Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	recorder/totalizer	continuous[2]	[2]
pH	pH units	Grab	weekly	[3]
TSS	mg/L	24-hour composite	weekly	[3]
BOD_5 20°C[4]	mg/L	24-hour composite	weekly	[3]
Nitrogen compounds[5]	mg/L	Grab	monthly	[3]
Copper	µg/L	Grab	monthly	[3]
Selenium[6]	µg/L	Grab	monthly	[3]
Lead	µg/L	Grab	monthly	[3]

[1] Footnote deleted.
[2] Total daily flow and instantaneous peak daily flow (24-hr basis). Actual monitored flow shall be reported (not the maximum flow, i.e., design capacity).
[3] Pollutants shall be analyzed using the analytical methods described in 40 CFR part 136; for priority pollutants the methods must meet the lowest MLs specified in Attachment 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or State Water Board.
[4] Biological Oxygen Demand measured over 5 days at 20 degrees centigrade
[5] Additional influent sampling for nitrogen species is required to identify causes for ammonia concentrations in effluent.
[6] Additional influent testing is required to determine if a relationship exists between selenium, which may be present in groundwater, and effluent concentrations.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Nickel	µg/L	Grab	monthly	3
Zinc	µg/L	Grab	quarterly	3
Remaining priority pollutants[7] excluding asbestos	µg/L	24-hour composite/grab for VOCs and Chromium VI	semiannually	3
Pesticides[8]	µg/L	24-hour composite	semiannually	3

IV. EFFLUENT MONITORING REQUIREMENTS

Effluent monitoring is required to determine compliance with permit conditions and water quality standards, assess plant performance, identify operational problems, improve plant performance and provide information on wastewater characteristics and flows for use in interpreting water quality and biological data to inform any conclusions made concerning enhancement of the Estuary.

A. Monitoring Location Effluent Transfer Stations (M-001 and M-001F)

1. The Discharger shall monitor the discharge of tertiary-treated effluent at the Effluent Transfer Stations as compliance points as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods:

Table E-3. Effluent Monitoring[9]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total waste flow	Mgd	recorder	continuous[10]	2
Turbidity	NTU	recorder	continuous	3
Total residual chlorine (TRC)	mg/L	recorder	continuous[11, 12]	3
Total residual chlorine	mg/L	Grab[13]	Daily[12, 14]	3

[7] Priority pollutants as defined by the California Toxics Rule (CTR) in Attachment F.
[8] Pesticides are, for purposes of this Order, the 6 constituents referred to in 40 CFR part 125.58 (p) (methoxychlor, demeton, guthion, malathion, mirex, and parathion).
[9] Whole Effluent Toxicity monitoring is also required as described in Section V.
[10] Where continuous monitoring of a constituent is required, the following shall be reported:
a. Total waste flow – Total daily and peak daily flow (24-hr basis);
b. Total residual chlorine (TRC) – Maximum daily value (24-hr basis);
c. Turbidity – Maximum daily value, total amount of time each day the turbidity exceeded five turbidity units, flow-proportioned average daily value
[11] Total residual chlorine (TRC) shall be continuously recorded. The recorded charts shall be maintained by the Discharger for at least five years. The maximum daily peak, minimum daily peak, and daily average total residual chlorine shall be reported on the monthly monitoring reports.
[12] Continuous monitoring of TRC at the current location shall serve as an internal trigger for increased TRC end of pipe grab sampling if either of the following occur:
a. TRC concentration excursions of up to 0.3 mg/L lasting greater than 15 minutes; or
b. TRC concentration peaks in excess of 0.3 mg/L lasting greater than 1 minute and
Additional end of pipe grab samples need not be taken if it can be demonstrated that a stoichiometrically appropriate amount of dechlorination chemical has been added to effectively dechlorinate the effluent to 0.1 mg/L or less for peaks in excess of 0.3 mg/L lasting more than 1 minute, but not for more than 5 minutes.
[13] Grab samples shall be collected at end of pipe during peak flow.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
(TRC)				
Total and fecal coliform	MPN/100 mL	Grab	Daily	[3]
enterococcus coliform	MPN/100 mL	Grab	5 times per 30 days	[3]
Settleable solids	ml/L	Grab	Daily	[3]
$BOD_5 20^oC$	mg/L	24-hr comp.	Daily	[3]
Suspended solids	mg/L	24-hr comp.	Daily	[3]
Dissolved oxygen	mg/L	Grab	Daily	[3]
Temperature	^0F	Grab	weekly	[3]
pH	pH units	Grab	weekly	[3]
Oil and grease	mg/L	Grab	weekly	[3]
Total dissolved solids	mg/L	24-hr comp.	monthly	[3]
Fluoride	mg/L	24-hr comp.	monthly	[3]
Phosphate as P	mg/L	24-hr comp.	monthly	[3]
Phosphorous	mg/L	24-hr comp.	monthly	[3]
Total Ammonia[15]	mg/L	24-hr comp.	monthly	[3]
Nitrate nitrogen	mg/L	24-hr comp.	monthly	[3]
Nitrite nitrogen	mg/L	24-hr comp.	monthly	[3]
Organic nitrogen	mg/L	24-hr comp.	monthly	[3]
Total Kjeldahl nitrogen	mg/L	24-hr comp.	monthly	[3]
Detergents (as MBAS)	mg/L	24-hr comp.	monthly	[3]
Chlorophyll *a*	mg/L	Grab	monthly	[3]
Chronic toxicity	Tuc	24-hr comp.	monthly	See Section V.B.2.
Acute toxicity	TUa	24-hr comp.	annually	See Section V.A.2.
Barium	µg/L	24-hr comp.	semiannually	[3]
Cobalt	µg/L	24-hr comp.	semiannually	[3]
Copper	µg/L	24-hr comp.	monthly	[3]
Iron	µg/L	24-hr comp.	semiannually	[3]
Lead	µg/L	24-hr comp.	monthly	[3]
Mercury	µg/L	24-hr comp.	quarterly	[3]
Molybdenum	µg/L	24-hr comp.	semiannually	[3]
Nickel	µg/L	24-hr comp.	monthly	[3]
Selenium	µg/L	24-hr comp.	monthly	[3]
Silver	µg/L	24-hr comp.	quarterly	[3]
Vanadium	µg/L	24-hr comp.	semiannually	[3]
Zinc	µg/L	24-hr comp.	quarterly	[3]
Cyanide	µg/L	24-hr comp.	semiannually	[3]
Chlorodibromomethane	µg/L	Grab	semiannually	[3]
Chloroform	µg/L	24-hr comp.	semiannually	[3]

[14] Daily grab samples shall be collected Monday through Friday only, except for holidays; and not on weekends.
[15] Total ammonia means sum of unionized ammonia (NH_3) concentration and mass and ionized ammonia (NH_4^+) concentration and mass.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Dichlorobromomethane	µg/L	Grab	semiannually	[3]
Bis(2-ethylhexyl)phthalate	µg/L	Grab	semiannually	[3]
Bromoform	µg/L	Grab	semiannually	[3]
Acetone	µg/L	Grab	semiannually	[3]
Total xylene	µg/L	24-hr comp.	semiannually	[3]
TCDD	µg/L	24-hr comp.	semiannually	[16]
Remaining priority pollutants (excluding asbestos)	µg/L	grab/24-hr comp. for VOC	semiannually	[3]
Pesticides[8]	µg/L	24-hr comp.	semiannually	[3]
Radioactivity (Including gross alpha, gross beta, combined radium-226 and radium-228, tritium, strontium-90 and uranium)	µg/L	24-hr comp.	semiannually	[17]

V. WHOLE EFFLUENT TOXICITY (WET) TESTING REQUIREMENTS

A. Acute Toxicity

1. Definition of Acute Toxicity

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

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

   b. No single test shall produce less than 70 percent survival.

2. Acute Toxicity Effluent Monitoring Program

   a. Method. The Discharger shall conduct acute toxicity tests on 100 percent effluent and receiving water grab samples by methods specified in 40 CFR part 136, which

[16] In accordance with the SIP, the Discharger shall conduct effluent monitoring for the seventeen 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD or dioxin) congeners in the effluent and in the receiving water Station RSW-004, located downstream of the discharge point. The Discharger shall use the appropriate Toxicity Equivalence Factor (TEF) to determine Toxic Equivalence (TEQ). Where TEQ equals the product between each of the 17 individual congeners' (i) concentration analytical result (C_i) and their corresponding Toxicity Equivalence Factor (TEF_i)., (i.e., $TEQ_i = C_i \times TEF_i$). Compliance with the dioxin limitation shall be determined by the summation of the seventeen individual TEQs, or the following equation:

$$\text{Dioxin concentration in effluent} = \sum_{1}^{17}(TEQ_i) = \sum_{1}^{17}(C_i)(TEF_i)$$

[17] Analyze these radiochemicals by the following USEPA methods: method 900.0 for gross alpha and gross beta, method 903.0 or 903.1 for radium-226, method 904.0 for radium-228, method 906.0 for tritium, method 905.0 for strontium-90, and method 908.0 for uranium. Analysis for combined radium-226 & 228 shall be conducted only if gross alpha results for the same sample exceed 15 pCi/L or beta greater than 50 pCi/L. If radium-226 & 228 exceeds the stipulated criteria, analyze for tritium, strontium-90 and uranium.

cites USEPA's *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms,* October, 2002 (EPA-821-R-02-012) or a more recent edition to ensure compliance.

b. Test Species. The fathead minnow, Pimephales promelas, shall be used as the test species for fresh water discharges and the topsmelt, Atherinops affinis, shall be used as the test species for brackish discharges. However, if the salinity of the receiving water is between 1 to 32 parts per thousand (ppt), the Discharger may have the option of using the inland silverslide, Menidia beryllina, instead of the topsmelt. The method for topsmelt is found in *USEPA's Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, October 2002 (EPA-821-R-02-012).

c. Alternate Reporting. In lieu of conducting the standard acute toxicity testing with the fathead minnow, the Discharger may elect to report the results or endpoint from the first 96 hours of the chronic toxicity test as the results of the acute toxicity test, but only if the Discharger uses USEPA's August 2002 Method (EPA-821-R-02-013) to conduct the chronic toxicity test.

d. Acute Toxicity Accelerated Monitoring. If the effluent toxicity requirements in section IV.A. of this Order is not met, the Discharger shall conduct six additional tests, approximately every 2 weeks, over a 12-week period. The Discharger shall ensure that results of a failing acute toxicity test are received by the Discharger within 24 hours of completion of the test and the additional tests shall begin within 5 business days of receipt of the result. If the additional tests indicate compliance with acute toxicity limitation, the Discharger may resume regular testing.

However, if the extent of the acute toxicity of the receiving water upstream of the discharge is greater than the downstream and the results of the effluent acute toxicity test comply with acute toxicity limitation, the accelerated monitoring need not be implemented for the receiving water.

e. Toxicity Identification Evaluation (TIE)

i. If the results of any two of the six accelerated tests are less than 90 percent survival, then the Discharger shall begin a TIE. The TIE shall include all reasonable steps to identify the sources of toxicity. Once the sources are identified, the Discharger shall take all reasonable steps to reduce toxicity to meet the objective.

ii. If the initial test and any of the additional six acute toxicity bioassay tests results are less than 70 percent survival, the Discharger shall immediately implement Initial Investigation Toxicity Reduction Evaluation (TRE) Work Plan. Once the sources are identified the Discharger shall take all reasonable steps to reduce toxicity to meet the requirements.

B. Chronic Toxicity Testing

1. Definition of Chronic Toxicity

Chronic toxicity is a measure of adverse sub-lethal effects in plants, animals, or invertebrates in a long-term test. The effects measured may include lethality or decreases in fertilization, growth, and reproduction.

2. Chronic Toxicity Effluent Monitoring Program

a. Test Methods. The Discharger shall conduct critical life stage chronic toxicity tests on 24-hour composite 100 percent effluent samples or receiving water grab samples

in accordance with EPA's *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, October 2002 (EPA-821-R-02-013) or USEPA's *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms*, October 2002 (EPA-821-R-02-014), or current version.

b. Frequency

i. Screening and Monitoring. The Discharger shall conduct the first chronic toxicity test screening for three consecutive months in 2014. The Discharger shall conduct short-term tests with the cladoceran, water flea (*Ceriodaphnia dubia* - survival and reproduction test), the fathead minnow (*Pimephales promelas* - larval survival and growth test), and the green alga (*Selenastrum capricornutum* - growth test) as an initial screening process for a minimum of three, but not to exceed, five suites of tests to account for potential variability of the effluent/receiving water. After this screening period, monitoring shall be conducted using the most sensitive species.

ii. Re-screening is required every 24 months. The Discharger shall re-screen with the three species listed above and continue to monitor with the most sensitive species. If the first suite of re-screening tests demonstrates that the same species is the most sensitive then the re-screening does not need to include more than one suite of tests. If a different species is the most sensitive or if there is ambiguity, then the Discharger shall proceed with suites of screening tests for a minimum of 3, but not to exceed 5, suites.

iii. Regular toxicity tests - After the screening period, monitoring shall be conducted monthly using the most sensitive species.

c. Toxicity Units. The chronic toxicity of the effluent shall be expressed and reported in Chronic Toxic Units, TU_c, where,

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

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

3. Accelerated Monitoring

If the chronic toxicity of the effluent or the receiving water downstream the discharge exceeds the monthly trigger median of 1.0 TU_c, the Discharger shall conduct 6 additional tests, approximately every 2 weeks, over a 12-week period. The samples shall be collected and the tests initiated no less than 7 days apart. The Discharger shall ensure that they receive results of a failing chronic toxicity test within 24 hours of the completion of the test and the additional tests shall begin within 5 business days of the receipt of the result. However, if the chronic toxicity of the receiving water upstream of the discharge is greater than the downstream and the TU_c of the effluent chronic toxicity test is less than or equal to a monthly median of 1 TU_c trigger, then accelerated monitoring need not be implemented for the receiving water.

a. If any 3 out of the initial test and the six additional tests results exceed 1.0 TU_c the Discharger shall immediately implement the Initial Investigation of the TRE.

b. If implementation of the Initial Investigation TRE Work Plan indicates the source of toxicity (e.g., a temporary plant upset, etc.), then the Discharger shall return to the normal sampling frequency required in Table 3 and Table 4 of this MRP.

c. If all of the 6 additional tests required above do not exceed 1 TU_c, then the Discharger may return to the normal sampling frequency.

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

4. Quality Assurance

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

b. If either the reference toxicant test or effluent test does not meet all test acceptability criteria (TAC) as specified in the test methods manual (EPA-821-R-02-012 and/or EPA-821-R-02-013), then the Discharger must re-sample and re-test within 14 days.

c. Control and dilution water should be receiving water or laboratory water, as appropriate, as described in the manual. If the dilution water used is different from the culture water, a second control using culture water shall be used.

C. TRE Work Plan

The Discharger shall prepare and submit a copy of the Discharger's initial investigation TRE Work Plan to the Executive Officer of the Regional Water Board for approval within 90 days of the effective date of this NPDES permit. If the Executive Officer does not disapprove the work plan within 60 days, the work plan shall become effective. The Discharger shall use USEPA manual EPA/833B-99/002 (municipal), or most current version, as guidance. At a minimum, the TRE Work Plan must contain the provisions in Attachment G. The TRE Work Plan shall describe the steps the Discharger intends to follow if toxicity is detected, and should include the following, at a minimum:

1. A description of the investigation and evaluation techniques that will be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.

2. A description of the Facility's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in the operation of the Facility; and,

3. If a TIE is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor). See MRP section V for information.

D. Steps in TRE/TIE

1. If results of the implementation of the Facility's Initial Investigation TRE Work Plan indicate the need to continue the TRE/TIE, the Discharger shall expeditiously develop a more detailed TRE Work Plan for submittal to the Executive Officer within 15 days of completion of the initial investigation TRE. The detailed work plan shall include, but not be limited to the following:

a. Further actions to investigate and identify the cause of toxicity;

b. Actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and,

c. A schedule for these actions.

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

   a. Step 1 includes basic data collection.

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

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

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

   e. Step 5 evaluates in-plant treatment options.

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

   Many recommended TRE elements parallel source control, pollution prevention, and storm water control program best management practices (BMPs). To prevent duplication of efforts, evidence of compliance with those requirements may be sufficient to comply with TRE requirements. By requiring the first steps of a TRE to be accelerated testing and review of the Facility's TRE Work Plan, a TRE may be ended in its early stages. All reasonable steps shall be taken to reduce toxicity to the required level. The TRE may be ended at any stage if monitoring indicates there are no longer toxicity violations.

3. The Discharger shall initiate a TIE as part of the TRE process to identify the cause(s) of toxicity. The Discharger shall use the USEPA acute manual, chronic manual, EPA/600/R-96-054 (Phase 1), EPA/600/R-92/080 (Phase 2), and EPA-600/R-92/081 (Phase 3), as guidance.

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

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

6. The Regional Water Board recognizes that toxicity may be episodic and identification of causes of and reduction of sources of toxicity may not be successful in all cases. Consideration of enforcement action by the Regional Water Board will be based, in part, on the Discharger's actions and efforts to identify and control or reduce sources of consistent toxicity.

   a. If all the results of the 6 additional tests are in compliance with the chronic toxicity limitation, the Discharger may resume regular monthly testing.

   b. If the results of any of the 6 accelerated tests exceeds the limitation, the Discharger shall continue to monitor weekly until 6 consecutive weekly tests are in compliance. At that time, the Discharger may resume regular monthly testing.

   c. If the results of 2 of the 6 tests, or any 2 tests in a 6-week period, exceed the limitation, the Discharger shall initiate a TRE.

d. If implementation of the initial investigation TRE Work Plan (see item D.3, above) indicates the source of toxicity (e.g., a temporary plant upset, etc.), then the Discharger shall return to the regular testing frequency.

E. Ammonia Removal

1. Except with prior approval from the Executive Officer of the Regional Water Board, ammonia shall not be removed from bioassay samples. The Discharger must demonstrate the effluent toxicity is caused by ammonia because of increasing test pH when conducting the toxicity test. It is important to distinguish the potential toxic effects of ammonia from other pH sensitive chemicals, such as certain heavy metals, sulfide, and cyanide. The following may be steps to demonstrate that the toxicity is caused by ammonia and no other toxicants before the Executive Officer would allow for control of pH in the test.

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

   b. Chronic ammonia concentrations in the effluent are greater than 4 mg/L total ammonia, based on guidance from USEPA.

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

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

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

F. Reporting

The Discharger shall submit a full report of the toxicity test results, including any accelerated testing conducted during the month, as required by this NPDES permit. Test results shall be reported in Acute Toxicity Units (TU_a) or Chronic Toxicity Units (TU_c), as required, with the self-monitoring report (SMR) for the month in which the test is conducted. If an initial investigation indicates the source of toxicity and accelerated testing is unnecessary, pursuant to sections V.A. and V.B., then those results also shall be submitted with the SMR for the period in which the investigation occurred.

1. The full report shall be received by the Regional Water Board by the 15th day of the second month following sampling.

2. The full report shall consist of (1) the results; (2) the dates of sample collection and initiation of each toxicity test; (3) the toxicity limit; and, (4) printout of the toxicity program (ToxCalc or CETIS).

3. Test results for toxicity tests also shall be reported according to the appropriate manual chapter on Report Preparation and shall be attached to the SMR. Routine reporting shall include the following, at a minimum, as applicable, for each test, as appropriate:

   a. Sample date(s)

   b. Test initiation date

   c. Test species

d. End point value(s) for each dilution (e.g. number of young, growth rate, percent survival)

e. NOEC values in percent effluent

f. TU_c value(s), where $TU_c = \frac{100}{NOEC}$

g. Mean percent mortality (+standard deviation) after 96 hours in 100 percent effluent (if applicable)

h. NOEC and LOEC (Lowest Observable Effect Concentration) values for reference toxicant test(s)

i. Available water quality measurements for each test (e.g., pH, dissolved oxygen (dissolved oxygen), temperature, conductivity, hardness, salinity, ammonia).

4. The Discharger shall provide a compliance summary that includes a summary table of toxicity data from at least eleven of the most recent samples.

5. The Discharger shall notify this Regional Water Board immediately of any toxicity exceedance and in writing 14 days after the receipt of the results of an effluent limit. The notification will describe actions the Discharger has taken or will take to investigate and correct the cause(s) of toxicity. It may also include a status report on any actions required by this Order, with a schedule for actions not yet completed. If no actions have been taken, the reasons shall be given.

VI. RECYCLING MONITORING REQUIREMENTS

Ventura Water Reclamation Facility is recycling wastewater under separate Waste Discharge Requirements (WDRs) and Water Recycling Requirements (WRRs) contained in Order No. 87-45, CI number 6190.

VII. RECEIVING WATER MONITORING REQUIREMENTS

A. Receiving Water Monitoring for Toxicity at Locations R-003, R-004, R-005, and M-001A

1. The Discharger shall monitor surface water for toxicity effects at R-003, R-004, and R-005. Toxicity will be assessed at the receiving water location at R-003, where the estuary discharges to the Ocean; at R-04, where the effluent channel through the tidal flat discharges to the estuary, at R-005, where the Santa Clara River enters the estuary above the outfall, and at M-001A, where the receiving water leaves the wildlife ponds, respectively, as follows:

Table E-4. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Copper	µg/L	Grab	monthly	[2]
Lead	µg/L	Grab	monthly	[2]
Mercury	µg/L	Grab	quarterly	[2]
Nickel	µg/L	Grab	monthly	[2]
Selenium	µg/L	Grab	monthly	[2]
Silver	µg/L	Grab	quarterly	[2]
Zinc	µg/L	Grab	quarterly	[2]
Arsenic	µg/L	Grab	quarterly	[2]
Chlorobromomethane	µg/L	Grab	semiannually	[2]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Chloroform	µg/L	Grab	semiannually	2
Bromoform	µg/L	Grab	semiannually	2
Dichlorobromomethane	µg/L	Grab	semiannually	2
Bis(2-ethylhexyl)phthalate	µg/L	Grab	semiannually	2
Dioxin	µg/L	Grab	semiannually	16
Toulene	µg/L	Grab	quarterly	2
Remaining priority pollutants excluding as asbestos	µg/L	Grab	semiannually	2
Chronic toxicity	TUc	Grab	quarterly	See section V.D.
Acute toxicity[18]	TUa	Grab	annually	See section V.C.

B. Receiving Water Monitoring for Nutrients at Locations R-001, R-002, R-003, R-004, R-005 and M-001A.

1. The Discharger shall monitor surface water for nutrient, dissolved oxygen, and toxicity effects at R-001, R-002, R-003, R-004, R-005, and M-001A as described below. The Regional Water Board may determine additional locations or constituents require monitoring within the Estuary based on the results of the Estuary Phase 3 special studies. See reopener requirements at VI.C.1.i.

Table E-5. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total and fecal coliform	MPN/100 mL	Grab	Weekly	2
Enterococcus coliform	MPN/100 mL	Grab	5 times per month	2
TRC[19]	mg/L	Grab	Weekly	2
Hardness	mg/L	Grab	Weekly	2
Salinity	ppt	Field	Weekly	2
pH	pH units	Grab	Weekly	2
Temperature	^{0}F	Field	Weekly	2
DO	mg/L	Field	Weekly	2
Total phosphorous as P	mg/L	Grab	Monthly	2
Total Ammonia	mg/L	Grab	Monthly	2
Nitrate nitrogen	mg/L	Grab	Monthly	2
Nitrite nitrogen	mg/L	Grab	Monthly	2
Organic nitrogen	mg/L	Grab	Monthly	2
Total Kjeldahl nitrogen	mg/L	Grab	Monthly	2
Chlorophyll a	mg/L	Grab	Monthly	2

[18] Acute toxicity test for the receiving water is conducted at Stations R-004 and R-003 only.
[19] TRC test for the receiving water is conducted in Stations R-001 to R-004.

C. Observation Points for Surface Water Conditions at Locations R-001, R-002, R-003, R-004, R-005 and M-001A.

1. The Discharger shall observe water appearance at R-001, R-002, R-003, and R-004. R-005, and M-001A as follows:

Table E-6. Receiving Water Monitoring Requirements

Parameter	Minimum Sampling Frequency
Sludge banks or deposits	Weekly
Oil, grease, or slicks	Weekly
Foam	Weekly
Solids of waste origin	Weekly
Breaching (Flow from Estuary to Ocean)	Weekly

D. Sediment Monitoring at Locations R-003, R-004, and R-005.

1. The Discharger shall monitor sediment conditions at R-003, R-004, and R-005, as follows:

Table E-7. Sediment Monitoring Requirements

Location	Parameter	Minimum Sampling Frequency
Benthic Community	Where appropriate: identification of all organisms to lowest possible taxon; community structure analysis for each station; mean, range standard deviation, and 95 percent confidence limits, if appropriate, for value determined in the community analysis.	Annually
Upper 5 cm of Sediment	Arsenic, cadmium, chromium, copper, lead, mercury, nickel, silver, zinc, cyanide, phenolic compounds (chlorinated), phenolic compounds (non-chlorinated), total halogenated organic compounds, aldrin and dieldrin, endrin, HCH, chlordane, total DDT, DDT derivatives, total PCB, PCB derivatives, toxaphene, total PAH, PAH derivatives, detected priority pollutants, compounds on the local 303(d) list, dissolved sulfides (pore water), TOC and grain size (sufficiently detailed to calculate percent weight in relation to phi size)	Annually
Sediment Toxicity	Sediment toxicity monitoring following protocol described in the *Evaluation of Methods for Measuring Sediment Toxicity in California Bays and Estuaries, March 2007.*	Annually

a. Local Benthic Trends Survey:

This survey addresses the question whether benthic conditions under the influence of the discharge are changing over time. The data collected are used for regular assessment of trends in sediment contamination and biological response along a fixed grid of sites within the influence of the discharge.

i. Until the Regional Water Board has determined the appropriate number and locations of sediment monitoring stations, based on the Estuary studies and input from the stakeholder group, at a minimum, 4 monitoring stations (R-003 to R-005 and M-001A, Attachment B) shall be sampled annually during the 3rd quarter (July, August, and September) for benthic conditions. The sampling method shall be approved by the Executive Officer.

ii. Until the Regional Water Board has determined the appropriate number and locations of sediment monitoring stations, based on the Estuary studies and input from the stakeholder group, the following determinations shall be made for each station, where appropriate: identification of all organisms to lowest possible taxon; community structure analysis for each station; mean, range standard deviation, and 95 percent confidence limits, if appropriate, for value determined in the community analysis. The Discharger may be required to conduct additional "statistical analyses" to determine temporal and spatial trends..

b. Sediment/Chemical Monitoring

The Discharger shall collect grab samples for sediment and chemical monitoring. Until the Regional Water Board has determined the appropriate number and locations of sediment monitoring stations, based on the Estuary studies and input from the stakeholder group, one grab sample (upper 5 centimeters) shall be collected at 4 monitoring stations (R-003 to R-005 and M-001A) and analyzed for the following parameters:

Until the Regional Water Board has determined the appropriate number and locations of sediment monitoring stations, based on the Estuary studies and input from the stakeholder group, annual samples shall be taken during the 3rd quarter (July, August, and September) and monitored for the following constituents: arsenic, cadmium, chromium, copper, lead, mercury, nickel, silver, zinc, cyanide, phenolic compounds (chlorinated), phenolic compounds (non-chlorinated), total halogenated organic compounds, aldrin and dieldrin, endrin, HCH, chlordane, total DDT, DDT derivatives, total PCB, PCB derivatives, toxaphene, total PAH, PAH derivatives, detected priority pollutants, compounds on the local 303(d) list, dissolved sulfides (pore water), TOC and grain size (sufficiently detailed to calculate percent weight in relation to phi size).

c. Sediment Toxicity

Until the Regional Water Board has determined the appropriate number and locations of sediment monitoring stations, based on the Estuary studies and input from the stakeholder group, at a minimum, 4 monitoring stations (R-003 to R-005 and M-001A, Attachment B) shall be sampled annually during the 3rd quarter (July, August, and September) for sediment toxicity monitoring following protocol described in the *Evaluation of Methods for Measuring Sediment Toxicity in California Bays and Estuaries, March 2007.* The most sensitive species have to be used.

All sediment

samples must be collected on the same day.

VIII. OTHER MONITORING REQUIREMENTS

A. Additional Characterization of the Estuary

The Discharger shall complete Phase 3 Estuary Watershed Special Studies:

1. Phase 3 Estuary Studies – The Discharger shall perform additional estuary studies to provide sufficient information to allow the Regional Water Board to determine whether or not the continued discharge of effluent enhances the Estuary. See further description in Attachment F Section VI B.

B. Constituents of Emerging Concern (CECs) in Effluent

The Discharger shall conduct a special study to investigate the CECs in the effluent discharge as listed in the Table below. These constituents shall be monitored annually for at least 2 years. The Regional Water Board has determined that 2 years is an appropriate time period to determine those CECs that are present in wastewater treatment plant effluent. Monitoring results shall be reported as part of the annual report. Within six months of the effective date of this Order, the Discharger shall submit to the Executive Officer a CECs special study work plan for approval. Upon approval, the Discharger shall implement the work plan.

Table E-8. CECs to be measured in Effluent

Parameter	Units	Reporting Level
17α-Ethinyl Estradiol	ng/L	0.5
17β-Estradiol	ng/L	0.5
Estrone	ng/L	0.5
Bisphenol A	ng/L	10
Nonylphenol & Nonylphenol Polyethoxylates	ng/L	100
Octylphenol & Octylphenol Polyethoxylates	ng/L	100
Polybrominated Diphenyl Ethers (PBDE 28, 47, 99, 100, 153, 154, 183, 209)	ng/L	100 for PBDE 209 and 5 for all others
Amoxicillin	ng/L	10
Azithromycin	ng/L	10
Carbamazepine	ng/L	10
Caffeine	ng/L	10
N,N-Diethyl-m-toluamide (DEET)	ng/L	10
Dilantin(phenytoin)	ng/L	10
Gemfibrozil	ng/L	10
Ibuprofen (must be sampled if Acetominophen is not)	ng/L	10
Iodinated Contrast Media (Iopromide)	ng/L	10
Sulfamethoxazole	ng/L	10
Trimethoprim	ng/L	10
Tris (2-chloroethyl phosphate)-TCEP, TCPP and TDCPP	ng/L	10
Triclosan	ng/L	10
Bifenthrin	ng/L	5
Permethrin	ng/L	10
Chlorpyrifos	ng/L	10
Galaxolide	ng/L	10
Diclofenac	ng/L	10
Perfluorooctane Sulfonate (PFOS)	ng/L	40
Fipronil	ng/L	2
Meprobamate	ng/L	10

1. The RL for 17α-Ethinyl Estradiol, 17β-Estradiol and Estrone is set at .5 ng/L, but ongoing research on analytical methods may result in improvements in the minimum

concentration of hormone which can be detected. Should improved methods become available, the reporting level for the compounds may be adjusted.

2. Reporting – By April 1st of each year (starting April 1, 2015), the Discharger shall submit to the Executive Officer, an annual summary report summarizing the monitoring results from the previous year. For example, the annual summary report due April 1, 2015, shall include CECs monitoring data from January to December 2014. Each annual summary report shall include a compilation of effluent monitoring data of CECs listed in the approved work plan, MLs, sample type, analytical methodology used, sampling date/time, QA/QC information, and an evaluation of cumulative CECs data collected to date as part of this special study. In addition, the first annual summary report due April 1, 2015, shall include a characterization of existing CECs data, i.e., all data collected outside of this special study.

C. Regional Watershed-Wide Monitoring Program for the Santa Clara River Watershed

Pursuant of 40 CFR parts 122.41(j) and 122.48(b), the monitoring program for a Discharger receiving an NPDES Permit must determine compliance with NPDES permit terms and conditions, and demonstrate that water quality standards are met.

Compliance monitoring focuses only on the quality of the discharge; it is not designed to assess the impact of the discharge on the receiving water in combination with other point source discharges or with any other sources of pollution (e.g., non-point source runoff, aerial fallout). Likewise, it is not designed to evaluate the current status of important ecological resources on a regional basis. The Santa Clarita Valley Sanitation District of Los Angeles County submitted the "Santa Clara River Watershed-wide Monitoring Program and Implementation Plan" (SCRWMP) to the Regional Water Board on December 15, 2011. This plan was developed in collaboration with stakeholders in the Santa Clara River Watershed and contains a design for an integrated regional monitoring program for this watershed .

Regional Water Board staff and interested stakeholders have yet to develop a funding mechanism to fully implement the SCRWMP, but hope to initiate the new program in 2014. The City of Ventura will be required to participate in implementation of the watershed-wide monitoring program. To achieve the goals of the SCRWMP, revisions to the Receiving Water Monitoring Requirements will be made, if necessary, under the direction of USEPA and the Regional Water Board

IX. 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. If there is no discharge during any reporting period, the report shall so state.

2. Each monitoring report shall contain a separate section titled "Summary of Non-Compliance" which discusses the compliance record and the corrective actions taken or planned that may be needed to bring the discharge into full compliance with waste discharge requirements. This section shall clearly list all non-compliance with discharge requirements, as well as all excursions of effluent limitations.

3. The Discharger shall inform the Regional Water Board well in advance of any proposed construction activity that could potentially affect compliance with applicable requirements.

B. Self-Monitoring Reports (SMRs)

1. At any time during the term of this Order, the State or Regional Water Board may notify the Discharger to submit SMRs ONLY through electronic means, using the State Water Board's California Integrated Water Quality System (CIWQS) Program website (http://www.waterboards.ca.gov/ciwqs/index.html). Until such notification is given, the Discharger shall submit hard copy SMRs in accordance with the requirements described in subsection B.5 below and submit information electronically. The CIWQS website will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

2. When requested, the Discharger shall electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program web site (http://www.waterboards.ca.gov/ciwqs/index.html). If for any reason hard copy SMRs will be required at the discretion of the Regional Water Board, the above requirement should be modified as appropriate. Additionally, the requirements may clarify what satisfies as submittal of hard copy SMRs. For example, "For this purpose, a hard copy signed penalty of perjury statement accompanying a CD with files in Portable Document Format (PDF) shall qualify as hard copy SMRs. Hard copy SMRs must be submitted to the Los Angeles Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below."

3. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. Additionally, the Discharger shall report in the SMR the results of any special studies, acute and chronic toxicity testing, TRE/TIE, the Pollutant Management Plan (PMP), and the Storm Water Pollution Prevention Plan (SWPPP) required by Special Provisions – section VI.C. of the Order. The Discharger shall submit quarterly and annual SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. SMRs are to include all new monitoring results obtained since the last SMR 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 SMR.

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

Table E-9. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	Submit with monthly SMR
Daily	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submit with monthly SMR
Weekly	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	Submit with monthly SMR
Monthly	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1st day of calendar month through last day of calendar month	By the 15th day of the second month after the month of sampling
Quarterly	Closest of January 1, April 1, July 1, or October 1 following (or on) permit	January 1 through March 31 April 1 through June 30	May15 August 15

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
	effective date	July 1 through September 30 October 1 through December 31	November 15 February 15
Semiannually	Closest of January 1 or July 1 following (or on) permit effective date	January 1 through June 30 July 1 through December 31	August 15 February 15
Annually	January 1 following (or on) permit effective date	January 1 through December 31	April 1
Annually for two years (CECs)	January 1 following (or on) permit effective date	July 1 through September 30	April 1

5. Reporting Protocols. The Discharger shall report with each sample result the applicable Reporting Level (RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR part 136.

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

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

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

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

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

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

6. Compliance Determination. Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined above and Attachment A. For purposes of reporting and administrative enforcement by the Los Angeles Regional 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 SMRs in accordance with the following requirements:

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

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

c. SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D). Paper SMRs should be converted to a Portable Document Format (PDF). Documents that are less than 10 megabytes (MB) should be emailed to losangeles@waterboards.ca.gov. Documents that are 10 MB or larger should be transferred to a disk and mailed to the address listed below: (Reference the reports to Compliance File No. 1822 to facilitate routing to the appropriate staff and file.)

California Regional Water Quality Control Board

Los Angeles Region

320 West 4th Street, Suite 200

Los Angeles, CA 90013

Attention: Information Technology Unit

Dischargers who have been certified to only submit electronic SMRs to CIWQS should continue doing so, as previously required

C. Discharge Monitoring Reports (DMRs)

1. At any time during the term of this permit, the State Water Board or the Los Angeles Regional Water Board may notify the Discharger to electronically submit DMRs. Until such notification is given specifically for the submittal of DMRs, the Discharger shall submit DMRs in accordance with the requirements described below.

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

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

3. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1) or on self-generated forms that follow the exact same format of EPA Form 3320-1.

D. Other Reports

1. Annual Summary Report

By April 1 of each year, the Discharger shall submit an annual summary report containing a discussion of the previous year's influent/effluent analytical results and receiving water bacterial monitoring data. The annual summary report shall contain graphical and tabular summaries of the monitoring analytical data. The annual summary report shall also contain an overview of any plans for upgrades to the treatment plant's collection system, the treatment processes, or the outfall system. The Discharger shall submit an electronic copy to the Regional Water Board in accordance with the requirements described in subsection B.5 above.

a. Each annual monitoring report shall contain a separate section titled "Reasonable Potential Analysis" which discusses whether or not reasonable potential was triggered for pollutants that do not have a final effluent limitation in the NPDES permit. This section shall contain the following statement: "The analytical results for this sampling period did/ did not trigger reasonable potential". If reasonable potential was triggered, then the following information should also be provided:

i. A list of the pollutant(s) that triggered reasonable potential;

ii. The Basin Plan or CTR criteria that was exceeded for each given pollutant;

iii. The concentration of the pollutant(s);

iv. The test method used to analyze the sample; and,

v. The date and time of sample collection.

2. The Discharger shall submit to the Regional Water Board, together with the first monitoring report required by this NPDES permit, a list of all chemicals and proprietary additives which could affect this waste discharge, including quantities of each. Any subsequent changes in types and/or quantities shall be reported promptly.

3. The Regional Water Board requires the Discharger to file with the Regional Water Board, within 90 days after the effective date of this Order, a technical report on his preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. The technical report should:

a. Identify the possible sources of accidental loss, untreated waste bypass, and contaminated drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks, and pipes should be considered.

b. Evaluate the effectiveness of present facilities and procedures and state when they become operational.

c. Describe facilities and procedures needed for effective preventive and contingency plans.

d. Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule contingent interim and final dates when they will be constructed, implemented, or operational.

The Discharger shall report the results of any special studies, acute and chronic toxicity testing, TRE/TIE, PMP, and Pollution Prevention Plan required by Special Provisions – VI.C. The Discharger shall submit reports in compliance with SMR reporting requirements described in subsection IX.B above.

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

As described in section I, the Los Angeles Regional Water Quality Control Board (Regional Water Board) incorporates this Fact Sheet as findings of the Regional 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	4A560107001
Discharger	City of Ventura
Name of Facility	Ventura Water Reclamation Facility, Ventura
Facility Address	1400 Spinnaker Drive
	Ventura, CA 93002-0099
	Ventura County
Facility Contact, Title and Phone	Dan Pfeifer, Wastewater Utility Manager, (805) 677-4131
Authorized Person to Sign and Submit Reports	Dan Pfeifer, Wastewater Utility Manager, (805) 677-4131
Mailing Address	P.O. Box 99, Ventura, CA 93002-0099
Billing Address	P.O. Box 99, Ventura, CA 93002-0099
Type of Facility	Publicly-Owned Treatment Works (POTW)
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	Y
Recycling Requirements	Producer
Facility Permitted Flow	9 million gallons per day (mgd)
Facility Design Flow	14 mgd
Watershed	Santa Clara River Watershed
Receiving Water	Santa Clara River Estuary via Wildlife Ponds
Receiving Water Type	Estuary

A. The City of Ventura (hereinafter Discharger) is the owner and operator of Ventura Water Reclamation Facility (hereinafter Facility or Ventura WRF), 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 Santa Clara River Estuary (Estuary), a water of the United States, tributary to the Pacific Ocean within the Santa Clara River Watershed. The Discharger was previously regulated by National Pollutant Discharge Elimination System (NPDES) Permit No. R4-2008-0011 (2008 Order) adopted on March 6, 2008 and expired on

March 6, 2013. 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 California Water Code (CWC) section 1211.

C. The Discharger filed a report of waste discharge (ROWD) and submitted an application for reissuance of its WDRs and NPDES permit on June 19, 2012. A site visit was conducted on July 19, 2012, to observe operations and collect additional data to develop permit limitations and requirements for waste discharge. The application was deemed complete on August 16, 2012.

II. FACILITY DESCRIPTION

The Discharger owns and operates the Ventura Water Reclamation Facility (VWRF), a tertiary wastewater treatment plant, with a design capacity of 14 million gallons per day (mgd), located at 1400 Spinnaker Road, Ventura, California. The design flow of 14 mgd is limited to 9 mgd discharge into the Santa Clara River Estuary, the 2008 average flow, at which time the Regional Water Board mandated studies to determine if the estuary water quality and beneficial uses were enhanced by the effluent[1]. The Facility receives domestic, commercial, and industrial wastewater generated in the city of Ventura by an estimated population of 105,000.

A. Description of Wastewater and Biosolids Treatment and Controls

Treatment at the Facility consists of wastewater processing, biosolids processing, and a pasteurization demonstration project. Attachment C provides a flow schematic of the Facility.

1. Wastewater Processing

The treatment system consists of screening, grit removal, primary sedimentation, flow equalization, bio-augmentation re-aeration (BAR) with full nitrification and denitrification (NDN)[2], aeration with additional nitrification, activated sludge and mixed liquor recycling, secondary settling, pressurized tertiary filtration, chlorination with ammonia addition[3], and dechlorination.

Concentrations of metals in the influent are generally controlled through the pretreatment program. However, because of high concentrations of copper, lead, nickel and zinc in the influent, the Facility improves metals removal by adding iron salt at the headworks.

2. Biosolids Processing

The biosolids system consists of primary sludge thickening, dissolved air flotation (DAF) secondary sludge thickening, anaerobic digestion, and dewatering (using plate and frame filter presses).

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[1] The prohibition against discharge of the entire design flow into the Estuary or additional outfalls may be lifted as discussed in the reopener requirements VI. C. 1.

[2] The Discharger completed the nitrification and partial denitrification system on October 3, 2012.

[3] Ammonia (NH_3) has been added into chlorine contact basin since April 2004. Ammonia reacts with hypochlorous acid (HOCl) to form chloramine (NH_2Cl):

$$NH_3 + HOCl \rightarrow NH_2Cl + H_2O$$

Chloramine is used as a disinfectant in municipal water systems as an alternative to chlorination and also exhibits less tendency to convert organic materials into chlorocarbons such as chloroform, dichlorobromomethane, dibromochloromethane, and carbon tetrachloride. .

All of the Class B anaerobically digested sludge is dewatered, composted and disposed of at the Toland Road Landfill, permitted under Order R4-2011-0052, CI 6190.

3. **Pasteurization Pilot Project**

A small-scale pasteurization evaluation unit has been installed at the Facility and has been disinfecting 500,000 gallons, about 5 percent of the average daily flow, of wastewater per day since December 2011. The Discharger is considering disinfecting the full wastewater flow. A full-scale design of the system has the potential to generate enough electricity to power the entire Facility; saving the Discharger about half of its current energy costs.

Pasteurization uses natural gas combined with digester gas (a natural by-product of wastewater treatment) as fuel to drive a turbine (or turbines) to generate electricity. The hot exhaust air from the turbine (energy that is typically wasted) is then passed through a series of heat exchangers that increase the temperature of the wastewater to a level that disinfects the wastewater stream. The disinfected water is then cooled by transferring the heat of the disinfected water to incoming wastewater.

B. Discharge Points and Receiving Waters

1. Treated wastewater is discharged into the Estuary (Discharge Point 001) through a series of city-owned ponds. The ponds have soil bottoms and allow percolation.

Table F-2 Discharge Points

Discharge Point Number	001
Latitude	34° 14' 21.72" north
Longitude	119° 15' 31.33" west

2. Approximately 1 mgd of the treated wastewater percolates from the wildlife ponds into perched groundwater, part of the Oxnard Groundwater Basin. The groundwater can exhibit artesian conditions when the freshwater table is above sea level, as dictated by the tidal stage and the depth to water. The quality of groundwater in the Oxnard Plain Groundwater Basin has been diminished by seawater intrusion.

3. The mouth of the Santa Clara River is sometimes closed off by a sand bar so that a shallow lagoon, referred to as the Santa Clara River Estuary, is created. At times when the sand bar is breached, either by floodwaters or by mechanical means, the lagoon empties directly into the Pacific Ocean.

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

Effluent limitations contained in the existing Order for discharges from Discharge Point 001 (Monitoring Location M001) and representative monitoring data from the term of the previous Order are as follows:

Table F-3 Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation			Monitoring Data (From March 2008 to April 2013)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Biochemical oxygen demand (BOD520oC)	mg/L	20	30	45	3.3	4	7
Total suspended solids (TSS)	mg/L	15	40	45	1.5	2.0	4.4
pH	--	--	--	--	--	--	6.7-7.3
Oil and Grease	mg/L	10	--	15	6.5	--	6.5
Settleable solids	mg/L	0.1	--	0.3	<0.1	--	<0.1
Total residual chlorine	mg/L	0.1	--	--	<0.1	--	2.7
MBAS	mg/l	0.5	--		0.16	--	0.16
Arsenic	µg/L	--	--	--	<2	--	<2
Cadmium	µg/L	--	--	--	<4	--	<4
Chromium (VI)	µg/L	--	--	--	<1	--	<1
Copper	µg/L	4.2	--	8.8	8.88	--	8.88
Lead	µg/L	--	--	--	9.44	--	9.44
Mercury	µg/L	0.05	--	0.10	<0.02	--	<0.02
Nickel	µg/L	--	--	--	35.4	--	35.4
Selenium	µg/L	--	--	--	13.7	--	13.7
Silver	µg/L	0.7	--	2.2	<0.2	--	<0.2
Thallium	µg/L	--	--	--	<1	--	<1
Zinc	µg/L	45	--	107	68.8	--	68.8
Summer Ammonia (May to October)	mg/l	0.045	--	0.30	0.98	--	1.2
Winter Ammonia (November to April)	mg/l	0.079	--	0.53	1.0	--	1.3
Nitrate + Nitrite as Nitrogen	mg/l	10	--	--	12.5	--	18.8
Nitrate as Nitrogen	mg/l	10	--	--	12.3	--	12.3
Nitrite as Nitrogen	mg/l	1	--		0.2	--	0.2
Cyanide	µg/L	--	--	--	<5	--	<5
Dioxin	µg/L	--	--	--	$<5\times10^{-6}$	--	$<5\times10^{-6}$
Benzene	µg/L	--	--	--	<0.2	--	<0.2

Parameter	Units	Effluent Limitation			Monitoring Data (From March 2008 to April 2013)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Bromoform	µg/L	--	--	--	4.3	--	4.3
Carbon Tetrachloride	µg/L	--	--	--	<0.12	--	<0.12
Chlorodibromomethane	µg/L	--	--	--	14.5	--	14.5
Chlorofom	µg/L	--	--	--	36	--	36
Dichlorobromomethane	µg/L	--	--	--	25.6	--	25.6
Ethylbenzene	µg/L	--	--	--	<0.34	--	<0.34
Methylene Chloride	µg/L	--	--	--	<0.25	--	<0.25
Tetrachloroethylene	µg/L	--	--	--	<0.03	--	<0.03
Toluene	µg/L	--	--	--	<0.2	--	<0.2
Pentachlorophenol	µg/L	--	--	--	<3.6	--	<3.6
Phenol	µg/L	--	--	--	<1.5	--	<1.5
2,4,6-Trichlorophenol	µg/L	--	--	--	<2.7	--	<2.7
Benzidine	µg/L	--	--	--	<4.4	--	<4.4
Benzo(a)Anthracene	µg/L	--	--	--	<7.8	--	<7.8
Benzo(a)Pyrene	µg/L	--	--	--	<2.5	--	<2.5
Benzo(b)Fluoranthene	µg/L	--	--	--	<4.8	--	<4.8
Benzo(k)Fluoranthene	µg/L	--	--	--	<2.5	--	<2.5
Bis(2-Chloroethyl)Ether	µg/L	--	--	--	<5.7	--	<5.7
Bis(2-Ethylhexyl)Phthalate	µg/L	--	--	--	<2.5	--	<2.5
Chrysene	µg/L	--	--	--	<2.0	--	<2.0
1,4-Dichlorobenzene	µg/L	--	--	--	<4.4	--	<4.4
3,3-Dichlorobenzidine	µg/L	--	--	--	<16.5	--	<16.5
Diethyl Phthalate	µg/L	--	--	--	<2.2	--	<2.2
Di-n-Butyl Phthalate	µg/L	--	--	--	<2.5	--	<2.5
1,2-Diphenylhydrazine	µg/L	--	--	--	<10	--	<10
Hexachlorobenzene	µg/L	--	--	--	<1.9	--	<1.9
Hexachloroethane	µg/L	--	--	--	<1.6	--	<1.6

Parameter	Units	Effluent Limitation			Monitoring Data (From March 2008 to April 2013)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Indeno(1,2,3-cd)Pyrene	µg/L	--	--	--	<3.7	--	<3.7
N-Nitrosodi-n-Propylamine	µg/L	--	--	--	<10	--	<10
Aldrin	µg/L	--	--	--	<0.004	--	<0.004
Alpha-BHC	µg/L	--	--	--	<0.003	--	<0.003
Beta-BHC	µg/L	--	--	--	<0.006	--	<0.006
Gamma-BHC	µg/L	--	--	--	<0.004	--	<0.004
Chlordane	µg/L	--	--	--	<0.014	--	<0.014
p,p'-DDT	µg/L	--	--	--	<4.7	--	<4.7
p,p'-DDE	µg/L	--	--	--	<5.6	--	<5.6
p,p'-DDD	µg/L	--	--	--	<2.8	--	<2.8
Dieldrin	µg/L	--	--	--	<0.002	--	<0.002
Endosulfan I	µg/L	--	--	--	<0.014	--	<0.014
Endosulfan II	µg/L	--	--	--	<0.004	--	<0.004
Endrin	µg/L	--	--	--	<0.006	--	<0.006
Heptachlor	µg/L	--	--	--	<0.003	--	<0.003
Heptachlor Epoxide	µg/L	--	--	--	<0.083	--	<0.083
PCB 1016	µg/L	--	--	--	<0.065	--	<0.065
PCB 1221	µg/L	--	--	--	<0.065	--	<0.065
PCB 1232	µg/L	--	--	--	<0.065	--	<0.065
PCB 1242	µg/L	--	--	--	<0.065	--	<0.065
PCB 1248	µg/L	--	--	--	<.065	--	<0.065
PCB 1254	µg/L	--	--	--	<0.065	--	<0.065
PCB 1260	µg/L	--	--	--	<0.065	--	<0.065
Toxaphene	µg/L	--	--	--	<10	--	<10

D. Compliance Summary

The following table summarizes the Facility's violations of subdivisions (h) and (i) of CWC section 13385, from March 2008 through December 2012. Compliance after December 2012 is currently under review by the Regional Water Board's Enforcement Unit.

On April 17, 2013, the Assistant Executive Officer issued Settlement Offer No. R4-2013-0053 for alleged violations of Regional Board Order Nos. R4-2008-0011 and R4-2008-0012, NPDES Permit No. CA0053651 for the Ventura WRF for $591,000. The City of Ventura submitted a signed waiver of right to hearing on July 11, 2013.

Table F-4 Summary of Compliance History

Review Period	Exceeded Constituents	# of Times Exceeded	Regional Board Action
March 2008 through March 2010	Ammonia	3	MMP - Settlement
	Copper	1	
	Nitrogen Compound	94	
	pH	2	
	Total Coliform	56	
April 2010 through December 2012	Ammonia	151	Under Review
	Copper	12	
	Nitrate	2	
	Total Coliform	26	
	Turbidity	6	

1. Three Time Schedule Orders (TSOs) were issued between 2008 and 2013, to give the City time to make changes at the Facility to comply with the final effluent limitations for ammonia contained in the 2008 Order.

   a. TSO No. R4-2008-0012 was issued concurrently with Order No. R4-2008-0011. It included interim requirements allowing the City three years to construct an ammonia removal process, such as NDN, at the Facility in order to comply with the final ammonia effluent limitations in the 2008 Order. The City upgraded the Facility, including modification of internal piping, aeration, and additional of tankage and pumping systems to assure complete biological nitrification and partial denitrification of effluent, by October 3, 2011. The Executive Officer extended the TSO by 90 days on June 16, 2011, to allow the City to complete maintenance of the aeration basins.

   b. On September 17, 2012, the City emailed a letter to the Regional Water Board requesting another TSO with interim ammonia effluent limitations for ammonia. The NDN process, completed in 2011, effectively removes most ammonia from the effluent; however, ammonia must be added back into the effluent prior to the disinfection process to reduce total coliform and prevent the formation of trihalomethanes. TSO No. R4-2012-0166 was issued on December 6, 2012. It included interim ammonia limits and provided time for the Discharger to further explore process changes to reduce nitrogen concentrations. Because of the rules governing the issuance of TSOs, TSO No. R4-2012-0166 expired after only 3 months, on March 5, 2013.

   c. TSO No. R4-2013-0047 was issued on March 7, 2013, in order to give the City additional time to consider strategies for ensuring long-term compliance with final

effluent limitations for ammonia. Since the issuance of the TSO, the City has been evaluating methods to reduce nitrogen loading to the Estuary. TSO No. R4-2013-0047 will expire once this Order becomes effective.

Table F-5 Ammonia Effluent Limitations in the 2008 Order

Constituent	Units	Effluent Limitations	
		Monthly Average	Daily Maximum
Summer Ammonia Nitrogen (April to October)	mg/L	0.045	0.30
Winter Ammonia Nitrogen (November to March)	mg/L	0.079	0.53

Table F-6 Interim Ammonia Effluent Limitations in Time Schedule Order

Constituent	Units	Effluent Limitations	
		Monthly Average	Daily Maximum
TSO Order No. R4-2008-012			
Summer Ammonia Nitrogen (April to October)	mg/L	2.1	2.5
Winter Ammonia Nitrogen (November to March)	mg/L	3.0	3.6
TSO Order Nos. R4-2013-0047 and R4-2012-0166			
Summer Ammonia Nitrogen (April to October)	mg/L	1.6	2.9
Winter Ammonia Nitrogen (November to March)	mg/L	1.3	1.4

E. Planned Changes

1. As discussed above, the Discharger is considering adding pasteurization as a disinfection alternative to chlorination, pending the outcome of the pasteurization disinfection pilot study and the special studies required in this Order.
2. Upon completion of the special studies, as discussed below, a preferred project or series of projects may be designed and constructed to optimize water quality compliance and beneficial uses in the Estuary.

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 WDRs pursuant to article 4, chapter 4, division 7 of the CWC (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 USEPA and chapter 5.5, division 7 of the CWC (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 CWC section 13389, this action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of CEQA, (commencing with section 21100) of Division 13 of the Public Resources Code.

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

1. **Water Quality Control Plan.** The Los Angeles Regional Water Board (Regional Water Board) adopted a Water Quality Control Plan for the Los Angeles Region (Basin Plan) on June 13, 1994 that designates beneficial uses, establishes water quality objectives (WQO), and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Requirements in this Order implement the Basin Plan. In addition, the Basin Plan implements State Water Board Resolution 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Beneficial uses applicable to the Santa Clara River Estuary, the Pacific Ocean and the Oxnard Forebay groundwater basin are as follows:.

Table F-7 Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Santa Clara River Estuary	Existing: Navigation (NAV); water contact recreation (REC-1); non-contact water recreation (REC-2); commercial and sport fishing (COMM); estuarine habitat (EST); marine habitat (MAR); wildlife habitat (WILD); rare, threatened, or endangered species[4] (RARE); migration of aquatic organisms, including fish[5] (MIGR); spawning, reproduction, and/or early development[6] (SPWN); and wetland[6] (WET).
001	Pacific Ocean, Nearshore[7]	Existing: Industrial water supply (IND); NAV; REC-1; REC-2; COMM; MAR; WILD; preservation of biological habitats[8] (BIOL); RARE[9]; MIGR-001[0]; SPWN[10]; and, shellfish harvesting (SHELL).
001	Oxnard Plain Groundwater Basin (unconfined and perched)	Existing Municipal (MUN) and Agriculture (AGR) Potential Industrial Supply (IND)

[4] One or more rare species utilize all ocean, bays, estuaries, and coastal wetlands for foraging and/or nesting.
[5] Aquatic organisms utilize all bays, estuaries, lagoons and coastal wetlands, to a certain extent, for spawning and early development. This may include migration into areas, which are heavily influenced by freshwater inputs.
[6] Waterbodies designated as WET may have wetlands habitat associated with only a portion of the waterbody. Any regulatory action would require a detailed analysis of the area.
[7] Nearshore is defined as the zone bounded by the shoreline and a line 1,000 feet from the shoreline or the 30-foot depth contours, whichever is further from the shoreline.
[8] Areas of Special Biological Significance (along coast from Latigo Point to Laguna Point) and Big Sycamore Canyon and Abalone Cove Ecological Reserves and Point Fermin Marine Life Refuge.

a. Beneficial Uses of Surface Waters

i. The Facility discharges into an estuary that discharges into the Ocean when the sand bar is breached. The limits in this Order are based on the Basin Plan and the State Implementation Policy (SIP). However, consistent with the Ocean Plan, the effluent from the Facility may not negatively impact the beneficial uses of the Ocean.

ii. Under federal law, all waters are assumed to be "fishable" and "swimmable" unless a Use Attainability Analysis (UAA) has been done to justify the unattainability of these uses.

b. Beneficial Uses of Groundwater

i. The wildlife ponds and the Estuary are known to be hydraulically connected to the underlying groundwater basin, the unconfined and perched Oxnard Plain Groundwater Basin. The Order specifies that effluent from the Facility may not negatively impact the beneficial uses of the groundwater basin.

ii. State Water Board Resolution No. 88-63 and Regional Water Board Resolution No. 89-03, known as the *Sources of Drinking Water Policy*, states that all surface waters and groundwaters of the state are considered to be suitable, or potentially suitable, for municipal or domestic water supply and should be so designated by the Regional Water Board with the following exceptions:

(a) The total dissolved solids (TDS) exceed 3,000 mg/L (5,000 µS/cm, electrical conductivity) and it is not reasonably expected by Regional Water Boards to supply public water system;

(b) There is contamination, either by natural processes or by human activity (unrelated to the specific pollution incident), that cannot reasonably be treated for domestic use using either best management practices or best economically achievable treatment practices; or

(c) The water source does not provide sufficient water to supply a single well capable of producing an average, sustained yield of 200 gallons per day.

iii. The special studies required by this Order include an investigation of groundwater basin and the interaction between the groundwater, the Estuary and the wildlife ponds. The results of the special studies should be sufficient to allow the Regional Water Board to determine whether or not additional controls to protect groundwater are necessary and if the groundwater is a potential source of drinking water. See reopener requirements at VI.C.I.

c. Requirements of this Order implement the Basin Plan and subsequent amendments including the following:

i. Ammonia - The 1994 Basin Plan contained water quality objectives (WQOs) for ammonia to protect aquatic life, in Tables 3-1 through Tables 3-4. Those ammonia objectives were revised, based on fresh and saltwater criteria according to the following Basin Plan amendments which are implemented in this Order.

(a) Freshwater Ammonia Water Objective – On April 25, 2002, the Regional Water Board adopted Resolution No. 2002-011, Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters (Including Enclosed Bays, Estuaries and Wetlands) with Beneficial Use Designations for Protection of Aquatic

Life (2002 Ammonia Amendment). The Basin Plan amendment was approved by the State Water Board, the Office of Administrative Law (OAL), and the USEPA on April 30, 2003, June 5, 2003, and June 19, 2003, respectively. The revised ammonia WQOs were adopted to be protective of aquatic life and are consistent with USEPA's 1999 ammonia criteria update.

(b) Saltwater Ammonia Water Objective – On March 4, 2004, the Regional Water Board adopted the Resolution No. 2004-022, Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters Not Characteristic of Freshwater (Including Enclosed Bays, Estuaries and Wetlands) with Beneficial Use Designations for Protection of Aquatic Life (2004 Ammonia Amendment). The Basin Plan amendment is consistent with the USEPA Ambient Water Quality Criteria for Ammonia (Saltwater)-1989. The Basin Plan amendment was approved by the State Water Board, OAL, and USEPA on July 22, 2004, September 14, 2004, and May 19, 2005, respectively.

After the adoption of the 2008 Order, the Regional Water Board revised how the 2002 and 2004 Ammonia Amendments are incorporated into permits. USEPA completed additional toxicology testing and determined that the most sensitive species are long-lived fish such as salmonids (steelhead), not the short-lived species such as Ceriodaphnia (water flea), under some conditions. As a result, longer term variations in water quality conditions are now averaged in the calculation of the limit. Also, USEPA has directed permit writers to use the 90th and 50th percentiles of 30-day averages for pH and temperature in the calculation of the acute and chronic ammonia limit, respectively. Previously, the 99th and 90th percentile of 1-hour acute and 4-day chronic criteria had been used.

ii. Chloride – On December 11, 2008, the Regional Water Board adopted the Resolution No. 2008-012, *Reconsideration of the Upper Santa Clara River Chloride TMDL Implementation Plan and Revise Chloride Water Quality Objectives.* The chloride Basin Plan amendment was approved by the State Water Board, OAL, and USEPA on October 20, 2009, January 26, 2010, and April 6, 2010, respectively. The TMDL does not set load allocations for Santa Clara River Reach 1, above Highway 101 and the Estuary. Page 3-13 of the Basin Plan indicates that there are no waterbody-specific objectives for TDS, chloride, sulfate or boron between the Highway 101 Bridge (receiving water station R-005) and the Estuary. Table 3-10 (page 3-19) of the Basin Plan indicates that the Oxnard Plain unconfined and perched aquifers have mineral objectives as follows: TDS is 3,000 mg/L, sulfate is 1,000 mg/L, and chloride is 500 mg/l. There is no boron objective.

iii. Bacteria – The 1994 Basin Plan provided WQOs for bacteria to protect the beneficial uses of the receiving water body. On October 25, 2001, the Regional Water Board adopted the Resolution No. 2001-018, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Bacteria Objectives for Water Bodies Designated for Water Contact Recreation* revising the objectives based on freshwater and saltwater criteria. The bacteria Basin Plan amendment was approved by the State Water Board, OAL, and USEPA on July 18, 2002, September 19, 2002, and September 25, 2002, respectively.

iv. Copper – Order No. R4-2008-00011, adopted by this Regional Water Board on March 6, 2008, calculated the copper limit based on a Water Effects Ratio (WER) study in the 2007 Updated Enhancement Study conducted by Nautilus Environmental and 2002 Metal Translator Factor (MTF) in the Metal Translator Study conducted by Entrix. A WER of 1.58, the lowest among 15 WERs calculated, and a MTF of .86 were applied. On December 11, 2008, the section IV.A.1.a. of the 2008 Order was amended to reflect a revised WER for copper, calculated using additional data provided by the Discharger. The amendment applied a revised WER of 2.08 based upon data collected during winter conditions between March 2004 and January 2005 when the toxicity effects were most pronounced. Another copper WER study was submitted to the Regional Water Board in February, 2010, proposing a value between 2.05 and 2.73 based on water samples collected on December 6, 2009, January 29, 2010, and February 2010. The results of the second WER study bracket the value used in the amendment 2008 Order, and the amended value of 2.08 is used here to calculate the copper limit..

v. Metals Translator Study – A metal translator study submitted June 27, 2002, and validated in 2007, quantifying the impact of the receiving water on metal toxicity. The metals translator was used to calculate metal limits in the 2008 Order and in this Order for copper (.86) and nickel (.81). Metal translators were not identified for other metals.

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. Requirements of this Order implement the Thermal Plan.

3. **Sediment Quality.** The State Water Board adopted the Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1, Sediment Quality on September 16, 2008, and it became effective on August 25, 2009. This plan supersedes other narrative sediment quality objectives, and establishes new sediment quality objectives and related implementation provisions for specifically defined sediments in most bays and estuaries. Requirements of this Order implement sediment quality objectives of this Plan.

4. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain federal water quality criteria for priority pollutants.

   The CTR specifies that freshwater criteria apply at locations where the salinity is 1 part per thousand (ppt) or less 95 percent or more of the time, and marine water criteria apply at locations where the salinity is 10 ppt or more 95 percent or more of the time. At locations where salinities fall between 1 and 10 ppt, the more stringent of either fresh or marine waters apply.

5. **State Implementation Policy (SIP).** On March 2, 2000, the State Water Board adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives

established by the Los Angeles Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

6. **Antidegradation Policy.** Federal regulation 40 CFR section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16("Statement of Policy with Respect to Maintaining the Quality of the Waters of the State"). Resolution 68-16 is deemed to incorporate the federal antidegradation 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 Los Angeles Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The discharge permitted in the Order is consistent with the antidegradation provisions of 40 CFR part 131.12 and State Water Board Resolution 68-16. See additional discussion at IV. D. 1.

7. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 CFR part 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. See additional discussion at IV. D. 2.

8. **Endangered Species Act Requirements.** This Order does not authorize any act that results in adverse effects to state of federally listed species that utilize the Estuary or result in 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 USC §§ 1531 to 1544) nor does this Order require any such act if authorization cannot be obtained from the appropriate agency as specified by the Acts. 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.

9. **State Parks**. The State of California Department of Parks and Recreation (State Parks) has declared McGrath State Beach and the surrounding 160 acres a natural preserve. The preserve includes the main channel of the Santa Clara River and adjacent natural lands of riparian shrub land and saltwater marsh. The purpose of the natural preserve is to protect and perpetuate the river ecosystem at the mouth of the Santa Clara River. Resource values of particular significance include estuarine waters, which are used extensively by a wide variety of waterfowl and other water-associated birds; nesting habitat of the endangered California least tern; and riparian shrub land and saltwater marsh communities. Flooding of the Estuary in 2012-2013 affected the use of McGrath State Beach as a campground. This Order does not address the authority to flood property not owned by the City of Ventura. Property right disputes are outside the responsibility of the Regional Water Board.

10. **Enclosed Bay and Estuaries Policy**. The Water Quality Control Policy for the Enclosed Bays and Estuaries of California (Enclosed Bays and Estuaries Policy), adopted by the

State Water Board as Resolution No. 95-84 on November 16, 1995, states that "*It is the policy of the State Board that the discharge of municipal wastewaters and industrial process waters (exclusive of cooling water discharges) to enclosed bays and estuaries, other than the San Francisco Bay-Delta system, shall be phased out at the earliest practicable date. Exceptions to this provision may be granted by a Regional Water Board only when the Regional Water Board finds that the wastewater in question would consistently be treated and discharged in such a manner that it would enhance the quality of receiving waters above that which would occur in the absence of the discharge.*" The Enclosed Bay and Estuaries Policy does not define what is meant by "enhancement".

a. While adopting Order No. 77-1008 in 1977, the Regional Water Board determined that the discharge from the Facility enhances the Estuary, based on a Facilities Plan[9] submitted by the City in 1976.

b. Order No. 00-143, adopted in 2000, also described effluent discharge as an enhancement, including extensive narrative limits and monitoring requirements designed to protect wetlands, the Estuary, and existing habitat.

   Studies were completed between August 2002 and May 2007, as required in the 2000 Order, to provide the Regional Water Board with additional information to verify the enhancement finding. These studies considered (1) metal translators and impacts on endangered species including the Tidewater Goby, in 2004; (2) toxicology, ecology and hydrology in 2005 and 2007, (3) water budget, salinity, recycled water markets, resident species and WER in 2007. The studies documented how beneficial uses varied with season, water level and water quality. Table F-8 contains a summary of each study.

Table F-8 Discharger's Conclusions on Studies on Estuary Enhancement between 2002 and 2007

Study Title	Date	Conclusions
2002 Metals Translator Studies (Entrix, Inc)	Aug 2002	Determined a metals translator to protect the Estuary and its species.
VWRF Discharge Beneficial Uses on the Distribution and Utilization of Estuary Tidewater Goby (Entrix, Inc)	Sept 2004	Determined the distribution and habitat of the tidewater goby in the Estuary; the historical and current hydrology of the Santa Clara River and Estuary; and, the impacts and benefits of the VWRF discharge on the distribution within and use of the Estuary by tidewater goby.
2005 Toxicology, Ecology and Hydrology Final Report (Nautilus Environmental)	May 2005	Assessed the impacts and benefits of VWRF discharge on Estuary's sensitive species habitat and ecological conditions; Estuary hydrology and water balance; Estuary sediment and water quality; and, discharge water quality.
2007 Updated Toxicology, Ecology and Hydrology Final Report (Nautilus Environmental)	May 2007	Updated the 2005 Report.

[9] The City filed a Facilities Plan for effluent utilization in 1976 that included a demonstration of enhancement of the Estuary due to the plant's freshwater discharge. The Facilities Plan indicated that some of the beneficial uses of the Estuary, such as fish and wildlife habitat and non-contact water recreation, were enhanced by the presence of the discharge. Consequently, Order No. 77-100, adopted by the Regional Water Board in May 1977, granted the City an exception to the discharge prohibition and allowed discharge of treated municipal wastewater into the Estuary. The demonstration of enhancement was based on an average discharge flow rate of 5.6 mgd.

Study Title	Date	Conclusions
Estuary Water Budget and Salinity Study (Kamman Hydrology & Engineering Inc.)	Apr 2007	Assessed the salinity and water balance information for the Estuary in a dry season.
Recycled Water Market Assessment (Kennedy/Jenks Consultants)	Apr 2007	Assessed the existing versus potential recycled water usage and customer locations for the City of Ventura.
Resident Species Study Santa Clara River Estuary (Entrix, Inc)	Sept 2007	Evaluated the most appropriate water quality criterion (freshwater, saltwater, or other) and discharge effluent limitations for metals and other constituents to protect the Estuary and its species.
2007 Metals Translator Study (Entrix, Inc)	Aug 2007	Evaluated the most appropriate discharge effluent limitations for metals to protect the Estuary and its species.
Water Effects Ratio Study (Nautilus Environmental)	May 2007	Evaluated the most appropriate discharge effluent limitations for metals to protect the Estuary and its species.

While adopting the 2008 Order, the Regional Water Board considered conflicting, yet credible, opinions from a variety of experts who predicted harm to endangered species, habitat, and recreation, both with and without the discharge. The Regional Water Board found that it had inadequate information with which to determine whether and to what extent the discharge that could be authorized by the permit continued to constitute an enhancement. Also, the Board lacked the information necessary to determine what, if any, negative impacts would occur to the Estuary if the discharge was prohibited, and therefore lacked the information necessary to dispute the previous enhancement finding.

The Regional Water Board chose to cap the allowable discharge at the 2000-2008 average annual level of 9 mgd and to require additional watershed-wide studies and a public process to determine the best approach for the Estuary. An Estuary Subwatershed Study, a Recycled Water Market Study, and a Treatment Wetlands Feasibility Study (collectively referred to as Phase 1 Studies) and a Phase 2 Estuary Subwatershed Study fulfilled requirements of the 2008 Order No. R4-2008-0011 and were completed between 2008 and 2013. The studies described specific infrastructure and recycled water projects and wetland treatment plans. Additional information was also gathered on groundwater quality and endangered species and habitat characteristics.

Table F-9 Discharger's Conclusions[10] from Studies on Estuary Enhancement between 2008 and 2013

Study Title	Date	Conclusions
Recycled Water Market Study	Mar 2010	Addressed macro-level supply and demand issues and the ability to expand the local recycled water market for additional recycled water supply that could be generated to serve newly identified demand.
Treatment Wetlands Feasibility Study	Mar 2010	Identified the preferred wetland site locations, planning level design specifications, and available measures to maximize treatment for nutrients; modeled to predict projected discharge related

[10] Stakeholders submitted comments regarding these studies. The conclusions given here represent the Discharger's interpretation of the studies. The Discharger's summary may not represent the conclusions made by other stakeholders or the staff of the Regional Water Board

Study Title	Date	Conclusions
		pollutant loads and concentrations entering and leaving wetlands and cost estimates for project level planning, design, permitting, and construction.
Phase 1 Estuary Subwatershed Study	Sept 2011	Determined discharge conditions, benefits and adverse impacts of the discharge on the Estuary's beneficial uses and sensitive, endangered and threatened species.
Phase 1 Estuary Subwatershed Study	Mar 2013	Identified and compared potential diversion and water reuse infrastructure alternatives, and addressed data gaps identified in the Phase 1 Final Amended Report (2011) to further facilitate a determination of discharge conditions, benefits and adverse impacts of the discharge on the Estuary's beneficial uses and sensitive, endangered and threatened species.

Since 2008, stakeholder workshops have been hosted by the City, consistent with the requirements of the 2008 Order. The Regional Water Board, the National Marine Fisheries Service, the United States Fish and Wildlife Service, the California Department of Parks and Recreation, the California Department of Fish and Wildlife, the United States Army Corp of Engineers, the United States Bureau of Reclamation, the Ventura County Farm Bureau, the United Water Conservation District, the County of Ventura Environmental Health, the Ventura County Watershed Protection District, the City of Oxnard, the Resource Conservation Partners, the Nature Conservancy, Heal the Bay, the Wishtoyo Foundation's Ventura Coastkeeper, the Ventura Audubon Society, the Surfrider Foundation, the Friends of the Santa Clara River and members of the public have attended these meetings.

c. **Petitions**. Heal the Bay and the Discharger filed petitions to State Water Board challenging the 2008 Order. Heal the Bay requested a review of the discharge to the Estuary as a violation of the Enclosed Bay and Estuaries Policy. Heal the Bay withdrew the petition on February 6, 2012. The Discharger requested a review the final copper effluent limitations, stating that they were more stringent than required by federal law, technologically infeasible, and more stringent than required to protect the beneficial uses designated for the receiving waters of the Estuary. The Discharger withdrew the petition on April 13, 2011.

d. **Legal Settlement.** Following adoption of the 2008 Order, the Wishtoyo Foundation's Ventura Coastkeeper (VCK) filed suit against the City of Ventura. On January 30, 2012, the City of Ventura, Heal the Bay, and Wishtoyo Foundation's Ventura Coastkeeper Program entered into a settlement agreement that provides a long-term plan for the City's reclamation facility and its highly treated water (Consent Decree). Entering into the settlement agreement followed 120 days of extensive public outreach, including a Town Hall meeting on November 10, 2011, which was attended by nearly 50 residents and other interested stakeholders.

The settlement's goal is to resolve a long-standing debate about the impact of the tertiary treated water on the sensitive ecology of the Estuary as well as associated legal and administrative actions against the City. The settlement outlines common goals and a collaborative process which relies on the best available science to decide how to use the reclaimed water produced by the wastewater facility in the future. The major points of the settlement include:

i. Create opportunities to use between 50-100% of the treated water for landscaping, agricultural, or other reclamation uses to stretch water supplies and reduce or eliminate the amount of effluent released into the Estuary;

ii. Build treatment wetlands to further improve water quality if treated water is released into the Estuary; and,

iii. Work together with Ventura Water's customers to arrive at the most responsible and sustainable solution for the health of the Estuary and Ventura's water supply by 2018, and to fully implement this solution by 2025..

The settlement agreement requires the City to determine, through scientific analysis, the Maximum Ecologically Protective Diversion Volume (MEPDV). That MEPDV may be determined either by agreement from the City of Ventura, Heal the Bay and the Ventura Coastkeeper before January 1, 2018, or by a determination from a science review panel that is established in the Consent Decree if the City, Heal the Bay and Ventura Coastkeeper cannot agree to the MEPDV by or before January 1, 2018. After review and recommendation of the MEPDV by all resource agencies, the City of Ventura may propose to construct the necessary facilities to reach that volume.

The special studies described in this Order may provide the scientific analysis used to define the MEPDV, but the special studies must provide sufficient and meaningful information to determine if discharge enhances the Estuary. The MEPDV analysis may be used by the Regional Water Board staff in its evaluation of Estuary enhancement during the next revision of this Order, projected to take place in November of 2018.

The City of Ventura, Heal the Bay, and Wishtoyo's Ventura Coastkeeper program have made progress on technical studies toward the agreements described in their 2012 consent decree. The parties plan to complete additional technical work, but have not reached agreement on the conclusions completed."

11. **Recycling.** In accordance with statewide policies concerning water reclamation, this Regional Water Board strongly encourages, wherever practical, water recycling, water conservation, and use of storm water and dry-weather urban runoff.

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

1. Integrated Report

The State Water Board proposed the California 2008-2010 Integrated Report from a compilation of the adopted Regional Water Boards' Integrated Reports containing 303(d) List of Impaired Waters and 305(b) Reports following recommendations from the Regional Water Boards and information solicited from the public and other interested parties. The Regional Water Boards' Integrated Reports were used to revise their 2006 CWA Section 303(d) List. On August 4, 2010, the State Water Board adopted the California 2008-2010 Integrated Report. On November 12, 2010, the USEPA approved California 2008-2010 Integrated Report Section 303(d) List of Impaired Waters requiring TMDLs for the Los Angeles Region.

The Santa Clara River Estuary is in the California 2008-2010 Integrated Report. The following pollutants were identified as impacting the receiving waters:

a. Santa Clara River Estuary – Calwater Watershed 40311000 (Hydro. Unit No. 402.10 in Basin Plan)

Pollutants – ChemA, coliform bacteria, nitrate, toxaphene, and toxicity

b. Santa Clara River Reach 1 (Estuary to Hwy 101 Bridge) – Calwater Watershed 40311000 (Hydro. Unit No. 402.10 in Basin Plan)

Pollutants – Toxicity

The cause for the toxicity is not described in the report, but toxicants controlled under the CTR and nutrients, which can be associated with eutrophication, dissolved oxygen depression and other effects toxic to aquatic life, are limited by this Order.

E. Other Plans, Polices and Regulations

1. **Secondary Treatment Regulations.** Part 133 of 40 CFR establishes the minimum levels of effluent quality to be achieved by secondary treatment. These limitations, established by USEPA, are incorporated into this Order, except where more stringent limitations are required by other applicable plans, policies, or regulations.

2. **Storm Water.** CWA section 402(p), as amended by the Water Quality Act of 1987, requires NPDES permits for storm water discharges. Pursuant to this requirement, in 1990, USEPA promulgated 40 CFR part 122.26 that established requirements for storm water discharges under an NPDES program. To facilitate compliance with federal regulations, on November 1991, the State Water Board issued a statewide general permit, *General NPDES Permit No. CAS000001 and Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities.* This permit was amended in September 1992 and reissued on April 17, 1997 in State Water Board Order No. 97-03-DWQ to regulate storm water discharges associated with industrial activity.

   The Discharger developed and currently implements a Storm Water Pollution Prevention Plan (SWPPP), to comply with the State Water Board's (Order No. 97-03-DWQ).

3. **Sanitary Sewer Overflows (SSOs).** The CWA prohibits the discharge of pollutants from point sources to surface waters of the United States unless authorized under an NPDES permit. (33 United States Code sections 1311 and 1342). The State Water Board adopted the *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems* (SSS WDR), Water Quality Order No. 2006-0003 on May 2, 2006, to provide a consistent, statewide regulatory framework to address SSOs. The WDR 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 requirements contained in this Order in sections VI.C.3.b, VI.C.4, and VI.C.5. are intended to be consistent with the requirements in the SSS WDR. The Regional Water Board recognizes that there are areas of overlapping interest between the NPDES permit conditions and the SSS WDR requirements. The requirements of the SSS WDR are considered the minimum thresholds (see finding 11 of Order N0. 2006-0003). The Regional Water Board will accept the documentation prepared by the Permittee under the SSS WDR for compliance purposes, as satisfying the requirements in sections VI.C.3.b, VI.C.4, and VI.C.5, provided for any more specific or stringent provisions enumerated in this Order, have also been addressed.

4. **Watershed Management.** This Regional Water Board has been implementing a Watershed Management Approach (WMA) to address water quality protection in the Los Angeles Region, as detailed in the Regional Water Board's Watershed Management Initiative (WMI). The WMI is designed to integrate various surface and ground water regulatory programs while promoting cooperative, collaborative efforts within a watershed. It is also designed to focus limited resources on key issues and use sound science. Information about the Santa Clara River Watershed and other watersheds in the

region can be obtained from the Regional Water Board's website at http://www.waterboards.ca.gov/losangeles and clicking on the word "Watersheds".

5. **Water Rights.** Prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the City 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 CWC section 1211.

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 CFR section 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 CFR 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.

A. Discharge Prohibitions

Effluent and receiving water limitations in this Order are based on the CWA, the Basin Plan, the State Water Board's plans and policies, USEPA guidance and regulations, and best practicable waste treatment technology. This order authorizes the discharge of tertiary-treated wastewater from Discharge Point 001 only. It does not authorize any other types of discharges.

B. Technology-Based Effluent Limitations (TBELs)

1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations at 40 CFR 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 section 301 of the CWA established a required performance level--referred to as "secondary treatment" --that all POTWs were required to meet by July 1, 1977.Section 301(b)(1)(B) of the CWA required that EPA develop secondary treatment standards for POTWs, as defined in section 304(d)(1). Based on this statutory requirement, USEPA developed national secondary treatment regulations which are specified in 40 CFR part 133. These technology-based regulations apply to all POTWs and identify the minimum level of effluent quality to be attained by secondary treatment in terms of five-day biochemical oxygen demand (BOD), total suspended solids (TSS), and pH.

The CWA requires that TBELs be established based on several levels of controls:

a. Best practicable treatment control technology (BPT) represents the average of the best existing performance by well-operated facilities within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.

b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.

c. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering a two-part reasonableness test. The first test compares the relationship between the costs of attaining a reduction in effluent discharge and the resulting benefits. The second test examines the cost and level of reduction of pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources. Effluent limitations must be reasonable under both tests.

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

The CWA requires USEPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and 40 CFR section 125.3 authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the Regional Water Board must consider specific factors outlined in 40 CFR section 125.3.

2. Applicable TBELs

This Facility is subject to the technology-based regulations for the minimum level of effluent quality attainable by secondary treatment for BOD, TSS, and pH, as summarized in Table F-10. The 2008 Order established TBELs to meet applicable secondary treatment standards. These effluent limitations have been carried over from the previous Order to avoid backsliding. Mass-based effluent limitations, based on a flow rate capped at 9 mgd, are also included. The following table summarizes the TBELs for the discharge from the Facility:

Table F-10. Summary of TBELs

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
$BOD_5$20°C	mg/L	20	30	45	--	--
	lbs/day	2,340	3,500	5,260	--	--
TSS	mg/L	15	40	45	--	--
	lbs/day	1,750	4,670	5,250	--	--
pH	standard units	--	--	--	6.5	8.5
Removal Efficiency for BOD and TSS	percent	85	--	--	--	--

This Facility is also subject to TBELs contained in similar NPDES permits, for similar facilities, based on the treatment level achievable by tertiary-treated wastewater treatment systems. These effluent limitations are consistent with the State Water Board

precedential decision, State Water Board Order No. WQ 2004-0010 for the City of Woodland.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

CWA Section 301(b) and 40 CFR 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. This Order contains requirements, expressed as a technology equivalence requirement, more stringent than secondary treatment requirements that are necessary to meet applicable water quality standards. The rationale for these requirements, which consist of tertiary treatment or equivalent requirements or other provisions, is discussed in the section IV.C.2. of the Fact Sheet.

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

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

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Basin Plan designates beneficial uses, establishes WQOs, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Basin Plan. The beneficial uses applicable to the Estuary are summarized in section III.C.1. of this Fact Sheet. The Basin Plan includes both narrative and numeric WQOs applicable to the receiving water as shown in the following discussions.

a. BOD and TSS

BOD is a measure of the quantity of the organic matter in the water and, therefore, the water's potential for becoming depleted in dissolved oxygen. As organic degradation takes place, bacteria and other decomposers use the oxygen in the water for respiration. Unless there is a steady supply of oxygen to the system, the water will quickly become depleted of oxygen. Adequate dissolved oxygen levels are required to support aquatic life. Depressions of dissolved oxygen can lead to anaerobic conditions resulting in odors, or, in extended durations of anaerobic conditions or higher magnitude cases, in fish kills.

The Ventura WRP permit provides tertiary treatment requirements, such as, the $BOD_5 20^oC$ and TSS limits that are more stringent than secondary treatment

requirements, based on best professional judgment (BPJ). The Facility achieves solids removal that is better than secondary-treated wastewater by adding chemical coagulants to enhance the precipitation of solids, and by filtering the effluent.

Total Suspended Solids (TSS) is another measure of the quantity of organic and mineral mater in the water. High TSS usually accompanies high BOD, and together they quantify treatment plant performance in removing organic and inorganic solid waste.

40 CFR part 133 describes the minimum level of effluent quality attainable by secondary treatment for BOD and TSS as:

i. The 30-day average shall not exceed 30 mg/L, and

ii. The 7-day average shall not exceed 45 mg/L.

The limits in this Order are based on tertiary treatment and may be more stringent than secondary treatment requirements. The Facility achieves solids removal that is better than secondary-treated wastewater by adding chemical coagulants to enhance the precipitation of solids and by filtering the secondary effluent.

The monthly average, weekly average, and daily maximum limits cannot be removed because none of the anti-backsliding exceptions apply. Those limits were all included in the previous Order and the Discharger has been able to meet all three limits (monthly average, the weekly average, and the daily maximum) for both BOD and TSS.

In addition to having mass-based and concentration-based effluent limitations for BOD and TSS, the Facility also has a percent removal requirement for these two constituents. In accordance with 40 CFR parts 133.102(a)(3) and 133.102(b)(3), the 30-day (monthly) average percent removal shall not be less than 85 percent. Percent removal is defined as a percentage expression of the removal efficiency across a treatment plant for a given pollutant parameter, as determined from the 30-day (monthly) average values of the raw wastewater influent pollutant concentrations to the Facility and the 30-day (monthly) average values of the effluent pollutant concentrations for a given time period.

b. Settleable solids

Excessive deposition of sediments can destroy spawning habitat, blanket benthic (bottom dwelling) organisms and abrade the gills of larval fish. The limits for settleable solids are based on the Basin Plan (page 3-16) narrative, *"Waters shall not contain suspended or settleable material in concentrations that cause nuisance or adversely affect beneficial uses."* The numeric limits are empirically based on results obtained from the settleable solids 1-hour test, using an Imhoff cone.

It is impracticable to use a 7-day average limitation, because short term spikes of settleable solid levels that would be permissible under a 7-day average scheme would not be adequately protective of all beneficial uses. The monthly average and the daily maximum limits cannot be removed because none of the anti-backsliding exceptions apply. The monthly average and daily maximum limits were both included in the previous Order and the Discharger has been able to meet both limits.

c. Oil and grease

Oil and grease are not readily soluble in water and form a film on the water surface. Oily films can coat birds and aquatic organisms, impacting respiration and thermal regulation, and causing death. Oil and grease can also cause nuisance conditions

(odors and taste), are aesthetically unpleasant, and can restrict a wide variety of beneficial uses. The limits for oil and grease are based on the Basin Plan (page 3-11) narrative, *"Waters shall not contain oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect beneficial uses."*

The numeric limits are empirically based on concentrations at which an oily sheen becomes visible in water. It is impracticable to use a 7-day average limitation, because spikes that occur under a 7-day average scheme could cause visible oil sheen. A 7-day average scheme would not be sufficiently protective of beneficial uses. The monthly average and the daily maximum limits cannot be removed because none of the anti-backsliding exceptions apply. Both limits were included in the previous Order and the Discharger has been able to meet both limits.

d. Residual chlorine

Disinfection of wastewaters with chlorine produces chlorine residual. Chlorine and its reaction products are toxic to aquatic life. The limit for residual chlorine is based on the Basin Plan (page 3-9) narrative, *"Chlorine residual shall not be present in surface water discharges at concentrations that exceed 0.1 mg/L and shall not persist in receiving waters at any concentration that causes impairment of beneficial uses".*

It is impracticable to use a 7-day average or a 30-day (monthly) average limitation, because it is not as protective as of beneficial uses as a daily maximum limitation is. Chlorine is very toxic to aquatic life and short-term exposures of chlorine may cause fish kills. The Discharger has been able to maintain a chlorine residual at or below 0.1 mg/L.

e. TDS, Chloride, Sulfate, and Boron

Page 3-12 of the Basin Plan indicates that there are no water body specific objectives in surface water for Total Dissolved Solids (TDS), chloride, sulfate and boron.

The perched and unconfined Oxnard Plain Forebay Groundwater Basin, which is continuous with freshwater underlying the discharge location, has limits on page 3-19 for TDS (3,000 mg/L), sulfate (1,000 mg/L), and chloride (500 mg/L).

Upon completion of the special study, groundwater limits may be reconsidered as described in the reopener provision at VI. C. I..

f. Methylene Blue Activated Substances (MBAS)

The MBAS procedure tests for the presence of anionic surfactants (detergents) in surface and ground waters. Surfactants disturb the water surface tension, which affects insects and can affect gills in aquatic life. The MBAS can also impart an unpleasant soapy taste to water, as well as cause scum and foaming in waters, which impact the aesthetic quality of both surface and ground waters.

Given the nature of the Facility (a POTW) which accepts domestic wash water into the sewer system and treatment plant and the characteristics of the wastes discharged, the discharge has reasonable potential to exceed both the numeric MBAS WQO and the narrative WQO for prohibition of floating material such as foams and scums. Therefore, an effluent limitation is required based upon BPJ.

g. Nitrogen Compounds/Nutrient Compounds

i. **Total inorganic nitrogen (NO_2 + NO_3 as N).** Total inorganic nitrogen is the sum of nitrate-nitrogen and nitrite-nitrogen. High nitrate levels in drinking water can cause health problems in humans. Infants are particularly sensitive and can develop methemoglobinemia (blue-baby syndrome). Nitrogen is also considered a nutrient. Excessive amounts of nutrients can lead to other water quality impairments, ex. algae[11]. Although there are no water body specific objectives for nitrogen in the Estuary, based on the Discharger's effluent data from their SMRs, the discharge has reasonable potential to exceed the numeric nitrate plus nitrite as nitrogen 10 mg/L WQO, specified in the Basin Plan page 3-11. An effluent limitation is required based upon BPJ. The Discharger will have to meet the 10 mg/L WQO at the end-of-pipe, since no dilution credit is appropriate at this time. This effluent limitation in concentration shall not apply when the concentration limitation for nitrate as nitrogen or nitrite as nitrogen is exceeded. This effluent limitation in mass load shall not apply when the mass load limitation for nitrate as nitrogen or nitrite as nitrogen is exceeded

ii. **Nitrite as Nitrogen.** Chapter 3 of the Basin Plan (page 3-11) contains the following WQO, "*Waters shall not exceed the 10 mg/L nitrogen as nitrate-nitrogen plus nitrite-nitrogen (NO_3-N + NO_2-N), 45 mg/L as nitrate (NO_3), 10 mg/L as nitrate-nitrogen (NO_3-N), or 1 mg/L as nitrite-nitrogen (NO_2-N) or as otherwise designated in Table 3-8.*" The nitrite effluent concentrations may exceed the 1 mg/L WQO specified in the Basin Plan based on the BPJ, if the oxidation process of the nitrification is not complete. A final nitrite limitation of 1 mg/L has been added to this Order.

iii. **Ammonia.** Ammonia is a pollutant routinely found in the wastewater effluent of POTWs, in landfill-leachate, as well as in run-off from agricultural fields where commercial fertilizers and animal manure are applied. Ammonia exists in two forms – un-ionized ammonia (NH3) and the ammonium ion (NH4+). They are both toxic, but the neutral, un-ionized ammonia species is much more toxic, because it is able to diffuse across the epithelial membranes of aquatic organisms much more readily than the charged ammonium ion. The form of ammonia is primarily a function of pH, but it is also affected by temperature and other factors. Additional impacts can also occur as the oxidation of ammonia lowers the dissolved oxygen content of the water, further stressing aquatic organisms. Oxidation of ammonia to nitrate may lead to groundwater impacts in areas of recharge. Ammonia also combines with chlorine (often both are present in POTW treated effluent discharges) to form chloramines – persistent toxic compounds that extend the effects of ammonia and chlorine downstream.

The Facility began operating a NDN system on October 3, 2011. The Facility's performance related to removing ammonia has improved since 2008. TSOs were issued in 2012 and 2013 because ammonia add-back after chlorination elevated ammonia in the effluent and the City needs additional time to consider and implement a long-term solution.

An RPA was conducted for total ammonia, as NH3 plus NH4+, using the Discharger's effluent data from their SMRs since October 2011. The RPA

[11] Excessive growth of algae and/or other aquatic plants can degrade water quality. Algal blooms sometimes occur naturally, but they are often the result of excess nutrients (i.e., nitrogen, phosphorus) from waste discharges or nonpoint sources. These algal blooms can lead to problems with tastes, odors, color, and increased turbidity and can depress the dissolved oxygen content of the water, leading to fish kills. Floating algal scum and algal mats are also an aesthetically unpleasant nuisance.

compares the effluent data with the Basin Plan WQOs. Because the Discharger's effluent has exceeded the WQOs for total ammonia between 2011 and 2013, there is reasonable potential that the discharge will cause or contribute to an exceedance of the Basin Plan WQOs. Consistent with 40 CFR part 122.44(d), this Order contains numeric effluent limitations for total ammonia.

Ammonia saltwater criteria are salinity, pH, and temperature dependent. Because there are such wide salinity, pH, and temperature fluctuations in the Estuary during summer (from May to October) and winter (from November to April) months, seasonal total ammonia effluent limitations provide better protection of living organisms in the Estuary and have been included in this Order.

(1) The Regional Water Board has adopted NPDES permits recently using an approach for calculating both the end-of-pipe limitations for ammonia, as well as receiving water limitations that address site-specific characteristics of effluent, as well as the receiving water. The procedures for calculating the total ammonia effluent limitations are based on the 2002 and 2004 Ammonia Amendments are as follows. For complete calculations see Attachment M.

One-Hour Average Total Ammonia Saltwater Quality Objective as Criteria Maximum Concentration (CMC)

Total Ammonia =

$$0.233+0.233\times10^{(pK_a^S+0.0324\times(298-T)+0.0415\times P/T-pH)}$$

Where: P = 1 atm, T= temperature (^{0}K) and pK_a^S = 0.116 * I + 9.245, the stoichiometric acid hydrolysis constant of ammonium ions in saltwater on I, I = $19.9273*S(1000-1.005109S)^{-1}$, the molar ionic strength of saltwater based on S where S= salinity

The following represents the 90th percentile of receiving water data after implementation of NDN treatment at R-004 for summer and winter :

(i) pH: 7.64 (summer) and 8.57 (winter)

(ii) temperature: 22.95 ^{0}C (summer) and 18.597 ^{0}C (winter)

(iii) Salinity: 1.54 (summer) and 2.09 (winter)

(iv) I: 0.03 (summer) and .0416 (winter)

(v) pK_a^S: 9.25 (summer) and 9.249 (winter)

Use of the 90th percentile pH, temperature, and salinity to set effluent limitations is appropriate because of the shorter time scale of the one-hour average. It is conservative, because it is overprotective 90 percent of the time. Using the values in the formula above, the resulting One-hour

Average Objective is equal to 11.41 mg/L for the summer months and 2.05 mg/L for the winter months.

Four-Day Average Total Ammonia Saltwater Quality Objective as Criteria Continuous Concentration (CCC)

Total Ammonia =

$$0.035 + 0.035 \times 10^{(pK_a^S + 0.0324 \times (298 - T) + 0.0415 \times P/T - pH)}$$

Where: P = 1 atm, T= temperature (^{0}K) and pK_a^S = 0.116 * I +9.245, the stoichiometric acid hydrolysis constant of ammonium ions in saltwater on I, I = 19.9273*S(1000-1.005109S)$^{-1}$, the molar ionic strength of saltwater based on S, where S= salinity.

The following represents the 50th percentile of receiving water data collected after implementation of NDN at R-004:

(i) pH: 7.49 (summer) and 7.91 (winter)

(ii) temperature: 21.21 ^{0}C (summer) and 14.97 ^{0}C (winter)

(iii) Salinity: 1.3 (summer) and 1.65 (winter)

(iv) I: .0259 (summer) and .033 (winter)

(v) pK_a^S: 9.248 (summer) and 9.25 (winter)

Use of the 50th percentile pH, temperature, and salinity is appropriate to set the 4-day average objective, because the 4-day average represents more long-term conditions. Using the values in the formula above, the resulting 4-day Average Objective is equal to 2.7 mg/L for the summer period and 1.649 mg/L for the winter period.

Translation of Total Ammonia Saltwater WQOs into Effluent Limitations

In order to translate the WQOs for total ammonia as described in the preceding discussions into effluent limitations, the Implementation Provisions of the 2002 Basin Plan Amendment, section 5 – *Translation of Objectives into Effluent Limits*, was followed and is discussed below. This method is similar to the method contained the SIP. The method is also consistent with that outlined in the USEPA *Technical Support Document for Water Quality-based Toxics Control (1991)* (TSD).

(i) Identify applicable water quality criteria: Four-day Average = 2.7 mg/L (summer) and 1.65 mg/L (winter) and One-hour Average = 11.41 mg/L (summer) and 2.05 mg/L (winter)

(ii) For each WQO, calculate the effluent concentration allowance (ECA) using the steady-state mass balance model. Since mixing has not

been allowed by the Regional Water Board, this equation applies: ECA = WQO

(iii) Determine the Long-Term Average discharge condition (LTA) by multiplying each ECA with a factor (multiplier) that adjusts for variability. The coefficient of variation (CV) is calculated from the weekly averages of the effluent ammonia at all monitoring stations by summer and winter as documented in Attachment K-6.

(iv) Find ECA multiplier, when CV = .2597 (summer) and .23989 (winter): ECA multiplier$_{4\text{-day}99}$ = 0.74646 (summer) and 0.762728(winter) and ECA multiplier$_{1\text{-hour}99}$ = 0.570296 (summer) and 0.593201 (winter)

(v) Use the LTA equations:

$LTA_{4\text{-day}/99} = ECA_{4\text{-day}}$ x ECA multiplier$_{4\text{-day}99}$ = 2.7 mg/L x 0.747 = 2.01 mg/L (summer)
$LTA_{1\text{-hour}/99} = ECA_{1\text{-hour}}$ x ECA multiplier$_{1\text{-hour}99}$ = 11.41 mg/L x 0.570 = 6.50 mg/L (summer)
$LTA_{4\text{-day}/99} = ECA_{4\text{-day}}$ x ECA multiplier$_{4\text{-day}99}$ = 1.65 mg/L x 0.763= 1.26 mg/L (winter)
$LTA_{1\text{-hour}/99} = ECA_{1\text{-hour}}$ x ECA multiplier$_{1\text{-hour}99}$ = 2.05 mg/L x 0.593 = 1.216 mg/L (winter)

(vi) Select the (most limiting) of the LTAs derived in Step 3: (LTAmin)LTA_{min} = 2.012323 mg/L (summer) and LTA_{min} = 1.21589 mg/L (winter)

(vii) Calculate maximum daily effluent limit (MDEL) and average monthly effluent limit (AMEL) by multiplying LTAmin as selected in Step 4 with a factor (multiplier).

The CV is calculated from the effluent, as above = .2597(summer) and .23989 (winter).

AMEL multiplier$_{95}$ = 1.22672 (summer) and 1.208601 (winter)
MDEL multiplier$_{99}$ = 1.753475 (summer) and 1.685768 (winter)

AMEL = LTA_{min} x AMEL multiplier$_{95}$ = 2.012323 mg/L x 1.226728 = 2.46857 ≈ 2.47 mg/L (summer)
MDEL = LTA_{min} x MDEL multiplier$_{99}$ = 2.012323 mg/L x 1.753475 = 3.528559 ≈ 3.53 mg/L (summer)
AMEL = LTA_{min} x AMEL multiplier$_{95}$ = 1.21589 mg/L x 1.2080601 = 1.469525 ≈ 1.47 mg/L (winter)
MDEL = LTA_{min} x MDEL multiplier$_{99}$ = 1.21589 mg/L x 1.685768 = 2.049708 ≈ 2.05 mg/L (winter)

Table F-11. WQBEL Total Ammonia Effluent Limitations

Constituent	AMEL (mg/L)	MDEL (mg/L)
Total Ammonia (summer months)	2.47	3.53
Total Ammonia (winter months)	1.47	2.05

(2) Performance Total Ammonia Effluent Limitations

The 2008 Order had more restrictive total ammonia limits (Summer AMEL 0.045 and Winter AMEL .079 mg/L) than those calculated above (Summer AMEL 2.47 and Winter AMEL 1.47 mg/L) fusing 2011-2013 receiving water data and current procedures for calculating ammonia effluent limits. Because this Order includes Estuary and Nutrient, Dissolved Oxygen and Toxicity studies, effluent limits for total ammonia in the Order are based on performance. The procedures for calculating the ammonia nitrogen effluent limitation based on the Basin Plan amendments is determined by calculating the 95% and 99% total ammonia effluent concentration for winter and summer conditions using Minitab software.

Table F-12a. Total Ammonia Effluent Performance

Constituent	AMEL (mg/L) (95% probability)	MDEL (mg/L) (99% probability)
Total Ammonia (summer months)	1.07	1.17
Total Ammonia (winter months)	1.3	1.4

(3) Combined WQBEL and Performance Total Ammonia Effluent Limits

The Performance Based Effluent Limits are more stringent than the WQBELs for every calculated limit. For example, the AMEL for total ammonia in the winter (1.3 mg/L) in the performance ammonia limit is lower than the WQBEL calculated for winter (1.47 mg/L). The most protective of the limits is applied to create the final ammonia effluent limits, with an AMEL in the winter of 1.47 as shown in Table F-12b.

Table F-12b. Final Effluent Ammonia Limits

Constituent	AMEL (mg/L) (95% probability)	MDEL (mg/L) (99% probability)
Total Ammonia (summer months)	1.07	1.17
Total Ammonia (winter months)	1.3	1.4

A reopener provision, described at VI.C.I., allows the Order and the ammonia limits to be reconsidered upon completion of the Nutrient, Dissolved Oxygen and Toxicity Study.

h. Coliform/Bacteria

Total coliform, fecal coliform, and enterococcus bacteria are used to indicate the likelihood of pathogenic bacteria in surface waters. Given the nature of the Facility, a wastewater treatment plant, pathogens are likely to be present in the effluent in cases where the disinfection process is not operating adequately. As such, this Order contains the following limitations:

i. Effluent Limitations:

(a) The 7-day median number of total coliform at some point in the treatment process must not exceed 2.2 Most Probable Number (MPN) per 100 milliliters;

(b) The number of total coliform must not exceed 23 MPN per 100 milliliters in more than one sample within any 30-day period; and,

(c) No sample shall exceed an MPN of 240 total coliform bacteria per 100 milliliters.

These disinfection-based effluent limitations for coliform are for human health protection and are consistent with disinfected tertiary recycled water requirements (CCRs title 22, chapter 3, section 60301.230) established by the CDPH. On July 8, 2010, the Regional Water Board adopted Resolution No. R-0010-006, the Santa Clara River Bacteria TMDL, also enacting that the 7-day median number of total coliform at some point in the treatment process must not exceed 2.2 MPN per 100 milliliters.

These limits for total coliform must be met at the point of the treatment train immediately following disinfection, as a measure of the effectiveness of the disinfection process.

ii. Receiving Water Limitation

(a) Geometric Mean Limits: Total coliform density shall not exceed 1,000/100 mL; Fecal coliform density shall not exceed 200 per 100 mL; Enterococcus density shall not exceed 35 per 100 mL.

(b) Single Sample Limits; Total coliform density shall not exceed 10,000 per 100 mL; Fecal coliform density shall not exceed 400 per 100 mL; Enterococcus density shall not exceed 104 per 100 mL; and, Total coliform density shall not exceed 1,000 per 100 mL, if the ratio of fecal-to-total coliform exceeds 0.1.

i. pH

The hydrogen ion activity of water (pH) is measured on a logarithmic scale, ranging from 0 to 14. While the pH of "pure" water at 25°C is 7.0, the pH of natural waters is usually slightly basic due to the solubility of carbon dioxide from the atmosphere. Minor changes from natural conditions can harm aquatic life. In accordance with 40 CFR part 133.102(c), the effluent values for pH shall be maintained within the limits of 6.0 to 9.0 unless the POTW demonstrates that (1) inorganic chemicals are not added to the waste stream as part of the treatment process; and (2) contributions from industrial sources do not cause the pH of the effluent to be less than 6.0 or greater than 9.0. The effluent limitation for pH in this Order requiring that the wastes

discharged shall at all times be within the range of 6.5 to 8.5 is taken from the Basin Plan (page 3-15) which reads "*the pH of inland surface waters shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharge.*"

j. Temperature

USEPA document, Quality Criteria for Water 1986 [EPA 440/5-86-001, May 1, 1986], also referred to as the Gold Book, discusses temperature and its effects on beneficial uses, such as recreation and aquatic life.

i. The Federal Water Pollution Control Administration in 1967 called temperature "a catalyst, a depressant, an activator, a restrictor, a stimulator, a controller, a killer, and one of the most important water quality characteristics to life in water." The suitability of water for total body immersion is greatly affected by temperature. Depending on the amount of activity by the swimmer, comfortable temperatures range from 20°C to 30°C (68 °F to 86 °F).

ii. Temperature also affects the self-purification phenomenon in water bodies and therefore the aesthetic and sanitary qualities that exist. Increased temperatures accelerate the biodegradation of organic material both in the overlying water and in bottom deposits which makes increased demands on the dissolved oxygen resources of a given system. The typical situation is exacerbated by the fact that oxygen becomes less soluble as water temperature increases. Thus, greater demands are exerted on an increasingly scarce resource which may lead to total oxygen depletion and obnoxious septic conditions. Increased temperature may increase the odor of water because of the increased volatility of odor-causing compounds. Odor problems associated with plankton may also be aggravated.

iii. Temperature changes in water bodies can alter the existing aquatic community. Coutant (1972) has reviewed the effects of temperature on aquatic life reproduction and development. Reproductive elements are noted as perhaps the most thermally restricted of all life phases, assuming other factors are at or near optimum levels. Natural short-term temperature fluctuations appear to cause reduced reproduction of fish and invertebrates.

The Basin Plan lists temperature requirements for the receiving waters. Based on the requirements of the Basin Plan and a white paper developed by Regional Water Board staff entitled *Temperature and Dissolved Oxygen Impacts on Biota in Tidal Estuaries and Enclosed Bays in the Los Angeles Region*, a maximum effluent temperature limitation of 86 °F is included in the Order. The white paper evaluated the optimum temperatures for steelhead, topsmelt, ghost shrimp, brown rock crab, jackknife clam, and blue mussel. The new temperature effluent limitation is reflective of new information available that indicates that the 100°F temperature is not protective of aquatic organisms. A survey was completed for several kinds of fish and the 86°F temperature was found to be protective. It is impracticable to use a 7-day average or a 30-day average limitation for temperature, because it is not as protective as of beneficial uses as a daily maximum limitation is. A daily maximum limitation is necessary to protect aquatic life and is consistent with the fishable/swimmable goals of the CWA. Section IV.A.2.b. of the Order contains the following effluent limitation for temperature: "*The temperature of wastes discharged shall not exceed 86°F, except as a result of external ambient temperature.*"

The above effluent limitation for temperature has been quoted in all recent NPDES permits adopted by this Regional Water Board.

Section V.A.1. of the Order explains how compliance with the receiving water temperature limitation will be determined.

k. Turbidity

Turbidity is an expression of the optical property that causes light to be scattered in water due to particulate matter such as clay, silt, organic matter, and microscopic organisms. Turbidity can result in a variety of water quality impairments. The effluent limitation for turbidity which reads, "*For the protection of the water contact recreation beneficial use, the wastes discharged to water courses shall have received adequate treatment, so that the turbidity of the wastewater does not exceed: (a) a daily average of 2 Nephelometric turbidity units (NTUs); and (b) 5 NTUs more than 5 percent of the time (72 minutes) during any 24 hour period,*" is based on the Basin Plan (page 3-17) and Section 60301.320 of title 22, chapter 3, "Filtered Wastewater" of the CCRs.

l. Radioactivity

Radioactive substances are generally present in natural waters in extremely low concentrations. Mining or industrial activities increase the amount of radioactive substances in waters to levels that are harmful to aquatic life, wildlife, or humans. The existing effluent limitation for radioactivity which reads, "*Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life or that result in accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life*" is based on the radioactive substances specified in the Basin Plan in order to protect the surface water beneficial use and human health.

m. Biostimulatory Substances

Biostimulatory substances include excess nutrients (nitrogen and phosphorus) and other compounds that stimulate aquatic growth. In addition to being aesthetical unpleasant (causing taste, odor, or color problems), this excessive growth can also cause other water quality problems. The limits for biostimulatory substances are based on the Basin Plan (page 3-8) narrative, "*Waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.*"

n. CTR and SIP

The CTR and the SIP specify numeric objectives for toxic substances and the procedures whereby these objectives are to be implemented. The procedures include those used to conduct an RPA to determine the need for effluent limitations for priority and non-priority pollutants.

3. Determining the Need for WQBELs

Pursuant to 40 CFR part 122.45(d)(2), for POTW continuous discharges, all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall, unless impracticable, be stated as average weekly and average monthly discharge limitations (AWEL and AMEL, respectively). It is impracticable to include only average weekly and average monthly effluent limitations in the permit, because a single daily discharge of certain pollutants, in excess amounts, can cause violations of WQOs. The effects of pollutants on aquatic organisms are often rapid. For many pollutants, an average weekly or average monthly effluent limitation

alone is not sufficiently protective of beneficial uses. As a result, Maximum Daily Effluent Limits (MDELs, as referenced in 40 CFR part 122.45(d)(1)), are included in the permit for certain constituents.

Priority pollutant water quality criteria in the CTR are applicable to the Estuary. The CTR contains both saltwater and freshwater criteria. Because a distinct separation generally does not exist between freshwater and saltwater aquatic communities, the following apply in accordance with 40 CFR part 131.38(c)(3): freshwater criteria apply at salinities of 1 part per thousand (ppt) and below at locations where this condition occurs 95 percent or more of the time; saltwater criteria apply at salinities of 10 ppt and above at locations where this occurs 95 percent or more of the time; and at salinities between 1 and 10 ppt the more stringent of the two apply. The CTR criteria for freshwater or human health for consumption of organisms, whichever is most stringent, are used to prescribe the effluent limitations in the tentative Order to protect the beneficial uses of the Estuary.

Some water quality criteria are hardness dependent. The Discharger provided hardness data collected from the Estuary. The receiving water hardness values ranged from 229 to 5270 mg/L after 2009. Since most of the receiving water hardness data (776 of 780 data points) and their average hardness as CaCO3 (920 mg/L) are greater than 400 mg/L as CaCO3, in accordance with the SIP/CTR procedures, the 400 mg/L hardness cap will be used in calculating metals criteria for evaluation of reasonable potential.

In accordance with Section 1.3 of the SIP, the Regional Water Board conducted an RPA for each priority pollutant with an applicable criterion or objective to determine if a WQBEL is required in the permit. The Regional Water Board analyzed effluent data to determine if a pollutant in a discharge has a reasonable potential to cause or contribute to an excursion above a state water quality standard. For all parameters that demonstrate reasonable potential, numeric WQBELs are required. The RPA considers water quality criteria from the CTR and NTR, and when applicable, WQOs specified in the Basin Plan. To conduct the RPA, the Regional Water Board staff identified the maximum effluent concentration (MEC) and maximum background concentration in the receiving water for each constituent, based on data provided by the Discharger. The monitoring data used are the available data from the 2008 Order.

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 limitation is needed.

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

c. Trigger 3 – If other related information such as CWA 303(d) listing for a pollutant, discharge type, or compliance history, then BPJ is used to determine that a limit is needed.

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

At least 10 data sets for effluent and receiving water monitoring for the period from March 2008 through April 2013 were available. In addition, samples for certain priority

pollutants were collected as required by the existing Monitoring and Reporting Program (MRP; Attachment E); these data were also used to complete the RPA.

The RPA was performed for the priority pollutants regulated in the CTR for which data are available. Based on the RPA, pollutants that demonstrate reasonable potential are copper, selenium, lead and nickel. Refer to Attachments K, M and N for a summary of the RPA and associated effluent limitation calculations. The following table summarizes the RPA.

Table F-13. Summary of RPA

CTR No.	Constituent	Water Quality Criteria (C) µg/L	Max Effluent Conc. (MEC) µg/L	Max Receiving Water Conc.(B) µg/L	RPA Result - Need Limit?	Reason
1	Antimony	4300	<1	<1	No	B<C, MEC<C
2	Arsenic	36	<2	7.7	No	B<C, MEC<C
3	Beryllium	Narrative	<2	<.2	No	No criteria
4	Cadmium	9.4	<4	<4.0	No	B<C, MEC<C
5a	Chromium III	N.A.	<7	<9.05	No	No criteria
5b	Chromium VI	11.4	<1	-	No	MEC<C
6	Copper	6.86	8.52	4.97	Yes	B<C, MEC>C
7	Lead	8.5	9.4	7.63	Yes	MEC>C
8	Mercury	0.051	<0.02	<2	No	MEC<C
9	Nickel	10.2	35.4	50.2	Yes	B>C, MEC>C
10	Selenium	5	13.7	8.07	Yes	B>C, MEC>C
11	Silver	2.2	<0.2	<.2	No	MEC<C,B<C
12	Thallium	6.3	<1	<1.0	No	MEC<C,B<C
13	Zinc	96	68.8	32.5	No	C>MEC, B<C
14	Cyanide	1	<5	<5	No	B<C, MEC<C
15	Asbestos	NA	NA	-	No	NA
16	2,3,7,8-TCDD (Dioxin)	$1.4x10^{-08}$	$<1x10^{-05}$	-	No	All ND in Effluent
17	Acrolein	780	<0.6	<0.6	No	All ND in Effluent
18	Acrylonitrile	0.66	<0.5	<0.5	No	All ND in Effluent
19	Benzene	71	<0.2	<0.20	No	All ND in Effluent
20	Bromoform	3600	4.3	2.96	No	MEC<C, B<C
21	Carbon Tetrachloride	4.4	<0.12	<0.12	No	All ND in Effluent
22	Chlorobenzene	21,000	<0.2	<0.20	No	All ND in Effluent
23	Dibromochloromethane[18]	34	14.5	3.63	No	MEC<C, B<C
24	Chloroethane	No criteria	<0.52	<0.52	No	No criteria
25	2-chloroethyl vinyl ether	No criteria	<0.13	<0.13	No	No criteria
26	Chloroform	No criteria	36	10.9	No	No criteria
27	Dichlorobromomethane[18]	46	25.6	4.89	No	MEC<C, B<C
28	1,1-dichloroethane	5	<0.07	<0.07	No	MEC<C, B<C
29	1,2-dichloroethane	99	<0.03	<0.03	No	All ND in Effluent
30	1,1-dichloroethylene	3.2	<0.13	<0.13	No	All ND in Effluent
31	1,2-dichloropropane	39	<0.04	<0.34	No	All ND in Effluent
32	1,3-dichloropropylene	1,700	<0.68	<0.34	No	All ND in Effluent
33	Ethylbenzene	29,000	<0.34	<0.34	No	All ND in Effluent

CTR No.	Constituent	Water Quality Criteria (C) µg/L	Max Effluent Conc. (MEC) µg/L	Max Receiving Water Conc.(B) µg/L	RPA Result - Need Limit?	Reason
34	Methyl bromide	4,000	<0.5	<0.50	No	All ND in Effluent
35	Methyl chloride	No criteria	<0.08	<0.08	No	No criteria
36	Methylene chloride	1,600	<0.25	<0.25	No	All ND in Effluent
37	1,1,2,2-tetrachloroethane	11	<0.03	<0.03	No	All ND in Effluent
38	Tetrachloroethylene	8.85	<0.03	<0.03	No	All ND in Effluent
39	Toluene	200,000	<0.2	1.3	No	All ND in Effluent
40	Trans 1,2-Dichloroethylene	140,000	<0.1	<0.1	No	All ND in Effluent
41	1,1,1-Trichloroethane	No criteria	<0.03	<0.03	No	All ND in Effluent
42	1,1,2-Trichloroethane	42	<0.02	<0.02	No	All ND in Effluent
43	Trichloroethylene	81	<0.12	<0.12	No	All ND in Effluent
44	Vinyl Chloride	525	<0.18	<0.18	No	All ND in Effluent
45	2-chlorophenol	400	<3.3	<3.3	No	All ND in Effluent
46	2,4-dichlorophenol	790	<2.7	<2.7	No	All ND in Effluent
47	2,4-dimethylphenol	2,300	<2.7	<2.7	No	All ND in Effluent
48	2-methyl-4,6-dinitrophenol	765	<10	<10	No	All ND in Effluent
49	2,4-dinitrophenol	14,000	<42	<42	No	All ND in Effluent
50	2-nitrophenol	No criteria	<3.6	<3.6	No	No criteria
51	4-nitrophenol	No criteria	<2.4	<2.4	No	No criteria
52	3-Methyl-4-Chlorophenol	No criteria	<3	<3.0	No	No criteria
53	Pentachlorophenol	7.9	<3.6	<3.6	No	All ND in Effluent
54	Phenol	4,600,000	<1.5	<1.5	No	All ND in Effluent
55	2,4,6-trichlorophenol	6.5	<2.7	<2.7	No	All ND in Effluent
56	Acenaphthene	2,700	<2	<2.0	No	All ND in Effluent
57	Acenaphthylene	No criteria	<1.9	<1.9	No	No criteria
58	Anthracene	110,000	<1.9	<1.9	No	All ND in Effluent
59	Benzidine	0.00054	<4.4	<4.4	No	All ND in Effluent
60	Benzo(a)Anthracene	0.049	<7.8	<7.8	No	All ND in Effluent
61	Benzo(a)Pyrene	0.049	<2.5	<2.5	No	All ND in Effluent
62	Benzo(b)Fluoranthene	0.049	<4.8	<4.8	No	All ND in Effluent
63	Benzo(ghi)Perylene	No criteria	<4.1	<4.1	No	No criteria
64	Benzo(k)Fluoranthene	0.049	<2.5	<2.5	No	All ND in Effluent
65	Bis(2-Chloroethoxy) methane	No criteria	<5.3	<5.3	No	No criteria
66	Bis(2-Chloroethyl)Ether	1.4	<5.7	<5.7	No	All ND in Effluent
67	Bis(2-Chloroisopropyl) Ether	170,000	<5.7	<5.7	No	All ND in Effluent
68	Bis(2-Ethylhexyl)Phthalate[18]	5.9	<2.5	7.1	No	All ND in Effluent
69	4-Bromophenyl Phenyl Ether	No criteria	<1.9	<1.9	No	No criteria
70	Butylbenzyl Phthalate	5,200	<2.5	<2.5	No	All ND in Effluent
71	2-Chloronaphthalene	4,300	<1.9	<1.9	No	All ND in Effluent
72	4-Chlorophenyl Phenyl	No criteria	<4.2	<4.2	No	No criteria

CTR No.	Constituent	Water Quality Criteria (C) µg/L	Max Effluent Conc. (MEC) µg/L	Max Receiving Water Conc.(B) µg/L	RPA Result - Need Limit?	Reason
	Ether					
73	Chrysene	0.049	<2.0	<2.0	No	All ND in Effluent
74	Dibenzo(a,h) Anthracene	0.049	<2.5	<2.5	No	All ND in Effluent
75	1,2-Dichlorobenzene	17,000	<1.9	<1.9	No	All ND in Effluent
76	1,3-Dichlorobenzene	2,600	<2.5	<1.9	No	All ND in Effluent
77	1,4-Dichlorobenzene	2,600	<4.4	<4.4	No	All ND in Effluent
78	3-3'-Dichlorobenzidine	0.077	<16.5	<16.5	No	All ND in Effluent
79	Diethyl Phthalate	120,000	<2.2	<2.2	No	All ND in Effluent
80	Dimethyl Phthalate	2,900,000	<1.6	<1.6	No	All ND in Effluent
81	Di-n-Butyl Phthalate	12,000	<2.5	<2.5	No	All ND in Effluent
82	2-4-Dinitrotoluene	9.1	<5.7	<5.7	No	All ND in Effluent
83	2-6-Dinitrotoluene	No criteria	<1.9	<1.9	No	No criteria
84	Di-n-Octyl Phthalate	No criteria	<2.5	<2.5	No	No criteria
85	1,2-Diphenylhydrazine	0.54	<10	<10	No	All ND in Effluent
86	Fluoranthene	370	<2.2	<2.2	No	All ND in Effluent
87	Fluorene	14,000	<1.9	<1.9	No	All ND in Effluent
88	Hexachlorobenzene	0.00077	<1.9	<1.9	No	All ND in Effluent
89	Hexachlorobutadiene	50	<0.9	<0.9	No	All ND in Effluent
90	Hexachlorocyclopentadiene	17,000	<1.9	<1.9	No	All ND in Effluent
91	Hexachloroethane	8.9	<1.6	<1.6	No	All ND in Effluent
92	Indeno(1,2,3-cd)Pyrene	0.049	<3.7	<3.7	No	All ND in Effluent
93	Isophorone	600	<2.2	<2.2	No	All ND in Effluent
94	Naphthalene	No criteria	<10	<10	No	No criteria
95	Nitrobenzene	1,900	<1.9	<1.9	No	All ND in Effluent
96	N-Nitrosodimethylamine	8.1	<0.15	<1.5	No	All ND in Effluent
97	N-Nitrosodi-n-Propylamine	1.4	<10	<10	No	All ND in Effluent
98	N-Nitrosodiphenylamine	16	<10	<10	No	All ND in Effluent
99	Phenanthrene	No criteria	<5.4	<5.4	No	No criteria
100	Pyrene	11,000	<1.9	<1.9	No	All ND in Effluent
101	1,2,4-Trichlorobenzene	No criteria	<1.9	<1.9	No	No criteria
102	Aldrin	0.00014	<0.004	<0.004	No	All ND in Effluent
103	Alpha-BHC	0.013	<0.003	<0.003	No	All ND in Effluent
104	Beta-BHC	0.046	<0.006	<0.006	No	All ND in Effluent
105	Gamma-BHC (Lindane)	0.063	<0.004	<0.004	No	All ND in Effluent
106	Delta-BHC	No criteria	<0.009	<0.009	No	No criteria
107	Chlordane	0.00059	<0.014	<0.014	No	All ND in Effluent
108	4,4'-DDT	0.00059	<4.7	<4.7	No	All ND in Effluent
109	4,4'-DDE	0.00059	<5.6	<5.6	No	All ND in Effluent
110	4,4'-DDD	0.00084	<2.8	<2.8	No	All ND in Effluent
111	Dieldrin	0.00014	<0.002	<.002	No	All ND in Effluent
112	Alpha-Endosulfan	No criteria	<0.014	<0.014	No	No criteria
113	Beta-Endosulfan	No criteria	<0.004	<0.014	No	No criteria

CTR No.	Constituent	Water Quality Criteria (C) µg/L	Max Effluent Conc. (MEC) µg/L	Max Receiving Water Conc.(B) µg/L	RPA Result - Need Limit?	Reason
114	Endosulfan Sulfate	240	<0.066	<0.066	No	All ND in Effluent
115	Endrin	0.0023	<0.006	<0.006	No	All ND in Effluent
116	Endrin Aldehyde	0.81	<0.023	<0.023	No	All ND in Effluent
117	Heptachlor	0.00021	<0.003	<0.003	No	All ND in Effluent
118	Heptachlor Epoxide	0.00011	<0.083	<0.083	No	All ND in Effluent
119	PCB 1016	0.00017	<0.39	<0.39	No	All ND in Effluent
120	PCB 1221	0.00017	<0.39	<0.65	No	All ND in Effluent
121	PCB 1232	0.00017	<0.39	<0.65	No	All ND in Effluent
122	PCB 1242	0.00017	<0.39	<0.65	No	All ND in Effluent
123	PCB 1248	0.00017	<0.39	<0.65	No	All ND in Effluent
124	PCB 1254	0.00017	<0.39	<0.65	No	All ND in Effluent
125	PCB 1260	0.00017	<0.39	<0.65	No	All ND in Effluent
126	Toxaphene	0.00075	<10	<10	No	All ND in Effluent

4. WQBEL Calculations

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

a. Calculation Options

Once the RPA has been conducted using either the Technical Support Document (TSD) or the SIP methodologies, WQBELs are calculated. Alternative procedures for calculating WQBELs include:

i. Use wasteload allocation (WLA) from applicable TMDL;

ii. Use a steady-state model to derive MDELs and AMELs; and,

iii. Where sufficient data exist, use a dynamic model which has been approved by the State Water Board.

b. WQBELs Calculations

WQBELs based on human health and aquatic life criterion were established for this Order. The process for developing these limits is in accordance with section 1.4 of the SIP. Attachments K, M and N summarize the development and calculation of all WQBELs for this Order using the process described below.

i. Lead: Tiers 1 and 2 of the SIP triggered reasonable potential for lead because the MEC exceeded the criteria (MEC > C), there was an exceedance of WQOs in the receiving water (B > C) and the pollutant is detected in the effluent. Therefore, final effluent limitations have been prescribed for lead.

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

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

where

C = the priority pollutant criterion/objective, adjusted if necessary for hardness, pH and translators. In this Order a hardness value of 400 mg/L (as $CaCO_3$) was used for development of hardness-dependent criteria.
D = the dilution credit
B = the ambient background concentration

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

For lead, the applicable saltwater quality criteria are:

ECA_{acute} = 220.82 µg/L
$ECA_{chronic}$ = 8.52 µg/L

No metal translator or water effects ratio were identified to modify the criterion.

(b) For each ECA based on aquatic life criterion/objective, determine the LTA by multiplying the ECA by a factor (multiplier). The multiplier is 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 percent of the samples in the data set are reported non-detect, the CV is set equal to 0.6.

(c) For lead, the following data was used to develop the acute and chronic LTA using Table 1 of the SIP: Because there are 11 samples, of which 10 are nondetect, the CV is equal to 0.6 and

$Multiplier_{acute}$ = 0.321

$Multiplier_{chronic}$ = 0.527

LTA_{acute} = 220.82 µg/L x 0.3211 = 70.9 µg/L
$LTA_{chronic}$ = 8.52 µg/L x 0.5274 = 4.483 µg/L

(d) Select the most limiting (lowest) of the LTA.

LTA = most limiting of LTA_{acute} or $LTA_{chronic}$
For lead, the most limiting LTA was the LTA_{acute}

LTA = 4.483 µg/L

(e) Calculate the WQBELs by multiplying the LTA by a factor (multiplier). WQBELs are expressed as AMELs and MDELs. The multiplier is 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 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 the 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 95th percentile occurrence probability, and the MDEL multipliers are based on the 99th percentile occurrence probability. If the number of samples is less than 4, the default number of samples to be used is 4.

For lead, the following data was used to develop the AMEL and MDEL for aquatic life using table 2 of the SIP. The number of samples is 11 and the CV is 0.6.

$Multiplier_{MDEL} = 3.1145$
$Multiplier_{AMEL} = 1.5524$

$AMEL_{aquatic\ life} = 4.483 \times 1.55 = 6.96$ µg/L
$MDEL_{aquatic\ life} = 4.49 \times 3.11 = 13.96$ µg/L

(f) For the ECA based on human health, set the AMEL equal to the $ECA_{human\ health}$. An $AMEL_{human\ health}$ for lead has not been established, so the discharge limits are based on potential impacts to aquatic life.

(g) Select the lower of the AMEL and MDEL based on aquatic life and human health water quality based effluent limit for this Order.

Table F-14 Lead WQBEL

Constituent	$AMEL_{aquatic\ life}$ (mg/L) (95% probability)	$MDEL_{aquatic\ life}$ (mg/L) (99% probability)	$AMEL_{human\ health}$ (mg/L) (95% probability)	$MDEL_{human\ health}$ (mg/L) (99% probability)
Lead	7.0	14	No criteria	No criteria

ii. Copper: Tiers 1 of the SIP triggered reasonable potential for copper because the MEC exceeded the criteria (MEC > C) and the pollutant is detected in the effluent..

The salt water continuous critical concentration (CCC) from the SIP , as total recoverable copper, is 3.7349 µg/L and the most restrictive SIP criterion. Applying the metal translator of .86 from the Entrix study of June 27, 2002, the

CCC is 4.3430 µg/L, as described in Attachment N part 2. The WER applied for copper was 2.08, based on Order R4-2008-0011, which amended the 2008 NPDES permit. The resulting CCC criteria is 9.0333 µg/L. This value is used with a coefficient of variation of .79 and the maximum effluent concentration of 8.88 mg/L in the calculation of the limits in Attachment N part 3.

iii. Nickel: Tier 1 and Tier 2 of the SIP RPA procedures were triggered for nickel because the MEC exceeded the criteria (MEC > C), there was an exceedance of WQOs in the receiving water (B > C) and the pollutant is detected in the effluent. A metal translator of .81, based on the Entrix study of June 27, 2002, was applied to calculate the final effluent limitations for nickel.

iv. Selenium: Tier 1 and Tier 2 of the SIP RPA procedures were triggered for selenium because the MEC exceeded the criteria (MEC > C), there was an exceedance of WQOs in the receiving water (B > C) and the pollutant is detected in the effluent. When the freshwater quality objective of 5 mg/L, the most restrictive WQO was considered, a final effluent limitations could be established.

c. Impracticability Analysis

Federal NPDES regulations contained in 40 CFR part 122.45 continuous dischargers, states that all permit limitations, standards, and prohibitions, including those to achieve water quality standards, shall unless impracticable be stated as maximum daily and average monthly discharge limitations for all dischargers other than POTWs.

As stated by USEPA in its long standing guidance for developing WQBELs, average limitations, alone, are not practical for limiting acute, chronic, and human health toxic effects.

For example, a POTW sampling for a toxicant to evaluate compliance with a 7-day average limitation could fully comply with this average limit, but still be discharging toxic effluent on one, two, three, or up to four of these seven days and not be meeting 1-hour average acute criteria or 4-day average chronic criteria. For these reason, USEPA recommends daily maximum and 30-day average limits for regulating toxics in all NPDES discharges. For the purposes of protecting the acute effects of discharges containing toxicants (CTR human health for the ingestion of fish), daily maximum limitations have been established in this NPDES permit for mercury because it is considered to be a carcinogen, endocrine disruptor, and is bioaccumulative.

A 7-day average alone would not protect one, two, three, or four days of discharging pollutants in excess of the acute and chronic criteria. Fish exposed to these endocrine disrupting chemicals will be passed on to the human consumer. Endocrine disrupters alter hormonal functions by several means. These substances can:

i. Mimic or partly mimic the sex steroid hormones estrogens and androgens (the male sex hormone) by binding to hormone receptors or influencing cell signaling pathways.

ii. Block, prevent and alter hormonal binding to hormone receptors or influencing cell signaling pathways.

iii. Alter production and breakdown of natural hormones.

iv. Modify the making and function of hormone receptors.

d. Mass-based limits

40 CFR part 122.45(f)(1) requires that, except under certain conditions, all NPDES permit limits, standards, or prohibitions be expressed in terms of mass units. 40 CFR part 122.45(f)(2) allows the permit writer, at his/her discretion, to express limits in additional units (e.g., concentration units). The regulations mandate that, where limits are expressed in more than one unit, the permittee must comply with both.

Generally, mass-based limits ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limits. Concentration-based effluent limits, on the other hand, discourage the reduction in treatment efficiency during low-flow periods and require proper operation of the treatment units at all times. In the absence of concentration-based effluent limits, a permittee would be able to increase the effluent concentration (i.e., reduce its level of treatment) during low-flow periods and still meet its mass-based limits. To account for this, this Order includes mass and concentration limits for some constituents.

The Facility design flow is 14 mgd. Because the Regional Water Board capped the flow at 9 mgd in the 2008 Order, the flow of 9 mgd is used to calculate mass based limits in this Order.

e. Final WQBELs

Summaries of the WQBELs required by this Order are described below.

Table F-15. Summary of WQBEL

Constituent	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
Summer Total Ammonia (May – October)	mg/L	1.07	1.17
	lbs/day	80	88
Winter Total Ammonia (November to April)	mg/L	1.3	1.4
	lbs/day	98	105
Nitrite + Nitrate as Nitrogen	mg/L	10	--
	lbs/day	750	--
Nitrite as Nitrogen	mg/L	1	--
	lbs/day	75	--
Nitrate as Nitrogen	mg/L	10	--
	lbs/day	750	--
Copper	µg/L	6.1	14
	lbs/day	.45	1.1
Selenium	µg/L	2.9	8.2
	lbs/day	.22	.62
Lead	µg/L	7.0	14
	lbs/day	0.52	1.1
Nickel	µg/L	7.2	18.8
	lbs/day	.54	1.4

5. Whole Effluent Toxicity (WET)

Because of the nature of industrial and domestic discharges into the POTW sewershed, it is possible that other toxic constituents could be present in the Facility's effluent, or could have synergistic or additive effects. Also, because numeric limits for certain toxic constituents that did not show reasonable potential have been removed, the acute toxicity limit may provide a backstop to preventing the discharge of toxic pollutants in toxic amounts. As such, the permit contains effluent limitations for toxicity.

The toxicity numeric effluent limitations are based on:

a. 40 CFR part 122.44(d)(v) – limits on WET are necessary when chemical-specific limits are not sufficient to attain and maintain applicable numeric or narrative water quality standards;

b. 40 CFR part 122.44(d)(vi)(A) – where a state has not developed a water quality criterion for a specific pollutant that is present in the effluent and has reasonable potential, the permitting authority can establish effluent limits using numeric water quality criterion;

c. Basin Plan objectives and implementation provisions for toxicity;

d. USEPA Regions 9 & 10 Guidance for Implementing WET Programs, May 31, 1996;

e. Whole Effluent Toxicity (WET) Control Policy, July 1994; and,

f. Technical Support Document (TSD) (several chapters and Appendix B).

The circumstances warranting a numeric chronic toxicity effluent limitation when there is reasonable potential were under review by the State Water Board in SWRCB/OCC Files A-1496 & A-1496(a) [Los Coyotes/Long Beach Petitions]. On September 16, 2003, at a public hearing, the State Water Board adopted Order No. 2003-0012, deferring the issue of numeric chronic toxicity effluent limitations until a subsequent Phase of the SIP is adopted. In the meantime, the State Water Board replaced the numeric chronic toxicity limit with a narrative effluent limitation and a 1 TUc trigger, in the Long Beach and Los Coyotes WRP NPDES permits. This permit contains a similar narrative chronic toxicity effluent limitation, with a numeric trigger for accelerated monitoring. Phase 2 of the SIP has been adopted; however, the toxicity control provisions were not revised.

On January 17, 2006, the State Water Board Division of Water Quality held a CEQA scoping meeting to seek input on the scope and content of the environmental information that should be considered in the planned revisions of the SI). However, the Toxicity Control Provisions of the SIP continue unchanged.

This Order contains a reopener to allow the Regional Water Board to modify the permit, if necessary, consistent with any new policy, law, or regulation. Until such time, this Order will have toxicity limitations that are consistent with the State Water Board's precedential decision.

g. Acute Toxicity Limitation:

The Dischargers shall test for acute toxicity by using USEPA's *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, October 2002 (EPA-821-R-02-012). Acute toxicity provisions are derived from the Basin Plan's toxicity standards (Basin Plan 3-16 and 3-17). The

provisions require the Discharger to accelerate acute toxicity monitoring and take further actions to identify the source of toxicity and to reduce acute toxicity.

h. Chronic Toxicity Limitation and Requirements:

Chronic toxicity provisions are derived from the Basin Plan's toxicity standards (Basin Plan 3-16 and 3-17). The provisions require the Discharger to accelerate chronic toxicity monitoring and take further actions to identify the source of toxicity and to reduce chronic toxicity. The monthly median trigger of 1.0 TU_c for chronic toxicity is based on *USEPA Regions 9 & 10 Guidance for Implementing Whole Effluent Toxicity (WET) Programs,* Final May 31, 1996 (chapter 2 – Developing WET Permitting Conditions, page 2-8). In cases where effluent receives no dilution or where mixing zones are not allowed, the 1.0 TU_c chronic criterion should be expressed as a monthly median. The "median" is defined as the middle value in a distribution, above which and below which lays an equal number of values. For example, if the results of the WET testing for a month were 1.5, 1.0, and 1.0 TU_c, the median would be 1.0 TU_c.

The *USEPA Regions 9 & 10 Guidance for Implementing Whole Effluent Toxicity (WET) Programs,* Final May 31, 1996 (chapter 2 – Developing WET Permitting Conditions, page 2-8) recommends two alternatives for setting up maximum daily limit: using 2.0 TU_c as the maximum daily limit; or using a statistical approach outlined in the Technical Guidance Document to develop a MDEL. In this Order, neither a MDEL nor a trigger for chronic toxicity is prescribed.

D. Final Effluent Limitation Considerations

1. Anti-Backsliding Requirements

CWA section 402(o) contains a general provision that prohibits a renewed permit from containing effluent limitations that are less stringent than the comparable effluent limitations in the previous permit, with certain exceptions. Except as discussed further below, the effluent limitations in this Order are at least as stringent as the effluent limitations in the previous permit, Order No. R4-2008-0208.CFRCWA section 402(o)(2)(B)(i) allows a permit to contain less stringent effluent limitations where "information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance".

CWA section 402(o)(2)(E) allows a permit to contain less stringent effluent limitations where "the permittee has installed the treatment facilities required to meet the effluent limitations in the previous permit and has properly operated and maintained the facilities but has nevertheless been unable to achieve the previous effluent limitations, in which case the limitations in the [renewed] permit may reflect the level of pollutant control actually achieved (but shall not be less stringent than required by effluent guidelines in effect at the time of permit renewal, reissuance, or medication)."

In this Order, effluent limitations for mercury, silver and zinc have been removed because analysis of new information indicates that the pollutants are not being discharged at concentrations that have the reasonable potential to cause or contribute to exceedances of water quality standards.

The removal of effluent limitations for these constituents is consistent with the anti-backsliding requirements of CWA section 402(o)(2)(B)(i) because new information indicates that no effluent limitations are required. In this Order the new MDELs and AMELs for copper are less stringent than those in the previous Order. The effluent limitations for copper in the previous permit were based on a May 2005 WER Study and

applied a WER of 1.58 for dissolved copper. Since adoption of the previous permit, the discharger completed a new WER study, submitted in February 2010. The effluent limitations for copper in this Order were derived using the calculation in the SIP and application of the 2010 WER Study, which relies on the geometric mean of mean WERs. The calculated values are 2.05 and 2.73 for dissolved and total copper, respectively. Staff review of this information concluded that the total copper WER, for the most critical conditions in the winter when the berm was open, should be used to calculate the WER. As a result, Order R4-2008-0208, was amended to the 2008 Order to establish a WER of 2.08, the value used here.

The new effluent limitations for copper are consistent with the anti-backsliding requirements of CWA section 402(o)(2)(B)(i) because the new effluent limitations were derived based on an evaluation of new information not available at the time of adoption of the previous permit.

In this Order, the new AMELs and MDELs for ammonia are less stringent than the effluent limitations for ammonia contained in the previous permit . Since adoption of the previous permit, the Discharger has installed treatment facilities to meet the effluent limitations of the previous permit and has properly operated and maintained the facilities, but has not been able to achieve the effluent limitations. In addition, USEPA has updated guidance regarding implementation of its 1999 ammonia criteria. The Basin Plan also provides direction on application of WQOs for ammonia and reads "*identify the WQOs for ammonia for the receiving water immediately downstream of the discharge.*[12]" Receiving water stations R-001, R-002, R-003, R-004 and R-005 are located at the margins of the Estuary. Receiving water station R-004 is located immediately downstream of the discharge. The ammonia effluent limitations in the previous permit were based on the most restrictive conditions at receiving water station R-001 (rather than on R-004) the 2004 ammonia saltwater Basin Plan Amendment, the USEPA's updated 1999 ammonia criteria, ammonia data, and the 2000 CTR. The new effluent limitations for ammonia are calculated using receiving water conditions at R-004, the point closest to the outfall as required by the Basin Plan, on Estuary studies completed between 2008 and 2013, and on the performance of the treatment facilities, and taking into account USEPA's updated 1999 ammonia criteria. Calculating the effluent limitations based only on the receiving water conditions at R-004 and on USEPA's updated ammonia criteria would result in significantly less stringent effluent limitations than contained in the previous permit. The new effluent limitations are, therefore, more stringent than the calculated limitations and are based on the performance of the facilities, but are less stringent than the previous permit This relaxation of effluent limitations is consistent with the anti-backsliding requirements of CWA sections 402(o)(2)(B)(i) and 402(o)(2)(E) because (1) the new effluent limitations were derived based on an evaluation of new information not available at the time of adoption of the previous permit, in particular new Estuary studies, (2) the discharger has installed and is properly operating and maintaining treatment facilities since adoption of the previous permit, (3) the discharger has not been able to achieve the limitations in the previous permit, and (4) the new effluent limitations at least reflect the level of pollutant control actually achieved (i.e., the performance based levels). In addition, the new effluent limitations will not result in degradation of the receiving water because they are derived based on criteria sufficient to be protective of the beneficial uses of the receiving waters and will not cause degradation as compared to the previous permit. These effluent limitations will be reconsidered and the permit may be reopened to address new information gathered regarding the Estuary.

[12] Basin Plan amendment for Inland Surface Water Ammonia Objectives for Saltwater March 4, 2004.

2. Antidegradation Policies

The Regional Water Board is required under CWA section 301(b)(1)(C) and its implementing regulations (40 CFR part 122.4(a); 40 CFR part 122.4(d); 40 CFR part 122.44(d)) to establish conditions in NPDES permits that ensure compliance with state water quality standards, including antidegradation requirements. The federal antidegradation policy (40 CFR part 131.12(a)(1)) requires that "*existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.*" As defined in 40 CFR part 131.3(e), *"[e]xisting uses are those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards*" (emphasis added).

40 CFR part 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both state and federal antidegradation policies.

The effluent limit for copper is higher in this permit than in the previous permit. The process for developing the limit was consistent with the previous permit, but the effluent data used to calculate the limit was updated. Because plant performance with respect to metals has not changed, the level of copper in effluent is not expected to increase. The effluent limits for ammonia are also higher in this permit than in the previous permit. However, the limits in this permit are performance-based and were calculated consistently with the interim effluent limits for ammonia contained in the TSOs issued between 2008 and 2013 (see Fact Sheet Section II.D.1). This permit requires consistent performance by the facility and does not allow degradation of the waterbody.

3. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The TBELs consist of restrictions on BOD, TSS, pH, and percent removal of BOD and TSS. Restrictions on BOD, TSS, and pH are discussed in section IV.B. of this Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

Water quality-based effluent limitations have been 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 pollutants WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR section 131.38. The procedures for calculating the individual water quality-based effluent limitations for priority pollutants are based on the CTR implemented by the SIP, which was approved by USEPA on May 18, 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA"

pursuant to 40 CFR section 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

Table F-16. Summary of Final Effluent Limitations for Discharge Point 001

Parameter	Units	Effluent Limitations					Basis
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
$BOD_5 20°C$	mg/L	20	30	45	--	--	Existing
	lbs/day	2,340	3,500	5,260	--	--	
TSS	mg/L	15	40	45	--	--	Existing
	lbs/day	1,750	4,670	5,250	--	--	
pH	pH unit	--	--	--	6.5	8.5	Existing
Oil and Grease	mg/L	10	--	15	--	--	Existing
	lbs/day	750	--	1,100	--	--	
Settleable Solids	ml/L	0.1	--	0.3	--	--	Existing
Total Residual Chlorine	mg/L	0.1	--	--	--	--	Existing
	lbs/day	7.5	--	--	--	--	
MBAS	mg/L	0.5	--	--	--	--	Basin Plan, BPJ
	lbs/day	38	--	--	--	--	
Summer Total Ammonia	mg/L	1.07		1.17	--	--	Performance
	lbs/day	80		88	--	--	
Winter Total Ammonia	mg/L	1.3		1.4	--	--	Performance, Basin Plan
	lbs/day	98		105	--	--	
Nitrate + Nitrite as Nitrogen[13]	mg/L	10	--	--	--	--	Basin Plan
	lbs/day	750	--	--	--	--	
Nitrite as Nitrogen	mg/L	10	--	--	--	--	Basin Plan, BPJ
	lbs/day	750	--	--	--	--	
Nitrate as Nitrogen	mg/L	10	--	--	--	--	Basin Plan
	lbs/day	750	--	--	--	--	
Copper	µg/L	6.1	--	14	--	--	CTR, SIP, WER, Metal Translator
	lbs/day	.46	--	1.1	--	--	
Selenium	µg/L	2.9	--	8.2	--	--	CTR, SIP
	lbs/day	.22	--	.62	--	--	

[13] This effluent limitation in concentration shall not apply when the concentration limitation for nitrate as nitrogen or nitrite as nitrogen is exceeded. This effluent limitation in mass load shall not apply when the mass load limitation for nitrate as nitrogen or nitrite as nitrogen is exceeded

Parameter	Units	Effluent Limitations					Basis
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Lead	µg/L	7.0	--	14	--	--	CTR, SIP
	lbs/day	0.52	--	1.1	--	--	
Nickel	µg/L	7.2	--	18.8	--	--	CTR, SIP. Metal Translator
	lbs/day	.54	--	1.4	--	--	

E. Recycling Specifications

The reuse of the reclaimed water is regulated under a separate WDRs and Water Recycling Requirements (WRRs) for the City of Ventura, Order No. 87-45, CI No. 6190. The Discharger is in the process of planning an expansion of the recycled water system. Once the plans are completed and the California Department of Public Health has approved the expansion, the WDR/WRR will be renewed.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

The Basin Plan contains numeric and narrative WQOs applicable to all surface waters within the Los Angeles Region. WQOs include an objective to maintain the high quality waters pursuant to 40 CFR part 131.12 and State Water Board Resolution No. 68-16. Receiving water limitations in this Order are included to ensure protection of beneficial uses of the receiving water.

B. Groundwater

The fresh groundwater beneath the Facility is in the Oxnard Plain Groundwater Basin. Groundwater infiltration and exfiltration has been documented at the Facility. The wildlife ponds do not have lined bottoms, and a loss of about 1 mgd is known to occur at the ponds, either through evaporation or seepage into the groundwater.

The loss of treated effluent from the ponds into the underlying groundwater is evidence of a hydraulic connection between the surface water and the groundwater. The water table, and hence, the location of the saline/freshwater interface, is known to vary between closed-flooded estuary conditions and open-breaching estuary conditions. The boundary between the groundwater basin (fresh) and the ocean (saline) is not a fixed point. Even though groundwater limits are not included in this Order, impacts on groundwater are prohibited.

VI. RATIONALE FOR PROVISIONS

A. Standard Provisions

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

Sections 122.41(a)(1) and (b) through (n) of 40 CFR 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 CFR allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR section 123.25, this Order omits federal conditions that address enforcement authority specified in 40

CFR 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 CWC section 13387(e).

B. Special Provisions

1. Reopener Provisions

This provision is based on 40 CFR part 123. The Regional Water Board may reopen the NPDES permit to modify permit conditions and requirements. Causes for modifications include the promulgation of new regulations, modification in sludge use or disposal practices, or adoption of new regulations by the State Water Board or Regional Water Board, including revisions to the Basin Plan.

2. Special Studies and Additional Monitoring Requirements

a. Phase 3 Estuary Studies

The Discharger shall perform additional estuary studies to provide sufficient information to allow the Regional Water Board to determine whether or not the continued discharge of effluent enhances the Estuary. The study will clarify the City's water budget analysis for the Santa Clara River Estuary, to determine whether any effluent discharge is needed to sustain the Estuary's native species, and if so how much.

i. Nutrient, Dissolved Oxygen and Toxicity Special Study - The Discharger must perform a special study to identify the cause of nutrient, dissolved oxygen and toxicity impairments in the Estuary. If it is determined that the effluent from the Facility is causing the impairments, the Facility must propose a plan for reducing nutrient loading, including ammonia, nitrogen and phosphorus loading and toxicity impairments.

ii. Groundwater Special Study – the discharger must perform a special study to document the interaction between the estuary, discharge and groundwater and determine if the beneficial use of MUN applies to the water impacted by the discharge.

iii. The work plans for the Phase 3 Estuary, Nutrient, Dissolved Oxygen and Toxicity and Groundwater special studies shall be submitted 180 days following permit adoption for approval by the Executive Officer. The scope of the work of the Phase 3 Estuary study must be sufficient to support a staff finding concerning enhancement of the estuary in conformance with the Enclosed Bays and Estuary Policy.

iv. The Phase 3 Estuary Special Studies must be completed with final reports submitted no later than January 1, 2018. The Nutrient, Dissolved Oxygen and Toxicity, and Groundwater Special Studies must be completed with final reports submitted no later 180 days before the expiration of this order.

b. CECs Special Study

Advancements in analytical technology over the last decade have dramatically increased the number of chemicals that can be detected and greatly decreased the concentrations at which chemicals can be detected. This new ability to detect trace levels of chemical concentrations has expanded the understanding of the kinds of contaminants present in the water and wastewater. Many man-made chemicals, particularly pesticides, pharmaceuticals and personal care products, have been found in waters across the United States.

Collectively, these compounds are referred to as Emerging Constituents (ECs) or CECs because their presence is starting to be revealed by rapid advances in analytical technology. Despite recent improvements in analytical science, the extent of contamination by CEC's in the environment and a lack of experience in CEC measurement makes interpretation of CEC data difficult. For these reasons, CECs are unregulated chemicals, for which no water quality standards have been established.

Recent publications and media reports on CECs have increased public awareness of the issue, providing an impetus for CEC investigations around the country, including local efforts by the City of Los Angeles and Southern California Coastal Water Research Project (SCCWRP). For instance, starting 2005, the City of Los Angeles has been conducting a special study as part of the Order No. 2005-0020, whose results suggest that the presence of natural and synthetic estrogen hormones has caused feminization of male fish (hornyhead turbot) in Santa Monica Bay, especially near the Hyperion Treatment Plant outfall. In January 2010, SCCWRP convened a workshop where 50 scientists, water quality managers, and stakeholders discussed and collaborated on developing an effective CEC monitoring and management strategy that is protective of water quality. Outcomes of this workshop include recommended lists of CECs for monitoring in recycled water (for groundwater concerns) and for monitoring in ambient waters, including ocean waters. The final report of Monitoring Strategies for CECs in Recycled Water was published on June 25, 2010.

The Discharger shall initiate an investigation of CECs in the Discharger's effluent by conducting a special study. Specifically, within 90 days of the effective date of this Order, the Discharger shall develop a CEC Special Study Work Plan and submit for approval by the Executive Officer of this Regional Water Board. Immediately upon approval of the work plan, the Discharger shall fully implement the special study.

c. Toxicity Reduction Requirements

If the discharge consistently exceeds an effluent limitation for toxicity, the Discharger needs to conduct Toxicity Identification Evaluation(TIE)/Toxicity Reduction Evaluation (TRE) detailed in section V of the MRP. The TRE will help the Discharger identify the possible source(s) of toxicity. Once the source(s) of toxicity is identified, the Discharger shall take all reasonable steps to reduce toxicity to the required level.

d. Treatment Plant Capacity

The treatment plant capacity study required by this Order shall serve as an indicator for the Regional Water Board regarding Facility's increasing hydraulic capacity and growth in the service area.

3. Best Management Practices and Pollution Prevention

a. Storm Water Pollution Prevention Plan (SWPPP)

CWA section 402(p), as amended by the Water Quality Act of 1987, requires NPDES permits for storm water discharges. Pursuant to this requirement, in 1990, USEPA promulgated 40 CFR part 122.26 that established requirements for storm water discharges under an NPDES permit. To facilitate compliance with federal regulations, on November 1991, the State Board issued a statewide general permit, *General NPDES Permit No. CAS000001 and Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities.* This permit was amended in September 1992 and reissued on April 17, 1997 as State Board Order

No. 97-03-DWQ. The Facility is covered under this general permit and an updated SWPPP is required.

b. Spill Contingency Plan (SCCP)

Since spill or overflow is a common event in the treatment plant service areas, this Order requires the Discharger to review and update, if necessary, SCCP after each incident. The Discharger shall ensure that the up-to-date SCCP is readily available to the sewage system personnel at all times and that the sewage personnel are familiar with it.

c. Pollutant Minimization Program (PMP)

This provision is based on the requirements of section 2.4.5 of the SIP.

4. Construction, Operation, and Maintenance Specifications

This provision is based on the requirements of 40 CFR part 122.41(e) and the previous Order.

5. Special Provisions for Municipal Facilities (POTWs Only)

a. **Biosolids Requirements.** To implement CWA section 405(d), on February 19, 1993, USEPA promulgated 40 CFR part 503 to regulate the use and disposal of municipal sewage sludge. This regulation was amended on September 3, 1999. The regulation requires that producers of sewage sludge meet certain reporting, handling, and disposal requirements. It is the responsibility of the Discharger to comply with said regulations that are enforceable by USEPA, because California has not been delegated the authority to implement this program. The Discharger is also responsible for compliance with WDRs and NPDES permits for the generation, transport and application of biosolids issued by the State Water Board, other Regional Water Boards, the Arizona Department of Environmental Quality or USEPA, to whose jurisdiction the Facility's biosolids will be transported and applied.

b. **Pretreatment Requirements.** This Order contains pretreatment requirements consistent with applicable effluent limitations, national standards of performance, and toxic and performance effluent standards established pursuant to sections 208(b), 301, 302, 303(d), 304, 306, 307, 403, 404, 405, and 501 of the CWA, and amendments thereto. This Order contains requirements for the implementation of an effective pretreatment program pursuant to section 307 of the CWA; 40 CFR parts 35 and 403; and/or section 2233, title 23 of the CCR.

Applications for renewal or modification of this Order must contain information about industrial discharges to the POTW pursuant to 40 CFR 122.21(j)(6). Pursuant to 40 CFR 122.42(b) and Provision VII.A of Attachment D, Standard Provisions, of this Order, the Discharger shall provide adequate notice of any new introduction of pollutants or substantial change in the volume or character of pollutants from industrial discharges which were not included in the permit application." and "Pursuant to 40 CFR 122.44(j)(1), the Discharger shall annually identify and report, in terms of character and volume of pollutants, any Significant Industrial Users discharging to the POTW subject to Pretreatment Standards under section 307(b) of the CWA and 40 CFR 403.

c. **Spill Reporting Requirements.** This Order established a reporting protocol for how different types of spills, overflow or bypasses of raw or partially treated sewage from its collection system or treatment plant covered by this Order shall be reported to regulatory agencies.

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 SSOs. 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.

VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 308(a) of the CWA and sections 122.41(h), (j)-(l), 122,44(i), and 122.48 of 40 CFR require that all NPDES permits specify monitoring and reporting requirements. CWC sections 13267 and 13383 also authorize the Regional Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The MRP, Attachment E of this Order, establishes monitoring, reporting, and recordkeeping 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

Influent monitoring is required to determine compliance with permit conditions, assess treatment plant performance, and assess effectiveness of the Pretreatment Program.

Influent monitoring in this Order follows the influent monitoring requirements in the previous Order with minor modification. The monitoring frequencies for selenium, lead and nickel have been increased to monthly.

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 MRP (Attachment E). This provision requires compliance with the MRP, and is based on 40 CFR parts 122.44(i), 122.62, 122.63, and 124.5. The MRP is a standard requirement in almost all NPDES permits (including this Order) issued by the Regional Water Board. In addition to containing definition of terms, it specifies general sampling/analytical protocols and the requirements of reporting spills, violation, and routine monitoring data in accordance with NPDES regulations, the CWC, and Regional Water Board policies. The MRP also contains sampling program specific for the Discharger's wastewater treatment plant. 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 will be required as shown on the MRP and as required in the SIP.

Table F-17 compares the effluent monitoring frequency of the previous Order and this Order. On May 19, 2010, Regional Water Board staff wrote a memo to the Board members regarding the determination of POTW's effluent monitoring frequency for priority pollutants, pesticides, and radioactive pollutants. Regional Water Board staff used a matrix of criteria, based on BPJ, to set the effluent and receiving monitoring frequencies. The monitoring frequencies for these pollutants, which vary from monthly, to quarterly, to semiannually, are generally set based on the following three criteria:

1. Criterion 1: Monitoring frequency will be monthly, for those pollutants with reasonable potential to exceed or contribute to exceedances of WQOs (i.e. monitoring has shown exceedances of the objectives, etc.);
2. Criterion 2: Monitoring frequency will be quarterly, for those pollutants in which some or all of the historic effluent monitoring data detected the pollutants, but without reasonable potential to exceed or contribute to exceedances of WQOs; or,

3. Criterion 3: Monitoring frequency will be semiannually, for those pollutants in which all of the historic effluent monitoring data have had non-detected concentrations of the pollutants and without current reasonable potential to exceed or contribute to exceedances of WQOs.

Table F-17. Effluent Monitoring Program Comparison Table

Parameter	Monitoring Frequency (Order No. R4-2008-0011)	Monitoring Frequency (Order No. R4-2013-0174)	Change of Monitoring Frequency
Total residual chlorine	Continuous	Continuous	No
Total residual chlorine	5 days/week	5 days/week	No
Total waste flow	Continuous	Continuous	No
Turbidity	Continuous	Continuous	No
Total and fecal coliform	Daily	Daily	No
Settleable solids	Daily	Daily	No
$BOD_5 20°C$	Daily	Daily	No
TSS	Daily	Daily	No
Dissolved oxygen	Daily	Daily	No
Temperature	Weekly	Weekly	No
pH	Weekly	Weekly	No
Oil and grease	Weekly	Weekly	No
TDS	Monthly	Monthly	No
Fluoride	Monthly	Monthly	No
Phosphate as P	Monthly	Monthly	No
Phosphorous	Monthly	Monthly	No
Total Ammonia	Monthly	Monthly	No
Nitrate nitrogen	Monthly	Monthly	No
Nitrite nitrogen	Monthly	Monthly	No
Organic nitrogen	Monthly	Monthly	No
Total Kjeldahl nitrogen	Monthly	Monthly	No
Detergents (as MBAS)	Monthly	Monthly	No
Chlorophyll *a*	Monthly	Monthly	No
Cyanide	Monthly	Semiannually	Decrease
Chronic toxicity	Monthly	Monthly	No
Acute toxicity	Annually	Annually	No
Aluminum	Semiannually	Semiannually	No
Antimony	Semiannually	Semiannually	No
Arsenic	Semiannually	Semiannually	No
Barium	Semiannually	Semiannually	No
Beryllium	Semiannually	Semiannually	No
Cadmium	Semiannually	Semiannually	No
Chromium VI	Semiannually	Semiannually	No
Cobalt	Semiannually	Semiannually	No
Copper	Monthly	Monthly	No

Parameter	Monitoring Frequency (Order No. R4-2008-0011)	Monitoring Frequency (Order No. R4-2013-0174)	Change of Monitoring Frequency
Iron	Semiannually	Semiannually	No
Lead	Semiannually	Monthly	Increase
Mercury	Monthly	Semiannually	Decrease
Molybdenum	Semiannually	Semiannually	No
Nickel	Semiannually	Monthly	Increase
Selenium	Semiannually	Monthly	Increase
Silver	Monthly	Semiannually	Decrease
Thallium	Semiannually	Semiannually	No
Vanadium	Semiannually	Semiannually	No
Zinc	Monthly	Quarterly	Decrease
Chlorodibromomethane	Monthly	Semiannually	Decrease
Dichlorobromomethane	Monthly	Semiannually	Decrease
Bis(2-ethylhexyl)phthalate	Monthly	Semiannually	Decrease
Acetone	Semiannually	Semiannually	No
Total xylene	Semiannually	Semiannually	No
Toulene	Semiannually	Semiannually	No
Chloroform	Semiannually	Semiannually	No
Bromoform	Semiannually	Semiannually	No
Remaining priority pollutants (excluding asbestos)	Semiannually	Semiannually	No
Pesticides	Semiannually	Semiannually	No
Radioactivity (Including gross alpha, gross beta, combined radium-226 and radium-228, tritium, strontium-90 and uranium)	Semiannually	Semiannually	No
CECs	Biannually	Annually for 2 years	Increase

The reduction of monitoring frequencies for priority pollutants listed in the above table is based on the fact that previous monitoring data for these pollutants indicate that the discharge did not demonstrate reasonable potential to exceed water quality standards.

However, monitoring frequency for priority pollutants with reasonable potential to exceed the WQOs is increased or maintained.

C. Whole Effluent Toxicity Testing Requirements

As discussed on page F-45, WET testing protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth.

This requirement establishes conditions and protocol by which compliance with the Basin Plan narrative WQO for toxicity will be demonstrated and in accordance with section 4.0 of

the SIP. Conditions include required monitoring and evaluation of the effluent for acute and chronic toxicity and numerical values for chronic toxicity evaluation to be used as "triggers" for initiating accelerated monitoring and toxicity reduction evaluation(s).

D. Receiving Water Monitoring

1. Surface Water

Receiving water monitoring is required to determine compliance with receiving water limitations and to characterize the water quality of the receiving water. Requirements are based on the Basin Plan. The receiving water monitoring program in this Order includes the following modifications to the existing receiving water monitoring program:

a. Monitoring for priority pollutants and chronic toxicity is required at station R-004, R-003 and R-005.

b. The reduction of monitoring frequencies for priority pollutants listed in table F-18 is based on the fact that previous effluent monitoring data for these pollutants indicate that the discharge did not demonstrate reasonable potential to exceed or contribute to exceedances of water quality standards. However, monitoring frequency for priority pollutants and chronic toxicity with reasonable potential to exceed or contribute to exceedances of the WQOs has been increased.

Table F-18. Receiving Water Monitoring Program Comparison Table

Parameter	Monitoring Frequency (2008 Order)	Monitoring Frequency (2013 Order)
Lead	Semiannually	Monthly
Nickel	Semiannually	Monthly
Copper	Monthly	Monthly
Mercury	Monthly	Semiannually
Silver	Monthly	Quarterly
Zinc	Monthly	Quarterly
Cyanide	Monthly	Semiannually
Selenium	--	Monthly
Bromoform	Monthly	Semiannually
Chlorodibromomethane	Monthly	Semiannually
Chloroform	Monthly	Semiannually
Dichlorobromomethane	Monthly	Semiannually
Bis(2-ethylhexyl)phthalate	Monthly	Semiannually
Remaining priority pollutants (excluding asbestos)	Semiannually	Semiannually
Chronic toxicity	Quarterly	Quarterly

2. Groundwater

None required at this time.

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, as described in Attachment I.

VIII. PUBLIC PARTICIPATION

The Regional Water Board considered the issuance of WDRs that will serve as an NPDES permit for the Ventura Water Reclamation Facility. As a step in the WDR adoption process, the Regional Water Board staff developed tentative WDRs and encouraged public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided them with an opportunity to submit their written comments and recommendations. Notification was provided by posting a notice in a local newspaper and by posting a notice at the Facility in Ventura, California.

The public had access to the agenda and any changes in dates and locations through the Regional Water Board's website: www.waterboards.ca.gov/losangeles. The public was provided access to the agenda including any changes in dates and locations.

B. Written Comments

Interested persons were invited to submit written comments concerning tentative WDRs as provided through the notification process. Comments were due either in person or by mail to the Executive Office at the Regional Water Board at 320 West Fourth Street Suite 200 Los Angeles California, 90013-2343.

To be fully responded to by staff and considered by the Regional Water Board, the written comments were due at the Regional Water Board office by 12:00 pm (noon) on October 7, 2013. Comments or evidence submitted after that date may not be included in the record for this matter.

C. Public Hearing

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

Date: November 7, 2013

Time: 9:00 a.m.

Location: City of Simi Valley, Council Chambers
2929 Tapo Canyon Road
Simi Valley, California

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

D. Reconsideration of Waste Discharge Requirements

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

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 the Regional Water Board by calling (213) 576-6600.

F. Register of Interested Persons

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

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Elizabeth Erickson at (213) 576 6665.

ATTACHMENT G – GENERIC TOXICITY REDUCTION EVALUATION (TRE) WORKPLAN (POTW)

1. **Information and Data Acquisition**
   a. **Operations and performance review**
      i. NPDES permit requirements
         (1) Effluent limitations
         (2) Special conditions
         (3) Monitoring data and compliance history
      ii. POTW design criteria
         (1) Hydraulic loading capacities
         (2) Pollutant loading capacities
         (3) Biodegradation kinetics calculations/assumptions
      iii. Influent and effluent conventional pollutant data
         (1) Biochemical oxygen demand (BOD_5)
         (2) Chemical oxygen demand (COD)
         (3) Suspended solids (SS)
         (4) Ammonia
         (5) Residual chlorine
         (6) pH
      iv. Process control data
         (1) Primary sedimentation - hydraulic loading capacity and BOD and SS removal
         (2) Activated sludge - Food-to-microorganism (F/M) ratio, mean cell residence time (MCRT), mixed liquor suspended solids (MLSS), sludge yield, and BOD and COD removal
         (3) Secondary clarification - hydraulic and solids loading capacity, sludge volume index and sludge blanket depth
      v. Operations information
         (1) Operating logs
         (2) Standard operating procedures
         (3) Operations and maintenance practices
      vi. Process sidestream characterization data
         (1) Sludge processing sidestreams
         (2) Tertiary filter backwash
         (3) Cooling water
      vii. Combined sewer overflow (CSO) bypass data
         (1) Frequency
         (2) Volume
      viii. Chemical coagulant usage for wastewater treatment and sludge processing
         (1) Polymer
         (2) Ferric chloride
         (3) Alum

b. **POTW influent and effluent characterization data**
   i. Toxicity
   ii. Priority pollutants
   iii. Hazardous pollutants
   iv. SARA 313 pollutants,
   v. Other chemical-specific monitoring results

c. **Sewage residuals (raw, digested, thickened and dewatered sludge and incinerator ash) characterization data**
   i. EP toxicity
   ii. Toxicity Characteristic Leaching Procedure (TCLP)
   iii. Chemical analysis

d. **Industrial waste survey (IWS)**
   i. Information on IUs with categorical standards or local limits and other significant non-categorical IUs
   ii. Number of IUs
   iii. Discharge flow
   iv. Standard Industrial Classification (SIC) code
   v. Wastewater flow
      (1) Types and concentrations of pollutants in the discharge
      (2) Products manufactured
   vi. Description of pretreatment facilities and operating practices
   vii. Annual pretreatment report
   viii. Schematic of sewer collection system
   ix. POTW monitoring data
      (1) Discharge characterization data
      (2) Spill prevention and control procedures
      (3) Hazardous waste generation
   x. IU self-monitoring data
      (1) Description of operations
      (2) Flow measurements
      (3) Discharge characterization data
      (4) Notice of sludge loading
      (5) Compliance schedule (if out of compliance)
   xi. Technically based local limits compliance reports
   xii. Waste hauler monitoring data manifests
   xiii. Evidence of POTW treatment interferences (i.e., biological process inhibition

ATTACHMENT H – STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

SECTION A: STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS[1]

1. Implementation Schedule

A storm water pollution prevention plan (SWPPP) shall be developed and implemented for each facility covered by this General Permit in accordance with the following schedule.

a. Facility operators beginning industrial activities before October 1, 1992 shall develop and implement the SWPPP no later than October 1, 1992. Facility operators beginning industrial activities after October 1, 1992 shall develop and implement the SWPPP when industrial activities begin.

b. Existing facility operators that submitted a Notice of Intent (NOI), pursuant to State Water Resources Control Board (State Water Board) Order No. 91-013-DWQ (as amended by Order No. 92-12) or San Francisco Bay Regional Water Quality Control Board (Regional Water Board) Order No. 92-11 (as amended by Order No. 92-116), shall continue to implement their existing SWPPP and shall implement any necessary revisions to their SWPPP in a timely manner, but in no case later than August 1, 1997.

2. Objectives

The SWPPP has two major objectives: (a) to identify and evaluate sources of pollutants associated with industrial activities that may affect the quality of storm water discharges and authorized non-storm water discharges from the facility; and (b) to identify and implement site- specific best management practices (BMPs) to reduce or prevent pollutants associated with industrial activities in storm water discharges and authorized non-storm water discharges. BMPs may include a variety of pollution prevention measures or other low-cost and pollution control measures. They are generally categorized as non-structural BMPs (activity schedules, prohibitions of practices, maintenance procedures, and other low-cost measures) and as structural BMPs (treatment measures, run-off controls, over-head coverage.) To achieve these objectives, facility operators should consider the five phase process for SWPPP development and implementation as shown in Table A.

The SWPPP requirements are designed to be sufficiently flexible to meet the needs of various facilities. SWPPP requirements that are not applicable to a facility should not be included in the SWPPP.

A facility's SWPPP is a written document that shall contain a compliance activity schedule, a description of industrial activities and pollutant sources, descriptions of BMPs, drawings, maps, and relevant copies or references of parts of other plans. The SWPPP

[1] From State Water Board's Water Quality Order No. 97-03-DWQ (NPDES General Permit No. CAS000001), Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities.

shall be revised whenever appropriate and shall be readily available for review by facility employees or Regional Water Board inspectors.

3. Planning and Organization

a. Pollution Prevention Team

The SWPPP shall identify a specific individual or individuals and their positions within the facility organization as members of a storm water pollution prevention team responsible for developing the SWPPP, assisting the facility manager in SWPPP implementation and revision, and conducting all monitoring program activities required in Section B of this General Permit. The SWPPP shall clearly identify the General Permit related responsibilities, duties, and activities of each team member. For small facilities, storm water pollution prevention teams may consist of one individual where appropriate.

b. Review Other Requirements and Existing Facility Plans

The SWPPP may incorporate or reference the appropriate elements of other regulatory requirements. Facility operators should review all local, State, and Federal requirements that impact, complement, or are consistent with the requirements of this General Permit. Facility operators should identify any existing facility plans that contain storm water pollutant control measures or relate to the requirements of this General Permit. As examples, facility operators whose facilities are subject to Federal Spill Prevention Control and Countermeasures' requirements should already have instituted a plan to control spills of certain hazardous materials. Similarly, facility operators whose facilities are subject to air quality related permits and regulations may already have evaluated industrial activities that generate dust or particulates.

4. Site Map

The SWPPP shall include a site map. The site map shall be provided on an 8-½ x 11 inch or larger sheet and include notes, legends, and other data as appropriate to ensure that the site map is clear and understandable. If necessary, facility operators may provide the required information on multiple site maps.

TABLE A
FIVE PHASES FOR DEVELOPING AND IMPLEMENTING INDUSTRIAL STORM WATER POLLUTION PREVENTION PLANS

PLANNING AND ORGANIZATION
Form Pollution Prevention Team Review other plans

ASSESSMENT PHASE
Develop a site map Identify potential pollutant sources Inventory of materials and chemicals List significant spills and leaks Identify non-storm water discharges Assess pollutant Risks

BEST MANAGEMENT PRACTICES IDENTIFICATION PHASE
Non-structural BMPs Structural BMPs Select activity and site-specific BMPs

IMPLEMENTATION PHASE
Train employees Implement BMPs Conduct recordkeeping and reporting

EVALUATION / MONITORING
Conduct annual site evaluation Review monitoring information Evaluate BMPs Review and revise SWPPP

The following information shall be included on the site map:

a. The facility boundaries; the outline of all storm water drainage areas within the facility boundaries; portions of the drainage area impacted by run-on from surrounding areas; and direction of flow of each drainage area, on-site surface water bodies, and areas of soil erosion. The map shall also identify nearby water bodies (such as rivers, lakes, and ponds) and municipal storm drain inlets where the facility's storm water discharges and authorized non-storm water discharges may be received.

b. The location of the storm water collection and conveyance system, associated points of discharge, and direction of flow. Include any structural control measures that affect storm water discharges, authorized non-storm water discharges, and run-on. Examples of structural control measures are catch basins, berms, detention ponds, secondary containment, oil/water separators, diversion barriers, etc.

c. An outline of all impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures.

d. Locations where materials are directly exposed to precipitation and the locations where significant spills or leaks identified in Section A.6.a.iv. below have occurred.

e. Areas of industrial activity. This shall include the locations of all storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage/maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust or particulate generating areas, cleaning and rinsing areas, and other areas of industrial activity which are potential pollutant sources.

5. <u>List of Significant Materials</u>

The SWPPP shall include a list of significant materials handled and stored at the site. For each material on the list, describe the locations where the material is being stored, received, shipped, and handled, as well as the typical quantities and frequency. Materials shall include raw materials, intermediate products, final or finished products, recycled materials, and waste or disposed materials.

6. <u>Description of Potential Pollutant Sources</u>

a. The SWPPP shall include a narrative description of the facility's industrial activities, as identified in Section A.4.e above, associated potential pollutant sources, and potential pollutants that could be discharged in storm water discharges or authorized non-storm water discharges. At a minimum, the following items related to a facility's industrial activities shall be considered:

i. Industrial Processes

Describe each industrial process, the type, characteristics, and quantity of significant materials used in or resulting from the process, and a description of the manufacturing, cleaning, rinsing, recycling, disposal, or other activities related to the process. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

ii. Material Handling and Storage Areas

Describe each handling and storage area, type, characteristics, and quantity of significant materials handled or stored, description of the shipping, receiving, and loading procedures, and the spill or leak prevention and response procedures. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

iii. Dust and Particulate Generating Activities

Describe all industrial activities that generate dust or particulates that may be deposited within the facility's boundaries and identify their discharge locations; the characteristics of dust and particulate pollutants; the approximate quantity of dust and particulate pollutants that may be deposited within the facility boundaries; and a description of the primary areas of the facility where dust and particulate pollutants would settle.

iv. Significant Spills and Leaks

Describe materials that have spilled or leaked in significant quantities in storm water discharges or non-storm water discharges since April 17, 1994. Include toxic chemicals (listed in 40 CFR, Part 302) that have been discharged to storm water as reported on U.S. Environmental Protection Agency (U.S. EPA) Form R, and oil and hazardous substances in excess of reportable quantities (see 40 Code of Federal Regulations [CFR], Parts 110, 117, and 302).

The description shall include the type, characteristics, and approximate quantity of the material spilled or leaked, the cleanup or remedial actions that have occurred or are planned, the approximate remaining quantity of materials that may be exposed to storm water or non-storm water discharges, and the preventative measures taken to ensure spill or leaks do not reoccur. Such list shall be updated as appropriate during the term of this General Permit.

v. Non-Storm Water Discharges

Facility operators shall investigate the facility to identify all non-storm water discharges and their sources. As part of this investigation, all drains (inlets and outlets) shall be evaluated to identify whether they connect to the storm drain system.
All non-storm water discharges shall be described. This shall include the source, quantity, frequency, and characteristics of the non-storm water discharges and associated drainage area.

Non-storm water discharges that contain significant quantities of pollutants or that do not meet the conditions provided in Special Conditions D. are prohibited by this General Permit (Examples of prohibited non-storm water discharges are contact and non-contact cooling water, boiler blowdown, rinse water, wash water, etc.). Non-storm water discharges that meet the conditions provided in Special Condition D. are authorized by this General Permit. The SWPPP must include BMPs to prevent or reduce contact of non-storm water discharges with significant materials or equipment.

vi. Soil Erosion

Describe the facility locations where soil erosion may occur as a result of industrial activity, storm water discharges associated with industrial activity, or authorized non-storm water discharges.

b. The SWPPP shall include a summary of all areas of industrial activities, potential pollutant sources, and potential pollutants. This information should be summarized similar to Table B. The last column of Table B, "Control Practices", should be completed in accordance with Section A.8. below.

7. Assessment of Potential Pollutant Sources

a. The SWPPP shall include a narrative assessment of all industrial activities and potential pollutant sources as described in A.6. above to determine:

i. Which areas of the facility are likely sources of pollutants in storm water discharges and authorized non-storm water discharges, and

ii. Which pollutants are likely to be present in storm water discharges and authorized non-storm water discharges. Facility operators shall consider and evaluate various factors when performing this assessment such as current storm water BMPs; quantities of significant materials handled, produced, stored, or disposed of; likelihood of exposure to storm water or authorized non-storm water discharges; history of spill or leaks; and run-on from outside sources.

b. Facility operators shall summarize the areas of the facility that are likely sources of pollutants and the corresponding pollutants that are likely to be present in storm water discharges and authorized non-storm water discharges.

Facility operators are required to develop and implement additional BMPs as appropriate and necessary to prevent or reduce pollutants associated with each pollutant source. The BMPs will be narratively described in Section 8 below.

8. Storm Water Best Management Practices

The SWPPP shall include a narrative description of the storm water BMPs to be implemented at the facility for each potential pollutant and its source identified in the site assessment phase (Sections A.6. and 7. above). The BMPs shall be developed and implemented to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Each pollutant and its source may require one or more BMPs. Some BMPs may be implemented for multiple pollutants and their sources, while other BMPs will be implemented for a very specific pollutant and its source.

TABLE B
EXAMPLE

ASSESSMENT OF POTENTIAL POLLUTION SOURCES AND CORRESPONDING BEST MANAGEMENT PRACTICES SUMMARY

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Vehicle & Equipment Fueling	Fueling	Spills and leaks during delivery. Spills caused by topping off fuel tanks. Hosing or washing down fuel oil fuel area. Leaking storage tanks. Rainfall running off fuel oil, and rainfall running onto and off fueling area.	fuel oil	Use spill and overflow protection. Minimize run-on of storm water into the fueling area. Cover fueling area. Use dry cleanup methods rather than hosing down area. Implement proper spill prevention control program. Implement adequate preventative maintenance program to preventive tank and line leaks. Inspect fueling areas regularly to detect problems before they occur. Train employees on proper fueling, cleanup, and spill response techniques.

The description of the BMPs shall identify the BMPs as (1) existing BMPs, (2) existing BMPs to be revised and implemented, or (3) new BMPs to be implemented. The description shall also include a discussion on the effectiveness of each BMP to reduce or

prevent pollutants in storm water discharges and authorized non-storm water discharges. The SWPPP shall provide a summary of all BMPs implemented for each pollutant source. This information should be summarized similar to Table B.

Facility operators shall consider the following BMPs for implementation at the facility:

a. Non-Structural BMPs

Non-structural BMPs generally consist of processes, prohibitions, procedures, schedule of activities, etc., that prevent pollutants associated with industrial activity from contacting with storm water discharges and authorized non-storm water discharges. They are considered low technology, cost-effective measures. Facility operators should consider all possible non-structural BMPs options before considering additional structural BMPs (see Section A.8.b. below). Below is a list of non-structural BMPs that should be considered:

i. Good Housekeeping

Good housekeeping generally consist of practical procedures to maintain a clean and orderly facility.

ii. Preventive Maintenance

Preventive maintenance includes the regular inspection and maintenance of structural storm water controls (catch basins, oil/water separators, etc.) as well as other facility equipment and systems.

iii. Spill Response

This includes spill clean-up procedures and necessary clean-up equipment based upon the quantities and locations of significant materials that may spill or leak.

iv. Material Handling and Storage

This includes all procedures to minimize the potential for spills and leaks and to minimize exposure of significant materials to storm water and authorized non-storm water discharges.

v. Employee Training

This includes training of personnel who are responsible for (1) implementing activities identified in the SWPPP, (2) conducting inspections, sampling, and visual observations, and (3) managing storm water. Training should address topics such as spill response, good housekeeping, and material handling procedures, and actions necessary to implement all BMPs identified in the SWPPP. The SWPPP shall identify periodic dates for such training. Records shall be maintained of all training sessions held.

vi. Waste Handling/Recycling

This includes the procedures or processes to handle, store, or dispose of waste materials or recyclable materials.

vii. Recordkeeping and Internal Reporting

This includes the procedures to ensure that all records of inspections, spills, maintenance activities, corrective actions, visual observations, etc., are developed, retained, and provided, as necessary, to the appropriate facility personnel.

viii. Erosion Control and Site Stabilization

This includes a description of all sediment and erosion control activities. This may include the planting and maintenance of vegetation, diversion of run-on and runoff, placement of sandbags, silt screens, or other sediment control devices, etc.

ix. Inspections

This includes, in addition to the preventative maintenance inspections identified above, an inspection schedule of all potential pollutant sources. Tracking and follow-up procedures shall be described to ensure adequate corrective actions are taken and SWPPPs are made.

x. Quality Assurance

This includes the procedures to ensure that all elements of the SWPPP and Monitoring Program are adequately conducted.

b. Structural BMPs

Where non-structural BMPs as identified in Section A.8.a. above are not effective, structural BMPs shall be considered. Structural BMPs generally consist of structural devices that reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Below is a list of structural BMPs that should be considered:

i. Overhead Coverage

This includes structures that provide horizontal coverage of materials, chemicals, and pollutant sources from contact with storm water and authorized non-storm water discharges.

ii. Retention Ponds

This includes basins, ponds, surface impoundments, bermed areas, etc. that do not allow storm water to discharge from the facility.

iii. Control Devices

This includes berms or other devices that channel or route run-on and runoff away from pollutant sources.

iv. Secondary Containment Structures

This generally includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills.

v. Treatment

This includes inlet controls, infiltration devices, oil/water separators, detention ponds, vegetative swales, etc. that reduce the pollutants in storm water discharges and authorized non-storm water discharges.

9. Annual Comprehensive Site Compliance Evaluation

The facility operator shall conduct one comprehensive site compliance evaluation (evaluation) in each reporting period (July 1-June 30). Evaluations shall be conducted within 8-16 months of each other. The SWPPP shall be revised, as appropriate, and the revisions implemented within 90 days of the evaluation. Evaluations shall include the following:

a. A review of all visual observation records, inspection records, and sampling and analysis results.

b. A visual inspection of all potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage system.

c. A review and evaluation of all BMPs (both structural and non-structural) to determine whether the BMPs are adequate, properly implemented and maintained, or whether additional BMPs are needed. A visual inspection of equipment needed to implement the SWPPP, such as spill response equipment, shall be included.

d. An evaluation report that includes, (i) identification of personnel performing the evaluation, (ii) the date(s) of the evaluation, (iii) necessary SWPPP revisions, (iv) schedule, as required in Section A.10.e, for implementing SWPPP revisions, (v) any incidents of non-compliance and the corrective actions taken, and (vi) a certification that the facility operator is in compliance with this General Permit. If the above certification cannot be provided, explain in the evaluation report why the facility operator is not in compliance with this General Permit. The evaluation report shall be submitted as part of the annual report, retained for at least five years, and signed and certified in accordance with Standard Provisions 9. and 10. of Section C. of this General Permit.

10. SWPPP General Requirements

a. The SWPPP shall be retained on site and made available upon request of a representative of the Regional Water Board and/or local storm water management agency (local agency) which receives the storm water discharges.

b. The Regional Water Board and/or local agency may notify the facility operator when the SWPPP does not meet one or more of the minimum requirements of this Section. As requested by the Regional Water Board and/or local agency, the facility operator shall submit an SWPPP revision and implementation schedule that meets the minimum requirements of this section to the Regional Water Board and/or local agency that requested the SWPPP revisions. Within 14 days after implementing the required SWPPP revisions, the facility operator shall provide written certification to the Regional Water Board and/or local agency that the revisions have been implemented.

c. The SWPPP shall be revised, as appropriate, and implemented prior to changes in industrial activities which (i) may significantly increase the quantities of pollutants in storm water discharge, (ii) cause a new area of industrial activity at the facility to be exposed to storm water, or (iii) begin an industrial activity which would introduce a new pollutant source at the facility.

d. Other than as provided in Provisions B.11, B.12, and E.2 of the General Permit, the SWPPP shall be revised and implemented in a timely manner, but in no case more than 90 days after a facility operator determines that the SWPPP is in violation of any requirement(s) of this General Permit.

e. When any part of the SWPPP is infeasible to implement by the deadlines specified in Provision E.2 or Sections A.1, A.9, A.10.c, and A.10.d of this General Permit due to proposed significant structural changes, the facility operator shall submit a report to the Regional Water Board prior to the applicable deadline that (i) describes the portion of the SWPPP that is infeasible to implement by the deadline, (ii) provides justification for a time extension, (iii) provides a schedule for completing and implementing that portion of the SWPPP, and (iv) describes the BMPs that will be implemented in the interim period to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Such reports are subject to Regional Water Board approval and/or modifications. Facility operators shall provide written notification to the Regional Water Board within 14 days after the SWPPP revisions are implemented.

f. The SWPPP shall be provided, upon request, to the Regional Water Board. The SWPPP is considered a report that shall be available to the public by the Regional Water Board under Section 308(b) of the Clean Water Act.

ATTACHMENT I
BIOSOLIDS USE AND DISPOSAL REQUIREMENTS

1. All biosolids generated by the Discharger shall be reused or disposed of in compliance with the applicable portions of:

   a. 40 CFR 503: for biosolids that are land applied, placed in surface disposal sites (dedicated land disposal sites or monofills), or incinerated; 40 CFR 503 Subpart B (land application) applies to biosolids placed on the land for the purpose of providing nutrients or conditioning the soil for crops or vegetation. 40 CFR 503 Subpart C (surface disposal) applies to biosolids placed on the land for the purpose of disposal.

   b. 40 CFR 258: for biosolids disposed of in Municipal Solid Waste landfills.

   c. 40 CFR 257: for all biosolids disposal practices not covered under 40 CFR 258 or 503.

2. The Discharger is responsible for assuring that all biosolids from its facility are used or disposed of in accordance with 40 CFR 503, whether the Discharger reuses or disposes of the biosolids itself or transfers them to another party for further treatment, reuse, or disposal. The Discharger is responsible for informing subsequent preparers, appliers, or disposers of the requirements they must meet under 40 CFR 503.

3. Duty to mitigate: The Discharger shall take all reasonable steps to prevent or minimize any biosolids use or disposal which may adversely impact human health or the environment.

4. No biosolids shall be allowed to enter wetland or other waters of the United States.

5. Biosolids treatment, storage, and use or disposal shall not contaminate groundwater.

6. Biosolids treatment, storage, and use or disposal shall not create a nuisance such as objectionable odors or flies.

7. The Discharger shall assure that haulers who transport biosolids off site for further treatment, storage, reuse, or disposal take all necessary measures to keep the biosolids contained.

8. If biosolids are stored for over two years from the time they are generated, the Discharger must ensure compliance with all the requirements for surface disposal under 40 CFR 503 Subpart C, or must submit a written request to EPA with the information in 503.20 (b), requesting permission for longer temporary storage.

9. Sewage sludge containing more than 50 mg/kg PCB's shall be disposed of in accordance with 40 CFR 761.

10. Any off-site biosolids treatment, storage, use or disposal site operated by the Discharger within Region 4 (Los Angeles Region of RWQCB) that is not subject to its own Waste Discharge Requirements shall have facilities adequate to divert surface runoff from the adjacent area, to protect the site boundaries from erosion, and to prevent any conditions that would cause drainage from the materials in the disposal site to escape from the site. Adequate protection is defined as protected from at least a 100-year storm and from the highest tidal stage that may occur.

11. Inspection and Entry: The Regional Board, USEPA or an authorized representative thereof, upon the presentation of credentials, shall be allowed by the Discharger, directly or through contractual arrangements with their biosolids management contractors, to:

    a. enter upon all premises where biosolids are produced by the Discharger and all premises where Discharger biosolids are further treated, stored, used, or disposed, either by the Discharger or by another party to whom the Discharger transfers the biosolids for further treatment, storage, use, or disposal;

    b. have access to and copy any records that must be kept under the conditions of this permit or of 40 CFR 503, by the Discharger or by another party to whom the Discharger transfers the biosolids for further treatment, storage, use, or disposal; and

    c. inspect any facilities, equipment (including monitoring and control equipment), practices, or operations used in the production of biosolids and further treatment, storage, use, or disposal by the Discharger or by another party to whom the Discharger transfers the biosolids for further treatment, storage, use, or disposal.

12. Monitoring shall be conducted as follows:

    a. Biosolids shall be tested for the metals required in section 503.16 (for land application) or 503.26 (for surface disposal), using the methods in "Test Methods for Evaluating Solids Waste, Physical/Chemical Methods" (SW-:846), as required in 503.8(b}(4}, at the following minimum frequencies:

Volume (dry metric tons/year)	Frequency
0 – 290	once per year
290 – 1500	once per quarter
1500 – 15000	once per 60 days
> 15000	once per month

For accumulated, previously untested biosolids, the Discharge~ shall develop a

representative sampling plan, which addresses the number and location of sampling points, and collect representative samples.

Test results shall be expressed in mg pollutant per kg biosolids on a 100% dry weight basis.

Biosolids to be land applied shall be tested for Organic-N, ammonium-N, and nitrate-N at the frequencies required above.

b. Prior to land application, the Discharger 'shall demonstrate that the biosolids meet Class A or Class B pathogen reduction levels by one of the methods listed in 503.32. Prior to disposal in a surface disposal site, the Discharger shall demonstrate that the biosolids meet Class B levels or shall ensure that the site is covered at the end of each operating day.

c. For biosolids that are land applied or placed in a surface disposal site, the Discharger shall track and keep records of the operational parameters used to achieve Vector Attraction Reduction requirements in 503.33 (b).

d. Class 1 facilities (facilities with pretreatment programs or others designated as Class 1 by the Regional Administrator) and Federal facilities with> 5 mgd influent flow shall sample biosolids for pollutants listed under Section 307 (a) of the Act (as required in the pretreatment section of the permit for POTWs with pretreatment programs.) Class 1 facilities and Federal Facilities with> 5 mgd influent flow shall test dioxins/dibenzofurans using a detection limit of < 1 pg/g during their next sampling period if they have not done so within the past 5 years and once per 5 years thereafter.

e. The biosolids shall be tested annually, or more frequently if necessary to determine hazardousness in accordance with California Law.

f. If biosolids are placed in a surface disposal site (dedicated land disposal site or monofill), a qualified groundwater scientist shall develop a groundwater monitoring program for the site, or shall certify that the placement of biosolids on the site will not contaminate an aquifer.

g. Biosolids placed in a municipal landfill shall be tested semi-annually by the Paint Filter Test (SW-846, Method 9095) to demonstrate that there are no free liquids.

13. The Discharger either directly or through contractual arrangements with their biosolids management contractors shall comply with the following 40 CFR 503 notification requirements:

a. A reuse/disposal plan shall be submitted to EPA Region IX Coordinator and, in the absence of other state or regional reporting requirements, to the state permitting

agency, prior to the use or disposal of any biosolids from this facility to a new or previously unreported site. The plan shall be submitted by the land applier of the biosolids and shall include, a description and a topographic map of the proposed site(s) for reuse or disposal, names and addresses of the applier(s) and site owner(s), and a list of any state or local permits which must be obtained. For land application sites, the plan shall include a description of the crops or vegetation to be grown, proposed nitrogen loadings to be used for the crops, and a groundwater monitoring plan if one exists.

b. If the Discharger biosolids do not meet 503.13 Table 3 metals concentration limits, the Discharger must require their land applier to contact the state permitting authority to determine whether bulk biosolids subject to the cumulative pollutant loading rates in 503.12(b)(2) have been applied to the site since July 20, 1993, and, if so, the cumulative amount of pollutants applied to date, and background concentration, if known. The Discharger shall then notify EPA Region IX Coordinator of this information.

c. For biosolids that are land applied, the Discharger shall notify the applier in writing of the nitrogen content of the biosolids, and the applier's requirements under 503, including the requirements that the applier certify that the requirement to obtain information in Subpart A, and that the management practices, site restrictions, and any applicable vector attraction reduction requirements Subpart D have been met. The Discharger shall require the applier to certify at the end of 38 months following application of Class B biosolids that those harvesting restrictions in effect for up to 38 months have been met.

d. If bulk biosolids are shipped to another State or to Indian Lands, the Discharger must send written notice prior to the initial application of bulk biosolids to the permitting authorities in the receiving State or Indian Land (the EPA Regional Office for the area and the State/Indian authorities).

e. Notification of 503 non-compliance: The Discharger shall require appliers of their biosolids to notify EPA Region 9 and their state permitting agency of any noncompliance within 24 hours if the non-compliance may seriously endanger health or the environment. For other instances of non-compliance, the Discharger shall require appliers of their biosolids to notify EPA Region 9 and their state permitting agency of the non-compliance in writing within 10working days of becoming aware of the non-compliance.

14. The Discharger shall submit an annual biosolids report to EPA Region IX Biosolids Coordinator and the Los Angeles Regional Water Quality Control Board by February 19 of each year for the period covering the previous calendar year. The report shall include:

a. The amount of biosolids generated that year, in dry metric tons, and the amount

accumulated from previous years.

b. Results of all pollutant monitoring required in the Monitoring Section above.

c. Descriptions of pathogen reduction methods, and vector attraction reduction methods, as required in 503.17 and 503.27.

d. Results of any groundwater monitoring or certification by groundwater scientist that the placement of biosolids in a surface disposal site will not contaminate an aquifer.

e. Names and addresses of land appliers and surface disposal site operators, and volumes applied (dry metric tons).

f. Names and addresses of persons who received biosolids for storage, further treatment, disposal in a municipal waste landfill, or for other reuse/disposal methods not covered in 14.c, above, and volumes delivered to each.

15. The Discharger shall require all parties contracted to manage their biosolids to submit an annual biosolids report to EPA Region IX Biosolids Coordinator by February 19 of each year for the period covering the previous calendar year. The report shall include:

a. Names and addresses of land appliers and surface disposal site operators, name, location (latitude/longitude), and size (hectares) of site(s), volumes applied/disposed (dry metric tons) and for land application, biosolids loading rates (metric tons per hectare), nitrogen loading rates (kg/ha), dates of applications, crops grown, dates of seeding and harvesting and certifications that the requirement to obtain information in 503.12(e)(2), management practices in 503.14 and site restrictions in 503.32(b)(5) have been met.

Attachment K-1 Metals Effluent Data

Constituent	Copper	1/2 copper	Lead	1/2 Lead	Nickel		Selenium				1/2 nickel	Zinc	1/2 zinc	Selenium	1/2 Selenium
Mar-08	8.52	8.52	9.4	9.4	3.44	3.44					3.44	38.5	38.5		
Apr-08	3.72	3.72										35.6	35.6		
May-08	3.26	3.26										26.6	26.6		
Jun-08	<2	1.00										18.9	18.9		
Jul-08	<2	1.00										22.9	22.9		
Aug-08	<2	1.00	<5	0.3	<10	5.00	8.78				5.00	21.8	21.8	8.78	8.78
Sep-08	3.29	3.29										19.4	19.4		
Oct-08	<2	1.00										14.9	14.9		
Nov-08	4.04	4.04										33.3	33.3		
Dec-08	<2	1.00										21.1	21.1		
Jan-09	<2	1.00										37.1	37.1		
Feb-09	3.24	3.24	<5	0.3	4.66	4.66	2.0				4.66	22.6	22.6	<2	1
Mar-09	<2	1.00										23.3	23.3		
Apr-09	<2	1.00										22.7	22.7		
May-09	<2	1.00										24.7	24.7		
Jun-09	<2	1.00										17.6	17.6		
Jul-09	<2	1.00										19.6	19.6		
Aug-09	2.09	2.09	<5	0.3	4.14	4.14	2.0				4.14	23.8	23.8	<2	1
Sep-09	<2	1.00										22.2	22.2		
Oct-09	<2	1.00										23.2	23.2		
Nov-09	<2	1.00										18.7	18.7		
Dec-09	<2	1.00										30.2	30.2		
Jan-10	3.74	3.74										35.3	35.3		
Feb-10	4.75	4.75	<5	0.3	5.03	5.03	2.0				5.03	37.6	37.6	<2	1
Mar-10	4.36	4.36										34.4	34.4		
Apr-10	2.36	2.36										41.1	41.1		
May-10	<2	1.00										32.2	32.2		
Jun-10	2.95	2.95										42.0	42.0		
Jul-10	<2	1.00										34.6	34.6		
Aug-10	2.92	2.92	<5	0.3	5.57	5.57	2.0				5.57	44.7	44.7	<2	1
Sep-10	<2	1.00										33.5	33.5		
Oct-10	4.95	4.95										32.0	32.0		
Nov-10	3.62	3.62										28.6	28.6		
Dec-10	4.16	4.16										33.8	33.8		
Jan-11	2.86	2.86										30.5	30.5		
Feb-11	4.09	4.09	<5	0.3	11.40	11.40	13.7				11.40	26.1	26.1	13.7	13.7
Mar-11	2.61	2.61										33.0	33.0		
Apr-11	2.87	2.87										35.0	35.0		
May-11	<2	1.00										<2	1.0		
Jun-11	4.94	4.94										34.8	34.8		
Jul-11	<2	1.00										34.2	34.2		
Aug-11	<2	1.00	<5	0.3	<1	0.50	2.0				0.50	35.4	35.4	<2	1
Sep-11	<2	1.00										42.1	42.1		
Oct-11	5.81	5.81										36.5	36.5		
Nov-11	4.35	4.35										18.5	18.5		
Dec-11	7.63	7.63										68.8	68.8		
Jan-12	4.48	4.48										34.7	34.7		
Feb-12	5.00	5.00	<5	0.3	23.30	23.30	2.0				23.30	31.3	31.3	<2	1
Mar-12	5.07	5.07										34.5	34.5		
Apr-12	<2	1.00										35.7	35.7		
May-12	<2	1.00										35.7	35.7		
Jun-12	<2	1.00										27.8	27.8		
Jul-12	<2	1.00										12.8	12.8		
Aug-12	<2	1.00	<5	0.3	35.40	35.40	2.0				35.40	31.9	31.9	<2	1
Sep-12	<2	1.00										31.4	31.4		
Oct-12	<2	1.00													
Nov-12	8.88	8.88										36.9	36.9		
Dec-12	<2	1.00										11.1	11.1		
Jan-13	<2	1.00										39.3	39.3		
Feb-13	2.89	2.89	<5	0.3	3.69						3.69	40.0	40.0	<2	1
Mar-13	<2	1.00										39.3	39.3		

Apr-13	<2	1.00										39.8	39.8		
Maximum	8.88		9.44		35.40		13.70					68.80		13.70	
Minimum	2.09		9.44		3.44		71.0					11.10		8.78	
Detects	29.00		1.00		9.00		No					60.00		2.00	
Count	62.00		11.00		11.00		No					61.00		10.00	
% nondetect	53.23		90.91		18.18							1.64		80.00	
SD		1.98		2.63		10.44	4.01				10.11		10.06		4.24
Avg		2.52		1.09		9.84					9.28		30.27		3.05
CV		0.7858		2.4200		1.06					1.0886		0.3323		1.3915
Default CV				0.60											

Attachment K-2 Non-Metal Effluent Data

Constituent	Data		Antimony		Arsenic		Beryllium		Cadmium		Chromium III		Chromium (VI)		Chromium		Mercury		Silver		Thallium		Zinc		Cyanide		Asbestos		Dioxin		Acrolein
CTR Number	Source		1		2		3		4		5a		5b		Total		8.00		11		12		13		14		15		16		17
Number of	Data points		10		10		10		10		10		10		0		61		61		10		61		21		0		10		10
Mar-08	SMR															<	0.02	<	0.2				38.5	<	5						
Apr-08	SMR															<	0.02	<	0.2				35.6	<	5						
May-08	SMR															<	0.02	<	0.2				26.6	<	5						
Jun-08	SMR															<	0.02	<	0.2				18.9	<	5						
Jul-08	SMR															<	0.02	<	0.2				22.9	<	5						
Aug-08	SMR	<	1	<	2.0	<	0.2	<	4.0	<	7	<	1			<	0.02	<	0.2	<	1		21.8	<	5			<	0.0000050	<	0.60
Sep-08	SMR															<	0.02	<	0.2				19.4	<	5						
Oct-08	SMR															<	0.02	<	0.2				14.9	<	5						
Nov-08	SMR															<	0.02	<	0.2				33.3	<	5						
Dec-08	SMR															<	0.02	<	0.2				21.1	<	5						
Jan-09	SMR															<	0.02	<	0.2				37.1	<	5						
Feb-09	SMR	<	1	<	2.0	<	0.2	<	4.0	<	7	<	1			<	0.02	<	0.2	<	1		22.6	<	5			<	0.0000052	<	0.60
Mar-09	SMR															<	0.02	<	0.2				23.3	<	5						
Apr-09	SMR															<	0.02	<	0.2				22.7								
May-09	SMR															<	0.02	<	0.2				24.7								
Jun-09	SMR															<	0.02	<	0.2				17.6								
Jul-09	SMR															<	0.02	<	0.2				19.6								
Aug-09	SMR	<	1	<	2.0	<	0.2	<	4.0	<	7	<	1			<	0.02	<	0.2	<	1		23.8	<	5			<	0.0000098	<	0.60
Sep-09	SMR															<	0.02	<	0.2				22.2								
Oct-09	SMR															<	0.02	<	0.2				23.2								
Nov-09	SMR															<	0.02	<	0.2				18.7								
Dec-09	SMR															<	0.02	<	0.2				30.2								
Jan-10	SMR															<	0.02	<	0.2				35.3								
Feb-10	SMR	<	1	<	2.0	<	0.2	<	4.0	<	7	<	1			<	0.02	<	0.2	<	1		37.6	<	5			<	0.0000053	<	0.60
Mar-10	SMR															<	0.02	<	0.2				34.4								
Apr-10	SMR															<	0.02	<	0.2				41.1								
May-10	SMR															<	0.02	<	0.2				32.2								
Jun-10	SMR															<	0.02	<	0.2				42.0								
Jul-10	SMR															<	0.02	<	0.2				34.6								
Aug-10	SMR	<	1	<	2.0	<	0.2	<	1.0	<	7	<	1			<	0.02	<	0.2	<	1		44.7	<	5			<	0.0000053	<	0.60
Sep-10	SMR															<	0.02	<	0.2				33.5								
Oct-10	SMR															<	0.02	<	0.2				32.0								
Nov-10	SMR															<	0.02	<	0.2				28.6								
Dec-10	SMR															<	0.02	<	0.2				33.8								
Jan-11	SMR															<	0.02	<	0.2				30.5								
Feb-11	SMR	<	1	<	2.0	<	0.2	<	4.0	<	7	<	1			<	0.02	<	0.2	<	1		26.1	<	5			<	0.0000100	<	0.60
Mar-11	SMR															<	0.02	<	0.2				33.0								
Apr-11	SMR															<	0.02	<	0.2				35.0								
May-11	SMR															<	0.02	<	0.2			<	2.0								
Jun-11	SMR															<	0.02	<	0.2				34.8								
Jul-11	SMR															<	0.02	<	0.2				34.2								
Aug-11	SMR	<	1	<	1.0	<	0.2	<	4.0	<	7	<	1			<	0.02	<	0.2	<	1		35.4	<	5			<	0.0000100	<	0.60
Sep-11	SMR															<	0.02	<	0.2				42.1								
Oct-11	SMR															<	0.02	<	0.2				36.5								
Nov-11	SMR															<	0.02	<	0.2				18.5								
Dec-11	SMR															<	0.02	<	0.2				68.8								
Jan-12	SMR															<	0.02	<	0.2				34.7								
Feb-12	SMR	<	1	<	2.0	<	0.2	<	4.0	<	7	<	1			<	0.02	<	0.2	<	1		31.3	<	5			<	0.0000098	<	0.60
Mar-12	SMR															<	0.02	<	0.2				34.5								
Apr-12	SMR															<	0.02	<	0.2				35.7								
May-12	SMR															<	0.02	<	0.2				35.7								
Jun-12	SMR															<	0.02	<	0.2				27.8								
Jul-12	SMR															<	0.02	<	0.2				12.8								
Aug-12	SMR	<	1	<	2.0	<	0.2	<	4.0	<	7	<	1			<	0.02	<	0.2	<	1.000		31.9	<	5			<	0.0000050	<	0.600
Sep-12	SMR															<	0.02	<	0.2				31.4								
Oct-12	SMR																														
Nov-12	SMR															<	0.02	<	0.2				36.9								
Dec-12	SMR															<	0.02	<	0.2				11.1								
Jan-13	SMR															<	0.02	<	0.2				39.3								
Feb-13	SMR	<	1	<	2.0	<	0.2	<	4.0	<	7	<	1			<	0.02	<	0.2	<	1.000		40.0	<	5			<	0.0000050	<	0.600
Mar-13	SMR															<	0.02	<	0.2				39.3								
Apr-13	SMR															<	0.02	<	0.2				39.8								
MEC																<	0.02	<	0.20	<	1.00		68.80	<	5.00				0.00	<	0.60
SD																							10.01								
Avg																							30.29								
CV																							0.33								

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Data		Acrylonitrile		Benzene		Bromoform		Carbon Tetrachloride		Chlorobenzene		Chlorodibromomethane		Chloroethane		2-Chloroethyl vinylether		Chloroform		Dichlorobromomethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethylene		1,2-Dichloropropane		1,3-Dichloropropylene	
Source		18		19		20		21		22		23.00		24		25		26.00		27		28		29		30		31		32	
ata points		10		10		12		10		10		20		10		10		11		20		10		10		10		10		10	
SMR												13.10								22.2											
SMR												6.00								15.6											
SMR												14.50								25.6											
SMR												7.00							<	0.1											
SMR												11.90								21.1											
SMR	<	0.50	<	0.2		0.4	<	0.12	<	0.2		1.85	<	0.52	<	0.13		12.80		4.6	<	0.07	<	0.03	<	0.13	<	0.04	<	0.34	<
SMR																															
SMR												2.10								8.0											
SMR												10.20								18.7											
SMR												3.20								5.8											
SMR						2.0						8.50						36.00		14.6											
SMR	<	0.50	<	0.2		0.5	<	0.12	<	0.2		2.75	<	0.52	<	0.13		11.20		5.9	<	0.07	<	0.03	<	0.13	<	0.04	<	0.34	<
SMR						4.3						13.70								22.1											
SMR																															
SMR																															
SMR																															
SMR																															
SMR	<	0.50	<	0.2		0.7	<	0.12	<	0.2		3.80	<	0.52	<	0.13		12.50		8.9	<	0.07	<	0.03	<	0.13	<	0.04	<	0.34	<
SMR																															
SMR																															
SMR																															
SMR																															
SMR	<	0.50	<	0.2		1.8	<	0.12	<	0.2		5.48	<	0.52	<	0.13		7.50		6.6	<	0.07	<	0.03	<	0.13	<	0.04	<	0.68	<
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	<	0.50	<	0.2	<	0.2	<	0.12	<	0.2		1.38	<	0.52	<	0.13		8.65		4.1	<	0.07	<	0.03	<	0.13	<	0.04	<	0.68	<
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	<	0.50	<	0.2	<	0.2	<	0.12	<	0.2		3.79	<	0.52	<	0.13		6.28		6.3	<	0.07	<	0.03	<	0.13	<	0.04	<	0.68	<
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	<	0.50	<	0.2	<	0.2	<	0.12	<	0.2		2.90	<	0.52	<	0.13		14.90		8.3	<	0.07	<	0.03	<	0.13	<	0.04	<	0.68	<
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	<	0.50	<	0.2		0.9	<	0.12	<	0.2		3.83	<	0.52	<	0.13		11.40		8.6	<	0.07	<	0.03	<	0.13	<	0.04	<	0.68	<
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	<	0.500	<	0.2		2.2	<	0.12	<	0.2		6.59	<	0.520	<	0.130		22.40		12.7	<	0.070	<	0.030	<	0.130	<	0.040	<	0.680	<
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	<	0.500	<	0.2		0.75	<	0.12	<	0.2		2.7	<	0.520	<	0.130	=	4.57	=	3.12	<	0.070	<	0.030	<	0.130	<	0.040	<	0.680	<
SMR																															
SMR																															
	<	0.50	<	0.20		4.30	<	0.12	<	0.20		14.50	<	0.52	<	0.13		36.00		25.60											
						1.17						4.17						8.47		7.25											
						1.18						6.26						13.47		11.14											
						0.99						0.67						0.63		0.65											

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Data	Ethylbenzene		Methyl Bromide		Methyl Chloride		Methylene Chloride		1,1,2,2-Tetrachloroethane		Tetrachloroethylene		Toluene		1,2-Trans-Dichloroethylene		1,1,1-Trichloroethane		1,1,2-Trichloroethane		Trichloroethylene		Vinyl Chloride		2-Chlorophenol		2,4-Dichlorophenol		2,4-Dimethylphenol		2-Methyl-4,6-Dinitrophenol
Source	33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		48
ata points	10		10		10		10		10		10		10		8		10		10		10		10		10		10		10		10
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	0.34	<	0.50	<	0.08	<	0.25	<	0.03	<	0.03	<	0.20	<	0.10	<	0.03	<	0.02	<	0.12	<	0.18	<	3.3	<	2.7	<	2.7	<	10
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	0.34	<	0.50	<	0.08	<	0.25	<	0.03	<	0.03	<	0.20	<	0.10	<	0.03	<	0.02	<	0.12	<	0.18	<	3.3	<	2.7	<	2.7	<	10
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	0.34	<	0.50	<	0.08	<	0.25	<	0.03	<	0.03	<	0.20	<	0.10	<	0.03	<	0.02	<	0.12	<	0.18	<	3.3	<	2.7	<	2.7	<	10
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	0.34	<	0.50	<	0.08	<	0.25	<	0.03	<	0.03	<	0.20	<	0.10	<	0.03	<	0.02	<	0.12	<	0.18	<	3.3	<	2.7	<	2.7	<	10
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	0.34	<	0.50	<	0.08	<	0.25	<	0.03	<	0.03	<	0.20	<	0.10	<	0.03	<	0.02	<	0.12	<	0.18	<	3.3	<	2.7	<	2.7	<	10
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	0.34	<	0.50	<	0.08	<	0.25	<	0.03	<	0.03	<	0.20	<	0.10	<	0.03	<	0.02	<	0.12	<	0.18	<	3.3	<	2.7	<	2.7	<	10
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	0.340	<	0.50	<	0.08	<	0.25	<	0.030	<	0.03	<	0.20		not reported	<	0.030	<	0.020	<	0.120	<	0.180	<	3.300	<	2.700	<	2.700	<	10.000
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	0.340	<	0.50	<	0.08	<	0.25	<	0.030	<	0.03	<	0.20		not reported	<	0.030	<	0.020	<	0.120	<	0.180	<	3.300	<	2.700	<	2.700	<	10.000
SMR																															
SMR																															

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Data		2,4-Dinitrophenol		2-Nitrophenol		4-Nitrophenol		3-Methyl-4-Chlorophenol		Pentachlorophenol		Phenol		2,4,6-Trichlorophenol		Acenaphthene		Acenaphthylene		Anthracene		Benzidine		Benzo(a)Anthracene		Benzo(a)Pyrene		Benzo(b)Fluoranthene		Benzo(ghi)Perylene	
Source		49		50		51		52		53		54		55		56		57.00		58		59		60		61		62		63	
ata points		9		9		9		9		10		9		9		10		10		10		10		10		10		10		10	
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	<	42	<	3.6	<	2.4	<	3	<	3.60	<	1.5	<	2.7	<	2	<	1.90	<	1.9	<	4.4	<	7.8	<	2.5	<	4.8	<	4.1	<
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR									<	3.60					<	2	<	1.90	<	1.9	<	4.4	<	7.8	<	2.5	<	4.8	<	4.1	<
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	<	42	<	3.6	<	2.4	<	3	<	3.60	<	1.5	<	2.7	<	2	<	1.90	<	1.9	<	4.4	<	7.8	<	2.5	<	4.8	<	4.1	<
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	<	42	<	3.6	<	2.4	<	3	<	3.60	<	1.5	<	2.7	<	2	<	1.90	<	1.9	<	4.4	<	7.8	<	2.5	<	4.8	<	2.5	<
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	<	42	<	1.9	<	3.6	<	3	<	3.60	<	1.5	<	2.7	<	2	<	1.90	<	1.9	<	4.4	<	7.8	<	2.5	<	4.8	<	2.5	<
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	<	42	<	3.6	<	2.4	<	3	<	3.60	<	1.5	<	2.7	<	2	<	1.90	<	1.9	<	4.4	<	7.8	<	2.5	<	4.8	<	4.1	<
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	<	42	<	3.6	<	2.4	<	3	<	3.60	<	1.5	<	2.7	<	2	<	1.90	<	1.9	<	4.4	<	7.8	<	2.5	<	4.8	<	4.1	<
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	<	42.000	<	3.600	<	2.400	<	3.000	<	3.60	<	1.500	<	2.700	<	2	<	1.90	<	1.9	<	4.4	<	7.8	<	2.5	<	4.8	<	4.1	<
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	<	42.000	<	3.600	<	2.400	<	3.000	<	3.60	<	1.500	<	2.700	<	2	<	1.90	<	1.9	<	4.4	<	7.8	<	2.5	<	4.8	<	4.1	<
SMR																															
SMR																															

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Data	Benzo(k)Fluoranthene		Bis(2-Chloroethoxy)Methane		Bis(2-Chloroethyl)Ether		Bis(2-Chloroisopropyl)Ether		Bis(2-Ethylhexyl) Phthalate		4-Bromophenyl Phenyl Ether		Butylbenzyl Phthalate		2-Chloronaphthalene		4-Chlorophenyl Phenyl Ether		Chrysene		Dibenzo(a,h)Anthracene		1,2-Dichlorobenzene		1,3-Dichlorobenzene		1,4-Dichlorobenzene		3,3-Dichlorobenzidine		Diethyl Phthalate
Source	64		65		66		67		68		69		70		71		72		73		74		75		76		77		78		79
ata points	10		10		10		10		20		10		10		10		10		10		10		10		10		10		10		10
SMR								<	2.5																						
SMR								<	2.5																						
SMR								<	2.5																						
SMR								<	2.5																						
SMR																															
SMR	2.5	<	5.3	<	5.7	<	5.7	<	2.5	<	1.9	<	2.5	<	1.9	<	4.2	<	2	<	2.5	<	1.9	<	1.9	<	4.4	<	16.5	<	2.2
SMR								<	2.5																						
SMR								<	2.5																						
SMR								<	2.5																						
SMR								<	2.5																						
SMR								<	2.5																						
SMR	2.5	<	5.3	<	5.7	<	5.7	<	2.5	<	1.9	<	2.5	<	1.9	<	4.2	<	2	<	2.5	<	1.9	<	1.9	<	4.4	<	16.5	<	2.2
SMR								<	2.5																						
SMR																															
SMR																															
SMR																															
SMR																															
SMR	2.5	<	5.3	<	5.7	<	5.7	<	2.5	<	1.9	<	2.5	<	1.9	<	4.2	<	2	<	2.5	<	1.9	<	1.9	<	4.4	<	16.5	<	2.2
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	2.5	<	5.3	<	5.7	<	5.7	<	2.5	<	1.9	<	2.5	<	1.9	<	4.2	<	2.5	<	2.5	<	1.9	<	1.9	<	4.4	<	16.5	<	2.2
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	2.5	<	5.3	<	5.7	<	5.7	<	2.5	<	1.9	<	2.5	<	1.9	<	4.2	<	2.5	<	2.5	<	1.9	<	1.9	<	4.4	<	16.5	<	2.2
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	2.5	<	5.3	<	5.7	<	5.7	<	2.5	<	1.9	<	2.5	<	1.9	<	4.2	<	2	<	2.5	<	1.9	<	2.5	<	4.4	<	16.5	<	2.2
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	2.5	<	5.3	<	5.7	<	5.7	<	2.5	<	1.9	<	2.5	<	1.9	<	4.2	<	2	<	2.5	<	1.9	<	2.5	<	4.4	<	16.5	<	2.2
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	2.5	<	5.3	<	5.7	<	5.7	<	2.5	<	1.9	<	2.5	<	1.9	<	4.2	<	2	<	2.5	<	1.9	<	2.5	<	4.4	<	16.5	<	2.2
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	2.5	<	5.3	<	5.7	<	5.7	<	2.5	<	1.9	<	2.5	<	1.9	<	4.2	<	2	<	2.5	<	1.9	<	2.5	<	4.4	<	16.5	<	2.2
SMR																															
SMR																															
SMR																															
SMR																															

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Data	Dimethyl Phthalate	Di-n-Butyl Phthalate	2,4-Dinitrotoluene	2,6-Dinitrotoluene	Di-n-Octyl Phthalate	1,2-Diphenylhydrazine	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-cd)Pyrene	Isophorone	Naphthalene
Source	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94
ata points	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
SMR															
SMR															
SMR															
SMR															
SMR															
SMR	< 1.6	< 2.5	< 5.7	< 1.9	< 2.5	< 10	< 2.2	< 1.9	< 1.9	< 0.9	< 1.9	< 1.6	< 3.7	< 2.2	< 10
SMR															
SMR															
SMR															
SMR															
SMR															
SMR	< 1.6	< 2.5	< 5.7	< 1.9	< 2.5	< 10	< 2.2	< 1.9	< 1.9	< 0.9	< 1.9	< 1.6	< 3.7	< 2.2	< 10
SMR															
SMR															
SMR															
SMR															
SMR															
SMR	< 1.6	< 2.5	< 5.7	< 1.9	< 2.5	< 10	< 2.2	< 1.9	< 1.9	< 0.9	< 1.9	< 1.6	< 3.7	< 2.2	< 10
SMR															
SMR															
SMR															
SMR															
SMR															
SMR	< 1.6	< 2.5	< 5.7	< 1.9	< 2.5	< 10	< 2.2	< 1.9	< 1.9	< 0.9	< 1.9	< 1.6	< 3.7	< 2.2	< 10
SMR															
SMR															
SMR															
SMR															
SMR															
SMR	< 1.6	< 2.5	< 5.7	< 1.9	< 2.5	< 10	< 2.2	< 1.9	< 1.9	< 0.9	< 1.9	< 1.6	< 3.7	< 2.2	< 10
SMR															
SMR															
SMR															
SMR															
SMR															
SMR	< 1.6	< 2.5	< 5.7	< 1.9	< 2.5	< 10	< 2.2	< 1.9	< 1.9	< 0.9	< 1.9	< 1.6	< 3.7	< 2.2	< 10
SMR															
SMR															
SMR															
SMR															
SMR															
SMR	< 1.6	< 2.5	< 5.7	< 1.9	< 2.5	< 10	< 2.2	< 1.9	< 1.9	< 0.9	< 1.9	< 1.6	< 3.7	< 2.2	< 10
SMR															
SMR															
SMR															
SMR															
SMR															
SMR	< 1.6	< 2.5	< 5.7	< 1.9	< 2.5	< 10	< 2.2	< 1.9	< 1.9	< 0.9	< 1.9	< 1.6	< 3.7	< 2.2	< 10
SMR															
SMR															
SMR															
SMR															
SMR															
SMR	< 1.6	< 2.5	< 5.7	< 1.9	< 2.5	< 10	< 2.2	< 1.9	< 1.9	< 0.9	< 1.9	< 1.6	< 3.7	< 2.2	< 10
SMR															
SMR															
SMR															
SMR															
SMR															
SMR	< 1.6	< 2.5	< 5.7	< 1.9	< 2.5	< 10	< 2.2	< 1.9	< 1.9	< 0.9	< 1.9	< 1.6	< 3.7	< 2.2	< 10
SMR															
SMR															

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Data	Nitrobenzene		N-Nitrosodimethylamine		N-Nitrosodi-n-Propylamine		N-Nitrosodiphenylamine		Phenanthrene		Pyrene		1,2,4-Trichlorobenzene		Aldrin		Alpha-BHC		Beta-BHC		Gamma-BHC		Delta-BHC		Chlordane		p,p'-DDT		p,p'-DDE		p,p'-DDD
Source	95		96		97		98		99		100		101		102		103		104		105		106		107		108		109		110
ata points	10		10		10		10		10		10		10		10		10		10		10		10		10		9		9		10
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	1.9	<	0.15	<	10	<	10	<	5.4	<	1.9	<	1.9	<	0.004	<	0.003	<	0.006	<	0.004	<	0.009	<	0.014	<	4.700	<	5.600	<	2.800
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	1.9	<	0.15	<	10	<	10	<	5.4	<	1.9	<	1.9	<	0.004	<	0.003	<	0.006	<	0.004	<	0.009	<	0.014	<	4.700	<	5.600	<	2.800
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	1.9	<	0.15	<	10	<	10	<	5.4	<	1.9	<	1.9	<	0.004	<	0.003	<	0.006	<	0.004	<	0.009	<	0.014	<	4.700	<	5.600	<	2.800
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	1.9	<	0.15	<	10	<	10	<	5.4	<	1.9	<	1.9	<	0.004	<	0.003	<	0.006	<	0.004	<	0.009	<	0.014					<	2.800
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	1.9	<	0.15	<	10	<	10	<	5.4	<	1.9	<	1.9	<	0.004	<	0.003	<	0.006	<	0.004	<	0.009	<	0.014	<	4.700	<	5.600	<	2.800
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	1.9	<	0.15	<	10	<	10	<	5.4	<	1.9	<	1.9	<	0.004	<	0.003	<	0.006	<	0.004	<	0.009	<	0.014	<	4.700	<	5.600	<	2.800
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	1.9	<	0.15	<	10	<	10	<	5.4	<	1.9	<	1.9	<	0.004	<	0.003	<	0.006	<	0.004	<	0.009	<	0.014	<	4.700	<	5.600	<	2.800
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	1.9	<	0.15	<	10	<	10	<	5.4	<	1.9	<	1.9	<	0.004	<	0.003	<	0.006	<	0.004	<	0.009	<	0.014	<	4.700	<	5.600	<	2.800
SMR																															
SMR																															

hmen

Data		Dieldrin		Endosulfan I		Endosulfan II		Endosul Sulf		Endrin		Endrin Aldeh		Heptachlor		Heptachlor Ep		PCB 1016		PCB 1221		PCB 1232		PCB 1242		PCB 1248		PCB 1254		PCB 1260	
Source		111		112		113		114		115		116		117		118		119		120		121		122		123		124		125	
ata points		9		10		10		9		9		9		9		9		10		10		10		10		10		10		10	
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	<	0.002	<	0.014	<	0.004	<	0.066	<	0.006	<	0.023	<	0.003	<	0.083	<	0.065	<	0.065	<	0.065	<	0.065	<	0.065	<	0.065	<	0.065	<
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	<	0.002	<	0.014	<	0.004	<	0.066	<	0.006	<	0.023	<	0.003	<	0.083	<	0.065	<	0.065	<	0.065	<	0.065	<	0.065	<	0.065	<	0.065	<
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	<	0.002	<	0.014	<	0.004	<	0.066	<	0.006	<	0.023	<	0.003	<	0.083	<	0.065	<	0.065	<	0.065	<	0.065	<	0.065	<	0.065	<	0.065	<
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR			<	0.014	<	0.004											<	0.390	<	0.390	<	0.390	<	0.390	<	0.390	<	0.390	<	0.390	<
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	<	0.002	<	0.014	<	0.004	<	0.066	<	0.006	<	0.023	<	0.003	<	0.083	<	0.065	<	0.065	<	0.065	<	0.065	<	0.065	<	0.065	<	0.065	<
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	<	0.002	<	0.014	<	0.004	<	0.066	<	0.006	<	0.023	<	0.003	<	0.083	<	0.065	<	0.065	<	0.065	<	0.065	<	0.065	<	0.065	<	0.065	<
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	<	0.002	<	0.014	<	0.004	<	0.066	<	0.006	<	0.023	<	0.003	<	0.083	<	0.065	<	0.065	<	0.065	<	0.065	<	0.065	<	0.065	<	0.065	<
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	<	0.002	<	0.014	<	0.004	<	0.066	<	0.006	<	0.023	<	0.003	<	0.083	<	0.065	<	0.065	<	0.065	<	0.065	<	0.065	<	0.065	<	0.065	<
SMR																															
SMR																															
SMR																															
SMR																															
SMR																															
SMR	<	0.002	<	0.014	<	0.004	<	0.066	<	0.006	<	0.023	<	0.003	<	0.083	<	0.065	<	0.065	<	0.065	<	0.065	<	0.065	<	0.065	<	0.065	<
SMR																															
SMR																															
SMR																															

hmen	
	Toxaphene
Data	
Source	126
ata points	10
SMR	
SMR	
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SMR	
SMR	
SMR	10.000
SMR	
SMR	
SMR	
SMR	
SMR	
SMR	10.000
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SMR	10.000
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SMR	

Attachment K-3 Receiving

R3 Pesticides & PCBs	2-Feb-13	7-Aug-12	7-Feb-12	9-Aug-11	1-Feb-11	8-Aug-10	2-Feb-10	4-Aug-09	4-Feb-09	5-Aug-08	5-Feb-08	Max
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	
Aldrin	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	
alpha-BHC	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	
beta-BHC	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	
gamma-BHC	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	
delta-BHC	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	
Chlordane	<.014	<.014	<.014	<.014	<.014	<.014	<.014	<.014	<.014	<.014	<.014	
4,4-DDT	<4.700	<4.700	<4.700	<4.700	<4.700	<4.700	<4.700	<4.700	<4.700	<4.700	<4.700	
4,4-DDE	<5.600	<5.600	<5.600	<5.600	<5.600	<5.600	<5.600	<5.600	<5.600	<5.600	<5.600	
4,4-DDD	<2.800	<2.800	<2.800	<2.800	<2.800	<2.800	<2.800	<2.800	<2.800	<2.800	<2.800	
Dieldrin	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
alpha-Endosulfan	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	
beta-Endosulfan	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	
Endosulfan Sulfate	<.066	<.066	<.066	<.066	<.066	<.066	<.066	<.066	<.066	<.066	<.066	
Endrin	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	
Endrin Aldehyde	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	
Heptachlor	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	
Heptachlor Epoxide	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	
Malathion	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	
Mirex	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	
Methoxychlor	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	
PCB-1016	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	
PCB-1221	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	
PCB-1232	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	
PCB-1242	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	
PCB-1248	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	
PCB-1254	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	
PCB-1260	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	
Toxaphene	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	

R4 Pesticides & PCBs	2-Feb-13	7-Aug-12	7-Feb-12	9-Aug-11	1-Feb-11	8-Aug-10	2-Feb-10	4-Aug-09	4-Feb-09	5-Aug-08	5-Feb-08	Max
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	
Aldrin	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	
alpha-BHC	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	
beta-BHC	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	
gamma-BHC	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	
delta-BHC	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	
Chlordane	<.014	<.014	<.014	<.014	<.014	<.014	<.014	<.014	<.014	<.014	<.014	
4,4-DDT	<4.700	<4.700	<4.700	<4.700	<4.700	<4.700	<4.700	<4.700	<4.700	<4.700	<4.700	
4,4-DDE	<5.600	<5.600	<5.600	<5.600	<5.600	<5.600	<5.600	<5.600	<5.600	<5.600	<5.600	
4,4-DDD	<2.800	<2.800	<2.800	<2.800	<2.800	<2.800	<2.800	<2.800	<2.800	<2.800	<2.800	
Dieldrin	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
alpha-Endosulfan	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	
beta-Endosulfan	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	
Endosulfan Sulfate	<.066	<.066	<.066	<.066	<.066	<.066	<.066	<.066	<.066	<.066	<.066	
Endrin	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	
Endrin Aldehyde	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	
Heptachlor	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	
Heptachlor Epoxide	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	
Malathion	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	
Mirex	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	
Methoxychlor	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	
PCB-1016	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	
PCB-1221	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	
PCB-1232	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	
PCB-1242	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	
PCB-1248	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	
PCB-1254	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	
PCB-1260	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	
Toxaphene	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	

R5 Pesticides & PCBs	2-Feb-13	7-Aug-12	7-Feb-12	9-Aug-11	1-Feb-11	8-Aug-10	2-Feb-10	4-Aug-09	4-Feb-09	5-Aug-08	Max
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	
Aldrin	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	
alpha-BHC	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	
beta-BHC	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	
gamma-BHC	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	
delta-BHC	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	
Chlordane	<.014	<.014	<.014	<.014	<.014	<.014	<.014	<.014	<.014	<.014	
4,4-DDT	<4.700	<4.700	<4.700	<4.700	<4.700	<4.700	<4.700	<4.700	<4.700	<4.700	
4,4-DDE	<5.600	<5.600	<5.600	<5.600	<5.600	<5.600	<5.600	<5.600	<5.600	<5.600	
4,4-DDD	<2.800	<2.800	<2.800	<2.800	<2.800	<2.800	<2.800	<2.800	<2.800	<2.800	
Dieldrin	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
alpha-Endosulfan	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	
beta-Endosulfan	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	
Endosulfan Sulfate	<.066	<.066	<.066	<.066	<.066	<.066	<.066	<.066	<.066	<.066	
Endrin	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	
Endrin Aldehyde	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	
Heptachlor	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	
Heptachlor Epoxide	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	
Malathion	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	
Mirex	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	
Methoxychlor	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	
PCB-1016	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	
PCB-1221	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	
PCB-1232	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	
PCB-1242	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	
PCB-1248	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	
PCB-1254	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	
PCB-1260	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	<.065	
Toxaphene	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	

R3 Metals	2-Feb-13	7-Aug-12	7-Feb-12	9-Aug-11	1-Feb-11	8-Aug-10	2-Feb-10	4-Aug-09	4-Feb-09	5-Aug-08	5-Feb-08	Max
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	
Aluminum	44.8	171	236	79.7	69.8	151.0	226.0	187.0	60.6	284.0	6520.0	6520.00
Antimony	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.00
Arsenic	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	7.7	<7.0	7.70
Barium	17.9	27.6	21.1	<2.0	<2.0	28.5	50.5	32.1	27.1	46.7	117	117.00
Beryllium	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.00
Cadmium	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	0.00
Chromium (III)	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0	9.05	9.05
Cobalt	<1.0	<1.0	<1.0	<1.0	2.62	<1.0	<1.0	<1.0	<1.0	<1.0	3.49	3.49
Lead	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	7.63	7.63
Molybdenum	10.1	13.6	9.77	11.3	12.4	8.76	9.58	10.6	13.5	16.5	12.1	16.50
Nickel	4.41	24.6	13.9	3.57	19.8	8.33	5.92	6.03	8.37	<1.0	50.2	50.20
Silver	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	0.00
Selenium	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	7.65	<2.0	7.65
Thallium	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.00
Tin	<100.0	<100.0	<100.0	<100.0	<100.0	<100.0	<100	<100.0	<100.0	<100.0	<100.0	0.00
Vanadium	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	19.2	19.20

R4 Metals	2-Feb-13	7-Aug-12	7-Feb-12	9-Aug-11	1-Feb-11	8-Aug-10	2-Feb-10	4-Aug-09	4-Feb-09	5-Aug-08	5-Feb-08	Max
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	
Aluminum	40.60	116	<3.0	132	37.5	69.0	176.0	118.0	591.0	284.0	**	581.00
Antimony	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**	
Arsenic	<2.0	<2.0	<2.0	7.35	<2.0	<2.0	<2.0	<2.0	<2.0	6.18	**	7.35
Barium	18.20	23.3	<2.0	<2.0	<2.0	30.2	59.4	24.4	34.4	26.2	**	59.40
Beryllium	<0.2	<0.2	<0.2	<0.2	<0.20	<.02	<0.20	<0.20	<0.20	<0.20	**	
Cadmium	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0		
Chromium (III)	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0	**	
Cobalt	<1.0	<1.0	<1.0	<1.0	4.97	<1.0	<1.0	<1.0	<1.0	<1.0	**	4.97
Lead	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**	
Molybdenum	9.79	11.4	<1.0	11.6	11.1	10.3	7.97	8.35	11.6	13.0	**	13.00
Nickel	8.04	30.2	1.46	4.43	12.6	6.54	5.96	5.12	7.13	<1.0	**	30.20
Silver	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2		
Selenium	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	8.07	**	8.07
Thallium	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**	
Tin	<100.0	<100.0	<100.0	<100.0	<100.0	<100	<100	<100.0	<100.0	<100.0	**	
Vanadium	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	**	

** -R4 metal analysis added to the permit in March 2008

R5 Metals	2-Feb-13	7-Aug-12	7-Feb-12	9-Aug-11	1-Feb-11	8-Aug-10	2-Feb-10	4-Aug-09	4-Feb-09	5-Aug-08	5-Feb-08	Max
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	
Aluminum	62.60	216	22.2	62.7	67.7	159.0	276.0	193.0	182.0	255.0	5360.0	5360.00
Antimony	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.00
Arsenic	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	6.20	<2.0	6.20
Barium	20.60	33.3	2.47	<2.0	6.44	30.7	59.4	34.2	41.5	47.3	110	110.00
Beryllium	<0.20	<0.2	<0.20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	0.00
Cadmium	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	0.00
Chromium (III)	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0	7.43	7.43
Cobalt	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.96	2.90
Lead	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5.54	5.54
Molybdenum	10.10	14.1	<1.0	15.3	12.5	10.7	9.49	10.5	15.0	16.8	12.4	16.80
Nickel	4.38	25	1.53	7.76	19.9	9.15	6.06	8.11	10.8	<1.0	42	42.00
Silver	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	0.00
Selenium	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	0.00
Thallium	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.00
Tin	<100.0	<100.0	<100.0	<100.0	<100.	<100.0	<100.0	<100.0	<100.0	<100.0	<100.0	0.00
Vanadium	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	16.6	16.60

R3 Metals	2-Feb-13	7-Aug-12	7-Feb-12	9-Aug-11	1-Feb-11	3-Aug-10	Max
Mercury	<.02	<.02	<.02	<.02	<.02	<.02	0.00
Zinc	19.5	8.21	15.3	32.40	12.00	16.1	32.40
Copper	<2	<2	3.01	2.33	2.62	<2	3.01
Cyanide	<5	<5	<5	<5	<5	<5	0.00

R4 Metals	2-Feb-13	7-Aug-12	7-Feb-12	9-Aug-11	1-Feb-11	3-Aug-10	Max
Mercury	<.02	<.02	<.02	<.02	<.02	<.02	
Zinc	13.5	17.1	<2	31.4	29.7	31.5	31.50
Copper	<2	<2	<2	<2	4.97	<2	4.97
Cyanide	<5	<5	<5	<5	<5	<5	

R5 Metals	2-Feb-13	7-Aug-12	7-Feb-12	9-Aug-11	1-Feb-11	3-Aug-10	Max
Mercury	<.02	<.02	<.02	<.02	<.02	<.02	
Zinc	20.1	7.75	<2	4.32	15.2	15.8	20.10
Copper	<2	<2	<2	<2	3.53	<2	3.53
Cyanide	<5	<5	<5	<5	<5	<5	

R3 Volatile Organic Compounds	2-Feb-13	7-Aug-12	7-Feb-12	9-Aug-11	1-Feb-11	8-Aug-10	2-Feb-10	4-Aug-09	4-Feb-09	5-Aug-08	5-Feb-08	Max
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	
Acrolein	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	0.00
Acrylonitrile	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.00
Acetone	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.47	<0.5	<0.5	2.47
Benzene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.00
Bromoform	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1.44	<0.2	<0.2	1.44
Carbon Tetrachloride	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	0.00
Chlorobenzene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.00
Dichlorobromomethane	<0.1	<0.1	0.365	2.84	0.28	<0.1	1.27	0.28	<0.10	<0.1	<0.1	2.84
Chloroethane	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	0.00
2-Chloroethylvinyl Ether	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	0.00
Chloroform	0.56	<0.05	0.77	7.02	0.37	9.55	2.79	<0.05	3.67	0.345	<0.05	9.55
Chlorodibromomethane	0.25	<0.09	<0.09	1.12	0.23	<.09	<.09	<.09	0.74	<0.09	<0.09	1.12
1,1-Dichloroethane	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	0.00
1,2-Dichloroethane	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.00
1,1-Dichloroethylene	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	0.00
1,2-Dichloropropane	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.00
1,3-Dichloropropylenes, S	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	0.00
Ethylbenzene	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	0.00
Methyl Bromide	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.00
Methyl Chloride	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	0.00
Methylene Chloride	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	0.00
1,1,2,2-Tetrachloroethan	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.00
Tetrachloroethylene	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.00
Toluene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.00
trans-1,2-Dichloroethylen	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00
1,1,1-Trichloroethane	<.0.03	<.0.03	<.0.03	<.0.03	<.0.03	<.0.03	<.0.03	<.0.03	<.0.03	<.0.03	<.0.03	0.00
1,1,2-Trichloroethane	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.00
Trichloroethylene	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	0.00
Trichlorotrifluoroethane	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.00
Vinyl Chloride	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	0.00
Xylenes, Total	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.00
Methyl Tert-butyl Ether (I	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	0.00

R4 Volatile Organic Compounds	2-Feb-13	7-Aug-12	7-Feb-12	9-Aug-11	1-Feb-11	8-Aug-10	2-Feb-10	4-Aug-09	4-Feb-09	5-Aug-08	5-Feb-08	Max
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L		
Acrolein	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	**	
Acrylonitrile	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**	
Acetone	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**	
Benzene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**	
Bromoform	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1.13	1.13	2.96	<0.2	**	2.96
Carbon Tetrachloride	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	**	
Chlorobenzene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**	
Dichlorobromomethane	0.33	1.21	0.46	4.33	0.94	0.46	4.89	1.37	<0.1	1.46	**	4.89
Chloroethane	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	**	
2-Chloroethylvinyl Ether	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	**	
Chloroform	0.69	2.99	1.12	10.9	2.79	3.02	7.99	4.01	2.96	4.99	**	10.90
Chlorodibromomethane	0.28	<0.09	<0.09	1.69	2.16	0.79	3.63	0.515	1.56	0.51	**	3.63
1,1-Dichloroethane	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	**	
1,2-Dichloroethane	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	**	
1,1-Dichloroethylene	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	**	
1,2-Dichloropropane	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	**	
1,3-Dichloropropylenes, S	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	**	
Ethylbenzene	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	**	
Methyl Bromide	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**	
Methyl Chloride	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	**	
Methylene Chloride	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	**	
1,1,2,2-Tetrachloroethan	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	**	
Tetrachloroethylene	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	**	
Toluene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**	
trans-1,2-Dichloroethylen	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**	
1,1,1-Trichloroethane	<.0.03	<.0.03	<.0.03	<.0.03	<.0.03	<.0.03	<.0.03	<.0.03	<.0.03	<.0.03	**	
1,1,2-Trichloroethane	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	**	
Trichloroethylene	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	**	
Trichlorotrifluoroethane	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**	
Vinyl Chloride	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	**	
Xylenes, Total	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**	
Methyl Tert-butyl Ether (I	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**	

R5 Volatile Organic Compounds	2-Feb-13	7-Aug-12	7-Feb-12	9-Aug-11	1-Feb-11	8-Aug-10	2-Feb-10	4-Aug-09	4-Feb-09	5-Aug-08	5-Feb-08	Max
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	
Acrolein	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	0.00
Acrylonitrile	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.00
Acetone	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.81	<0.5	<0.5	3.81
Benzene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.00
Bromoform	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.00
Carbon Tetrachloride	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	0.00
Chlorobenzene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.00
Dichlorobromomethane	0.18	<0.1	<0.1	<0.1	0.28	0.28	0.28	0.28	0.27	<0.1	<0.1	0.28
Chloroethane	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	0.00
2-Chloroethylvinyl Ether	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	0.00
Chloroform	0.51	<0.05	<0.05	<0.05	1.26	1.26	<0.05	<0.05	0.44	0.51	<0.05	1.26
Chlorodibromomethane	0.15	<0.09	<0.09	<0.09	0.71	0.71	<.09	<.09	0.27	<0.09	<0.09	0.71
1,1-Dichloroethane	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	0.00
1,2-Dichloroethane	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.00
1,1-Dichloroethylene	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	0.00
1,2-Dichloropropane	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.00
1,3-Dichloropropylenes, S	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	0.00
Ethylbenzene	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	0.00
Methyl Bromide	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.00
Methyl Chloride	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	0.00
Methylene Chloride	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	0.00
1,1,2,2-Tetrachloroethan	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.00
Tetrachloroethylene	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.00
Toluene	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.00
trans-1,2-Dichloroethylen	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.00
1,1,1-Trichloroethane	<.0.03	<.0.03	<.0.03	<.0.03	<.0.03	<.0.03	<.0.03	<.0.03	<.0.03	<.0.03	<.0.03	0.00
1,1,2-Trichloroethane	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.00
Trichloroethylene	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	0.00
Trichlorotrifluoroethane	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.00
Vinyl Chloride	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	0.00
Xylenes, Total	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.00
Methyl Tert-butyl Ether (I	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	0.00

R3	2-Feb-13	7-Aug-12	7-Feb-12	9-Aug-11	1-Feb-11	8-Aug-10	2-Feb-10	4-Aug-09	4-Feb-09	5-Aug-08	5-Feb-08
	ug/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L
Dioxin	<5.0	<5.0	<5.0	<4.9	<4.9	<5.0	<.320	<5.2	<0.290	<0.200	<0.011

R4	2-Feb-13	7-Aug-12	7-Feb-12	9-Aug-11	1-Feb-11	8-Aug-10	2-Feb-10	4-Aug-09	4-Feb-09	5-Aug-08	5-Feb-08	Max
	ug/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	
Dioxin	<5.0	<5.0	<5.0	<4.9	<4.9	<5.0	<0.34	<5.2	<0.290	<0.200	**	

R5	2-Feb-13	7-Aug-12	7-Feb-12	9-Aug-11	1-Feb-11	8-Aug-10	2-Feb-10	4-Aug-09	4-Feb-09	5-Aug-08	5-Feb-08	Max
	ug/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	
Dioxin	<5.0	<5.0	<5.0	<4.9	<4.9	<5.0	<0.43	<5.0	<.290	<0.200	<.240	

R3 Acid Extractibles	2-Feb-13	7-Aug-12	7-Feb-12	9-Aug-11	1-Feb-11	8-Aug-10	2-Feb-10	4-Aug-09	4-Feb-09	5-Aug-08	5-Feb-08	Max
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	
2-Chlorophenol	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	
2,4-Dichlorophenol	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	
2,4-Dimethylphenol	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	
2-Methyl-4,6-Dinitrophen	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
2,4-Dinitrophenol	<42.0	<42.0	<42.0	<42.0	<42.0	<42.0	<42.0	<42.0	<42.0	<42.0	<42.0	
2-Nitrophenol	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	
4-Nitrophenol	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	
3-Methyl-4-Chlorophenol	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	
Pentachlorophenol	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	
Phenol, Single Compounc	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	
2,4,6-Trichlorophenol	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	

R4 Acid Extractibles	2-Feb-13	7-Aug-12	7-Feb-12	9-Aug-11	1-Feb-11	8-Aug-10	2-Feb-10	4-Aug-09	4-Feb-09	5-Aug-08	5-Feb-08	Max
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	
2-Chlorophenol	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	**	
2,4-Dichlorophenol	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	**	
2,4-Dimethylphenol	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	**	
2-Methyl-4,6-Dinitrophen	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	**	
2,4-Dinitrophenol	<42.0	<42.0	<42.0	<42.0	<42.0	<42.0	<42.0	<42.0	<42.0	<42.0	**	
2-Nitrophenol	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	**	
4-Nitrophenol	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	**	
3-Methyl-4-Chlorophenol	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	**	
Pentachlorophenol	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	**	
Phenol, Single Compounc	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	**	
2,4,6-Trichlorophenol	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	**	

R5 Acid Extractibles	2-Feb-13	7-Aug-12	7-Feb-12	9-Aug-11	1-Feb-11	8-Aug-10	2-Feb-10	4-Aug-09	4-Feb-09	5-Aug-08	5-Feb-08	
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	Max
2-Chlorophenol	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	
2,4-Dichlorophenol	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	
2,4-Dimethylphenol	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	
2-Methyl-4,6-Dinitrophen	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
2,4-Dinitrophenol	<42.0	<42.0	<42.0	<42.0	<42.0	<42.0	<42.0	<42.0	<42.0	<42.0	<42.0	
2-Nitrophenol	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	
4-Nitrophenol	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	
3-Methyl-4-Chlorophenol	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	
Pentachlorophenol	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	
Phenol, Single Compounc	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	
2,4,6-Trichlorophenol	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	

R3 Base/Neutral Extractibles	2-Feb-13	7-Aug-12	7-Feb-12	9-Aug-11	1-Feb-11	8-Aug-10	2-Feb-10	4-Aug-09	4-Feb-09	5-Aug-08	5-Feb-08	Max
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	
Acenaphthene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
Acenaphthylene	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	
Anthracene	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	
Benzidine	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	
Benzo(a)anthracene	<7.8	<7.8	<7.8	<7.8	<7.8	<7.8	<7.8	<7.8	<7.8	<7.8	<7.8	
Benzo(a)pyrene	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
Benzo(b)fluoranthene	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	
Benzo(ghi)perylene	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	
Benzo(k)fluoranthene	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	

R4 Base/Neutral Extractibles	2-Feb-13	7-Aug-12	7-Feb-12	9-Aug-11	1-Feb-11	8-Aug-10	2-Feb-10	4-Aug-09	4-Feb-09	5-Aug-08	5-Feb-08	Max
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	
Acenaphthene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**	
Acenaphthylene	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	**	
Anthracene	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	**	
Benzidine	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	**	
Benzo(a)anthracene	<7.8	<7.8	<7.8	<7.8	<7.8	<7.8	<7.8	<7.8	<7.8	<7.8	**	
Benzo(a)pyrene	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	**	
Benzo(b)fluoranthene	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	**	
Benzo(ghi)perylene	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	**	
Benzo(k)fluoranthene	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	**	

R5 Base/Neutral Extractibles	2-Feb-13	7-Aug-12	7-Feb-12	9-Aug-11	1-Feb-11	8-Aug-10	2-Feb-10	4-Aug-09	4-Feb-09	5-Aug-08	5-Feb-08	
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	Max
Acenaphthene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
Acenaphthylene	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	
Anthracene	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	
Benzidine	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	
Benzo(a)anthracene	<7.8	<7.8	<7.8	<7.8	<7.8	<7.8	<7.8	<7.8	<7.8	<7.8	<7.8	
Benzo(a)pyrene	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
Benzo(b)fluoranthene	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	
Benzo(ghi)perylene	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	
Benzo(k)fluoranthene	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	

Bis (2-Chloroethoxy) Meth	<5.3	<5.3	<5.3	<5.3	<5.3	<5.3	<5.3	<5.3	<5.3	<5.3	<5.3			<5.3	<5.3	<5.3	<5.3	<5.3	<5.3	<5.3	<5.3	<5.3	<5.3	--			<5.3	<5.3	<5.3	<5.3	<5.3	<5.3	<5.3	<5.3	<5.3	<5.3	<5.3	
Bis (2-Chloroethyl) Ether	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7			<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	--			<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	
Bis (chloromethyl) Ether	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7			<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	--			<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	
Bis (2-Chloroisopropyl) E	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7			<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	--			<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	
Bis (2-Ethylhexyl) Phthal	<2.5	<2.5	<2.5	<2.5	<2.5	7.1	<2.5	<2.5	<2.5	<2.5	<2.5	7.10		<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	--			<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
4-Bromophenyl Phenyl E	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9			<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	--			<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	
Butylbenzyl Phthalate	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5			<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	--			<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
2-Chloronaphthalene	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9			<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	--			<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	
4-Chlorophenyl Phenyl E	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2			<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	--			<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	
Chrysene	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0			<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	--			<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
Dibenzo(a,h)anthracene	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5			<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	--			<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
1,2-Dichlorobenzene	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9			<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	--			<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	
1,3-Dichlorobenzene	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5			<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	--			<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
1,4-Dichlorobenzene	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4			<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	--			<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	
3,3-Dichlorobenzidine	<16.5	<16.5	<16.5	<16.5	<16.5	<16.5	<16.5	<16.5	<16.5	<16.5	<16.5			<16.5	<16.5	<16.5	<16.5	<16.5	<16.5	<16.5	<16.5	<16.5	<16.5	--			<16.5	<16.5	<16.5	<16.5	<16.5	<16.5	<16.5	<16.5	<16.5	<16.5	<16.5	
Diethyl Phthalate	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2			<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	--			<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	
Dimethyl Phthalate	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6			<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	--			<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	
Di-n-butyl Phthalate	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5			<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	--			<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
2,4-Dinitrotoluene	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7			<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	--			<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	
2,6-Dinitrotoluene	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9			<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	--			<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	
Di-n-octyl Phthalate	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5			<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	--			<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
1,2-Diphenylhydrazine	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	--			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Fluoranthene	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2			<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	--			<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	
Fluorene	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9			<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	--			<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	
Hexachlorobenzene	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9			<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	--			<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	
Hexachlorobutadiene	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9			<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	--			<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	
Hexachlorocyclopentadie	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9			<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	--			<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	
Hexachloroethane	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6			<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	--			<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	
Indeno (1,2,3-cd) Pyrene	<3.7	<3.7	<3.7	<3.7	<3.7	<3.7	<3.7	<3.7	<3.7	<3.7	<3.7			<3.7	<3.7	<3.7	<3.7	<3.7	<3.7	<3.7	<3.7	<3.7	<3.7	--			<3.7	<3.7	<3.7	<3.7	<3.7	<3.7	<3.7	<3.7	<3.7	<3.7	<3.7	
Isophorone	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2			<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	--			<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	
Naphthalene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	--			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Nitrobenzene	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9			<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	--			<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	
N-Nitrosodimethylamine	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15			<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	--			<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	
N-Nitrosodi-n-Propylamin	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	--			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
N-Nitrosodiphenylamine	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	--			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Phenanthrene	<5.4	<5.4	<5.4	<5.4	<5.4	<5.4	<5.4	<5.4	<5.4	<5.4	<5.4			<5.4	<5.4	<5.4	<5.4	<5.4	<5.4	<5.4	<5.4	<5.4	<5.4	--			<5.4	<5.4	<5.4	<5.4	<5.4	<5.4	<5.4	<5.4	<5.4	<5.4	<5.4	
Pyrene	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9			<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	--			<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	
1,2,4-Trichlorobenzene	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9			<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	--			<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	

Attachment K-4 Non Priority Effluent Data

MBAS, Toxcity, Oil and Grease, BOD, Suspended Solids, Settleable Solids, Residual Chlorine, Coliform, Temperature

	Effluent Grease & Oil	Effluent MBAS	Effluent MBAS	Chronic Toxicity - Selenastrum	Chronic Fathead Larvae - Growth *	Chronic Fathead Larvae- Survival *	Chronic Ceriodaphnia - Survival *	Chronic Ceriodaphnia - Reproduction *		
Month	MG/L	standard method	mg/L	TUc	TUc	TUc	TUc	TUc	Annual Test	
maximum	6.5	0	0.16	6.25	1	1	1	1.79	1.79	
Jan 2008	4.9075	<.5	0.086	1	1	1	1	1		
Feb 2008	4.685	<.5	0.01	1	1	1	1	1.79		
Mar 2008	3.2675	<.5	0.01	1						
Apr 2008	4.474	<.5	0.01	1						
May 2008	1.25	<5	0.04	1.79						
Jun 2008	4.745	<.5	0.013	1						
Jul 2008	2.65	<.5	0.003	1						
Aug 2008	1.91	<.5		1						
Sep 2008	4.94	<.5	0.005	1						
Oct 2008	4.4425	<.5	0.098	1						
Nov 2008	3.71	<.5	0.065	1						
Dec 2008	3.01	<.5	0.14	1						
Jan 2009	4.575	<.5	0.02	1						
Feb 2009	2.7175	<.5	0.08	1						
Mar 2009	1.38	<.5	0.09	1						
Apr 2009	1.525	<.5	0.16	1						
May 2009	2.435	<.5		1						
Jun 2009	1.946	<.5		1						
Jul 2009	1.085	<.5		6.25						
Aug 2009	1.394	<.5		3.13						
Sep 2009	2.2175	<.5		1.395						
Oct 2009	1.8175	<.5		1						
Nov 2009	1.188	<.5		1						
Dec 2009	1.6475	<.5		1						
Jan 2010	1.605	<.5		1						
Feb 2010	2.135	<.5		1						
Mar 2010	<1.0	<.5		1						
Apr 2010	3.5	<.5		1						
May 2010	3.25	<.5		1						
Jun 2010	1.6575	<.5		1						
Jul 2010	<1.0	<.5		1						
Aug 2010	<1.0	<.5		1						
Sep 2010	2.475	<.5		1						
Oct 2010	<4.0	<.5		1						
Nov 2010	<5.0	<.5		1	1	1	1	1		
Dec 2010	1.2	<.5		1	1	1	1	1		
Jan 2011	<1.0	<.5	0.12	1	1	1	1	1		
Feb 2011	1.8	<.5	0.15	1						
Mar 2011	<1.0	<.5	0.05	1						
Apr 2011	1	<.5	0.06	1						
May 2011	<1.0	<.5	0.11	1						
Jun 2011	3.25	<.5	0.11	1						
Jul 2011	<1.0	<.5	0.07	1						
Aug 2011	<1.0	<.5	0.12	1						
Sep 2011	<1.0	<.5	0.07	1						
Oct 2011	<1.0	<.5	0.04	1						
Nov 2011	3.725	<.5	0.1	1						
Dec 2011	4.15	<.5	0.08	1						
Jan 2012	1.7	<0.50	0.14	1						
Feb 2012	1.3	<0.50	0.09	1						
Mar 2012	2.7	<0.50	0.06	1						
Apr 2012	3.4	<0.50	0.02	1						
May 2012	3.1	<0.50	0.06	1.79						
Jun 2012	2.5	<0.50	0.06	1						
Jul 2012	1.6	<0.50	0.07	1						
Aug 2012	2.2	<0.50	0.1	1						
Sep 2012	2.9	<0.50	0.06	1						
Oct 2012	5	<0.50	0.1	1						
Nov 2012	4.5	<0.50	0.1	1	1	1	1	1	1.79	
Dec 2012	4.3	<0.50	0.07	1						
Jan-2013	6.5	<0.50	0.09	1						
Feb-2013	4.8	<0.50	0.05	1						
Mar-2013	3.9			1						
Apr-2013	4.6			1						
maximum	6.5		0.16	6.25	1	1	1	1.79	1.79	
minimum	1		0.003	1	1	1	1	1	1.79	
average	2.935903846		0.072682927	1.146171875	1	1	1	1.131666667	1.79	
count	52		41	64	6	6	6	6	1	
stdeve	1.348864833		0.041062973	0.708609853	0	0	0	0.294415617	0	
coefficient of variation	0.459437674		0.564960368	0.618240482	0	0	0	0.260161075	0	

Electronically reported after NDN	Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C)				Chlorine, Total Residual	Settleable Solids		Total Suspended Solids (TSS)				Coliform		Temperature		Total Dissolved Solids	
	Monthly Average (Mean)	Min Percent Reduction	Single	Weekly Average (Mean)	Daily Maximum	Daily Maximum	Monthly Average (Mean)	Monthly Average of Daily	Min	Single	Weekly Average (Mean)	Fecal	Total	ave	max	ave	max

	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	F	F	mg/L	mg/L
maximum	3.3	97.5	7	4	0.27	0.1	0.1	1.46	98.5	4.36	2	2	30	73.3	80.2	1470	1698
	=	=	=	=	0	<	<	=		=	=	=	=	=	=	=	=

Attachment K-5 Nitrate, Nitrite, Phosphorus Effluent and Receiving

Nitrate Effluent

Parameter		Result	1/2 for ND	Units	Sample Date
Nitrate,	=	12.3		mg/L	09/08/2011
Nitrate,	=	9.2		mg/L	10/10/2011
Nitrate,	=	6.2		mg/L	11/02/2011
Nitrate,	=	7.6		mg/L	12/12/2011
Nitrate,	=	8.2		mg/L	01/18/2012
Nitrate,	=	7.6		mg/L	02/07/2012
Nitrate,	=	7.6		mg/L	03/06/2012
Nitrate,	=	6.9		mg/L	04/04/2012
Nitrate,	=	8.5		mg/L	05/01/2012
Nitrate,	=	7.3		mg/L	06/04/2012
Nitrate,	=	9.3		mg/L	07/04/2012
Nitrate,	=	8.9		mg/L	08/02/2012
Nitrate,	=	8.3		mg/L	10/03/2012
Nitrate,	=	8.3		mg/L	10/03/2012
Nitrate,	=	7.2		mg/L	11/05/2012
Nitrate,	=	6.2		mg/L	12/03/2012
Nitrate,	=	8.4		mg/L	1/31/2013
Nitrate,	=	9.2		mg/L	2/28/2013
Nitrate,	=	8.3		mg/L	3/31/2013
Nitrate,	=	5.4		mg/L	4/30/2013
maximum		12.3			
minimum		5.4			
average		8.045			
count		20			
stdevp		1.4249737			
coefficient		0.17712211			

Nitrite Effluent

Parameter		Result	1/2 ND	Units	Sample Date
Nitrite, Total	ND	0	0.2	mg/L	09/08/2011
Nitrite, Total	ND	0	0.2	mg/L	10/10/2011
Nitrite, Total	ND	0	0.2	mg/L	11/02/2011
Nitrite, Total	ND	0	0.2	mg/L	12/12/2011
Nitrite, Total	ND	0	0.2	mg/L	01/18/2012
Nitrite, Total	ND	0	0.2	mg/L	02/07/2012
Nitrite, Total	ND	0	0.2	mg/L	03/06/2012
Nitrite, Total	ND	0	0.2	mg/L	04/04/2012
Nitrite, Total	ND	0	0.2	mg/L	05/01/2012
Nitrite, Total	ND	0	0.2	mg/L	06/04/2012
Nitrite, Total	ND	0	0.2	mg/L	07/04/2012
Nitrite, Total	ND	0	0.2	mg/L	08/02/2012
Nitrite, Total	ND	0	0.2	mg/L	10/03/2012
Nitrite, Total	ND	0	0.2	mg/L	10/03/2012
Nitrite, Total	ND	0	0.2	mg/L	11/05/2012
Nitrite, Total	ND	0	0.2	mg/L	12/03/2012
Nitrite, Total	ND	0	0.2	mg/L	1/31/2013
Nitrite, Total	ND	0	0.2	mg/L	2/28/2013
Nitrite, Total	ND	0	0.2	mg/L	3/31/2013
Nitrite, Total	ND	0	0.2	mg/L	4/30/2013
maximum			0.2		
minimum			0.2		
average			0.2		
count			20		
stdevp			2.7756E-17		
coefficient			1.3878E-16		

Nitrate Receiving

Location	Parameter		Results	1/2 ND	Units	Sample Date
R-001	Nitrate,	=	3.2	3.2	mg/L	09/06/2011
R-003	Nitrate,	=	3.9	3.9	mg/L	09/06/2011
R-004	Nitrate,	=	4.1	4.1	mg/L	09/06/2011
R-005	Nitrate,	=	4.1	4.1	mg/L	09/06/2011
R-001	Nitrate,	=	3.6	3.6	mg/L	10/04/2011
R-003	Nitrate,	=	6.5	6.5	mg/L	10/04/2011
R-004	Nitrate,	=	7.3	7.3	mg/L	10/04/2011
R-005	Nitrate,	=	5	5	mg/L	10/04/2011
R-002	Nitrate,	=	3.8	3.8	mg/L	10/18/2011
R-001	Nitrate,	=	2.4	2.4	mg/L	11/01/2011
R-002	Nitrate,	=	3	3	mg/L	11/01/2011
R-003	Nitrate,	=	4.9	4.9	mg/L	11/01/2011
R-004	Nitrate,	=	5.7	5.7	mg/L	11/01/2011
R-005	Nitrate,	=	2.9	2.9	mg/L	11/01/2011
R-001	Nitrate,	=	2.1	2.1	mg/L	12/06/2011
R-002	Nitrate,	=	3.6	3.6	mg/L	12/06/2011
R-003	Nitrate,	=	4.5	4.5	mg/L	12/06/2011
R-003	Nitrate,	=	4.5	4.5	mg/L	12/06/2011
R-004	Nitrate,	=	4.6	4.6	mg/L	12/06/2011
R-005	Nitrate,	=	3.4	3.4	mg/L	12/06/2011
R-001	Nitrate,	=	3.4	3.4	mg/L	01/18/2012
R-002	Nitrate,	=	4	4	mg/L	01/18/2012
R-003	Nitrate,	=	4.8	4.8	mg/L	01/18/2012
R-004	Nitrate,	=	4.5	4.5	mg/L	01/18/2012
R-005	Nitrate,	=	3.8	3.8	mg/L	01/18/2012
R-001	Nitrate,	=	3.3	3.3	mg/L	02/07/2012
R-002	Nitrate,	=	3.8	3.8	mg/L	02/07/2012
R-003	Nitrate,	=	4.2	4.2	mg/L	02/07/2012
R-004	Nitrate,	=	4.4	4.4	mg/L	02/07/2012
R-005	Nitrate,	=	3.8	3.8	mg/L	02/07/2012
R-001	Nitrate,	=	3.3	3.3	mg/L	03/06/2012
R-002	Nitrate,	=	3.8	3.8	mg/L	03/06/2012
R-003	Nitrate,	=	4.1	4.1	mg/L	03/06/2012
R-004	Nitrate,	=	5	5	mg/L	03/06/2012
R-005	Nitrate,	=	3.8	3.8	mg/L	03/06/2012
R-002	Nitrate,	=	1.6	1.6	mg/L	04/03/2012
R-003	Nitrate,	=	1.5	1.5	mg/L	04/03/2012
R-004	Nitrate,	=	9.4	9.4	mg/L	04/03/2012
R-005	Nitrate,	=	3.4	3.4	mg/L	04/03/2012
R-001	Nitrate,	=	1.8	1.8	mg/L	04/24/2012
R-002	Nitrate,	=	0.9	0.9	mg/L	05/01/2012
R-003	Nitrate,	=	0.9	0.9	mg/L	05/01/2012
R-004	Nitrate,	=	3.7	3.7	mg/L	05/01/2012
R-005	Nitrate,	=	2.7	2.7	mg/L	05/01/2012
R-001	Nitrate,	=	1.2	1.2	mg/L	06/05/2012
R-002	Nitrate,	=	2.8	2.8	mg/L	06/05/2012
R-003	Nitrate,	=	3.8	3.8	mg/L	06/05/2012
R-004	Nitrate,	=	5.1	5.1	mg/L	06/05/2012
R-005	Nitrate,	=	2.4	2.4	mg/L	06/05/2012
R-001	Nitrate,	=	1.2	1.2	mg/L	07/04/2012
R-002	Nitrate,	=	0.9	0.9	mg/L	07/04/2012
R-003	Nitrate,	=	0.8	0.8	mg/L	07/04/2012
R-004	Nitrate,	=	6.3	6.3	mg/L	07/04/2012
R-005	Nitrate,	=	0.9	0.9	mg/L	07/04/2012
R-001	Nitrate,	=	0.4	0.4	mg/L	08/07/2012
R-002	Nitrate,	=	0.4	0.4	mg/L	08/07/2012
R-003	Nitrate,	=	0.5	0.5	mg/L	08/07/2012
R-004	Nitrate,	=	2.7	2.7	mg/L	08/07/2012
R-005	Nitrate,	=	0.8	0.8	mg/L	08/07/2012
R-001	Nitrate,	ND	0	0.2	mg/L	09/11/2012
R-003	Nitrate,	=	0.8	0.8	mg/L	09/11/2012
R-004	Nitrate,	=	7.4	7.4	mg/L	09/11/2012
R-005	Nitrate,	ND	0	0.2	mg/L	09/11/2012
R-001	Nitrate,	ND	0	0.2	mg/L	10/02/2012
R-002	Nitrate,	ND	0	0.2	mg/L	10/02/2012
R-003	Nitrate,	ND	0	0.2	mg/L	10/02/2012
R-004	Nitrate,	ND	0	0.2	mg/L	10/02/2012
R-005	Nitrate,	ND	0	0.2	mg/L	10/02/2012
R-001	Nitrate,	=	0.5	0.5	mg/L	11/13/2012
R-002	Nitrate,	=	0.9	0.9	mg/L	11/13/2012
R-003	Nitrate,	=	1.1	1.1	mg/L	11/13/2012
R-004	Nitrate,	=	2.5	2.5	mg/L	11/13/2012
R-005	Nitrate,	=	1.2	1.2	mg/L	11/13/2012
R-001	Nitrate,	=	1	1	mg/L	12/04/2012
R-002	Nitrate,	=	1.7	1.7	mg/L	12/04/2012
R-002	Nitrate,	=	1.7	1.7	mg/L	12/04/2012
R-003	Nitrate,	=	2	2	mg/L	12/04/2012
R-004	Nitrate,	=	2.8	2.8	mg/L	12/04/2012
R-005	Nitrate,	=	1.7	1.7	mg/L	12/04/2012
R-001	Nitrate,	=				1/2/2013
R-002	Nitrate,	=				1/2/2013
R-003	Nitrate,	=	2.8	2.8	mg/L	1/2/2013
R-004	Nitrate,	=	3.2	3.2	mg/L	1/2/2013
R-005	Nitrate,	=	3.1	3.1	mg/L	1/2/2013
R-001	Nitrate,	=			mg/L	2/5/2013
R-002	Nitrate,	=			mg/L	2/5/2013
R-003	Nitrate,	=	3.7	3.7	mg/L	2/5/2013
R-004	Nitrate,	=	3.8	3.8	mg/L	2/5/2013
R-005	Nitrate,	=	3.1	3.1	mg/L	2/5/2013
R-001	Nitrate,	=			mg/L	3/5/2013
R-002	Nitrate,	=			mg/L	3/5/2013
R-003	Nitrate,	=	1.7	1.7	mg/L	3/5/2013
R-004	Nitrate,	=	2.5	2.5	mg/L	3/5/2013
R-005	Nitrate,	=	1.5	1.5	mg/L	3/5/2013
R-001	Nitrate,	=			mg/L	4/9/2013
R-002	Nitrate,	=			mg/L	4/9/2013
R-003	Nitrate,	=	0	0	mg/L	4/9/2013
R-004	Nitrate,	=	0.8	0.8	mg/L	4/9/2013
R-005	Nitrate,	=	0	0	mg/L	4/9/2013

Nitrite Receiving

Location	Parameter		Result	1/2 ND	Units	Sample Date
R-001	Nitrite, Total	=	0.5		mg/L	09/06/2011
R-003	Nitrite, Total	=	0.7		mg/L	09/06/2011
R-004	Nitrite, Total	=	0.7		mg/L	09/06/2011
R-005	Nitrite, Total	ND	0		mg/L	09/06/2011
R-001	Nitrite, Total	ND	0		mg/L	10/04/2011
R-003	Nitrite, Total	=	0.4		mg/L	10/04/2011
R-004	Nitrite, Total	=	0.4		mg/L	10/04/2011
R-005	Nitrite, Total	=	0.4		mg/L	10/04/2011
R-002	Nitrite, Total	ND	0		mg/L	10/18/2011
R-001	Nitrite, Total	ND	0		mg/L	11/01/2011
R-002	Nitrite, Total	ND	0		mg/L	11/01/2011
R-003	Nitrite, Total	ND	0		mg/L	11/01/2011
R-004	Nitrite, Total	ND	0		mg/L	11/01/2011
R-005	Nitrite, Total	ND	0		mg/L	11/01/2011
R-001	Nitrite, Total	ND	0		mg/L	12/06/2011
R-002	Nitrite, Total	ND	0		mg/L	12/06/2011
R-003	Nitrite, Total	ND	0		mg/L	12/06/2011
R-003	Nitrite, Total	ND	0		mg/L	12/06/2011
R-004	Nitrite, Total	ND	0		mg/L	12/06/2011
R-005	Nitrite, Total	ND	0		mg/L	12/06/2011
R-001	Nitrite, Total	ND	0		mg/L	01/18/2012
R-002	Nitrite, Total	ND	0		mg/L	01/18/2012
R-003	Nitrite, Total	ND	0		mg/L	01/18/2012
R-004	Nitrite, Total	ND	0		mg/L	01/18/2012
R-005	Nitrite, Total	ND	0		mg/L	01/18/2012
R-001	Nitrite, Total	ND	0		mg/L	02/07/2012
R-002	Nitrite, Total	ND	0		mg/L	02/07/2012
R-003	Nitrite, Total	ND	0		mg/L	02/07/2012
R-004	Nitrite, Total	ND	0		mg/L	02/07/2012
R-005	Nitrite, Total	ND	0		mg/L	02/07/2012
R-001	Nitrite, Total	ND	0		mg/L	03/06/2012
R-002	Nitrite, Total	ND	0		mg/L	03/06/2012
R-003	Nitrite, Total	ND	0		mg/L	03/06/2012
R-004	Nitrite, Total	ND	0		mg/L	03/06/2012
R-005	Nitrite, Total	ND	0		mg/L	03/06/2012
R-002	Nitrite, Total	ND	0		mg/L	04/03/2012
R-003	Nitrite, Total	ND	0		mg/L	04/03/2012
R-004	Nitrite, Total	ND	0		mg/L	04/03/2012
R-005	Nitrite, Total	ND	0		mg/L	04/03/2012
R-001	Nitrite, Total	ND	0		mg/L	04/24/2012
R-002	Nitrite, Total	ND	0		mg/L	05/01/2012
R-003	Nitrite, Total	ND	0		mg/L	05/01/2012
R-004	Nitrite, Total	ND	0		mg/L	05/01/2012
R-005	Nitrite, Total	ND	0		mg/L	05/01/2012
R-005	Nitrite, Total	ND	0		mg/L	05/31/2012
R-001	Nitrite, Total	ND	0		mg/L	06/05/2012
R-002	Nitrite, Total	ND	0		mg/L	06/05/2012
R-003	Nitrite, Total	ND	0		mg/L	06/05/2012
R-004	Nitrite, Total	ND	0		mg/L	06/05/2012
R-005	Nitrite, Total	ND	0		mg/L	06/05/2012
R-005	Nitrite, Total	ND	0		mg/L	06/30/2012
R-001	Nitrite, Total	ND	0		mg/L	07/04/2012
R-002	Nitrite, Total	ND	0		mg/L	07/04/2012
R-003	Nitrite, Total	ND	0		mg/L	07/04/2012
R-004	Nitrite, Total	ND	0		mg/L	07/04/2012
R-005	Nitrite, Total	ND	0		mg/L	07/04/2012
R-005	Nitrite, Total	ND	0		mg/L	07/31/2012
R-001	Nitrite, Total	ND	0		mg/L	08/07/2012
R-002	Nitrite, Total	ND	0		mg/L	08/07/2012
R-003	Nitrite, Total	ND	0		mg/L	08/07/2012
R-004	Nitrite, Total	ND	0		mg/L	08/07/2012
R-005	Nitrite, Total	ND	0		mg/L	08/07/2012
R-005	Nitrite, Total	ND	0		mg/L	08/31/2012
R-005	Nitrite, Total	ND	0		mg/L	08/31/2012
R-001	Nitrite, Total	ND	0		mg/L	09/11/2012
R-002	Nitrite, Total	ND	0		mg/L	09/11/2012
R-003	Nitrite, Total	ND	0		mg/L	09/11/2012
R-004	Nitrite, Total	ND	0		mg/L	09/11/2012
R-005	Nitrite, Total	ND	0		mg/L	09/11/2012
R-005	Nitrite, Total	ND	0		mg/L	09/30/2012
R-001	Nitrite, Total	ND	0		mg/L	10/02/2012
R-002	Nitrite, Total	ND	0		mg/L	10/02/2012
R-003	Nitrite, Total	ND	0		mg/L	10/02/2012
R-004	Nitrite, Total	ND	0		mg/L	10/02/2012
R-005	Nitrite, Total	ND	0		mg/L	10/02/2012
R-005	Nitrite, Total	ND	0		mg/L	10/31/2012
R-005	Nitrite, Total	ND	0		mg/L	10/31/2012
R-001	Nitrite, Total	ND	0		mg/L	11/13/2012
R-002	Nitrite, Total	ND	0		mg/L	11/13/2012
R-003	Nitrite, Total	ND	0		mg/L	11/13/2012
R-004	Nitrite, Total	ND	0		mg/L	11/13/2012
R-005	Nitrite, Total	ND	0		mg/L	11/30/2012
R-001	Nitrite, Total	ND	0		mg/L	12/04/2012
R-002	Nitrite, Total	ND	0		mg/L	12/04/2012
R-003	Nitrite, Total	ND	0		mg/L	12/04/2012
R-004	Nitrite, Total	ND	0		mg/L	12/04/2012
R-005	Nitrite, Total	ND	0		mg/L	12/04/2012
R-005	Nitrite, Total	ND	0		mg/L	12/31/2012
R-001	Nitrite, Total	=				1/2/2013
R-002	Nitrite, Total	=				1/2/2013
R-003	Nitrite, Total	=	0	0	mg/L	1/2/2013
R-004	Nitrite, Total	=	0	0	mg/L	1/2/2013
R-005	Nitrite, Total	=	0	0	mg/L	1/2/2013
R-001	Nitrite, Total	=			mg/L	2/5/2013
R-002	Nitrite, Total	=			mg/L	2/5/2013
R-003	Nitrite, Total	=		0	mg/L	2/5/2013
R-004	Nitrite, Total	=	0	0	mg/L	2/5/2013
R-005	Nitrite, Total	=	0	0	mg/L	2/5/2013
R-001	Nitrite, Total	=			mg/L	3/5/2013
R-002	Nitrite, Total	=			mg/L	3/5/2013
R-003	Nitrite, Total	=	0	0	mg/L	3/5/2013
R-004	Nitrite, Total	=	0	0	mg/L	3/5/2013
R-005	Nitrite, Total	=	0	0	mg/L	3/5/2013
R-001	Nitrite, Total	=			mg/L	4/9/2013
R-002	Nitrite, Total	=			mg/L	4/9/2013
R-003	Nitrite, Total	=	0	0	mg/L	4/9/2013
R-004	Nitrite, Total	=	0	0	mg/L	4/9/2013
R-005	Nitrite, Total	=	0	0	mg/L	4/9/2013

Phosphate/Phosphorus Effluent

Location	Parameter		Result	Units	Sample Date
Effluent	Phosphate,	Average	3.16	mg/L	11/30/2012
Effluent	Phosphate,	Average	3.32	mg/L	12/31/2012
Effluent	Phosphate,	Average	2.94	mg/L	01/31/2013
Effluent	Phosphate,	Average	3.15	mg/L	02/28/2013
Effluent	Phosphate,	Average	3.04	mg/L	03/31/2013
Effluent	Phosphate,	Average	3.61	mg/L	04/30/2013
Effluent	Phosphorus	Average	3.4	mg/L	11/30/2012
Effluent	Phosphorus	Average	3.41	mg/L	12/31/2012
Effluent	Phosphorus	Average	3.48	mg/L	01/31/2013
Effluent	Phosphorus	Average	3.49	mg/L	02/28/2013
Effluent	Phosphorus	Average	3.38	mg/L	04/30/2013
maximum			3.610		
minimum			2.94		
average			3.30727272		
count			11		
stdevp			0.19822352		
coefficient			0.05993564		
95% Excell			3.55		
99% Excell			3.598		

Attachment K-6 Non Priority Pollutants Effluent Data Ammonia

Total Ammonia Data October 2011 to April 2013

Location	Parameter		Result	Units	Sampling Date	Average monthly
Effluent	Ammonia,	=	0.9	mg/L	10/5/2011	0.975
Effluent	Ammonia,	=	1.1	mg/L	10/12/2011	
Effluent	Ammonia,	=	0.9	mg/L	10/18/2011	
Effluent	Ammonia,	=	1	mg/L	10/26/2011	
Effluent	Ammonia,	=	1.2	mg/L	11/1/2011	1.025
Effluent	Ammonia,	=	0.6	mg/L	11/9/2011	
Effluent	Ammonia,	=	1.1	mg/L	11/17/2011	
Effluent	Ammonia,	=	1.2	mg/L	11/22/2011	
Effluent Transfer	Ammonia, Total (as N)	=	0.8	mg/L	12/1/2011	0.72
Effluent Transfer	Ammonia, Total (as N)	=	0.7	mg/L	12/7/2011	
Effluent	Ammonia,	=	0.7	mg/L	12/14/2011	
Effluent	Ammonia,	=	0.9	mg/L	12/21/2011	
Effluent	Ammonia,	=	0.5	mg/L	12/28/2011	
Effluent	Ammonia,	=	0.8	mg/L	1/4/2012	0.85
Effluent	Ammonia,	=	0.8	mg/L	1/11/2012	
Effluent	Ammonia,	=	0.9	mg/L	1/18/2012	
Effluent	Ammonia,	=	0.9	mg/L	1/25/2012	
Effluent	Ammonia,	=	1.2	mg/L	2/1/2012	0.825
Effluent	Ammonia,	=	0.4	mg/L	2/8/2012	
Effluent	Ammonia,	=	0.8	mg/L	2/15/2012	
Effluent	Ammonia,	=	0.9	mg/L	2/22/2012	
Effluent	Ammonia,	=	0.8	mg/L	3/7/2012	1
Effluent	Ammonia,	=	1	mg/L	3/14/2012	
Effluent	Ammonia,	=	0.9	mg/L	3/21/2012	
Effluent	Ammonia,	=	1.3	mg/L	3/28/2012	
Effluent	Ammonia,	=	0.9	mg/L	4/4/2012	0.933333333
Effluent	Ammonia,	=	0.9	mg/L	4/18/2012	
Effluent	Ammonia,	=	1	mg/L	4/25/2012	
Effluent	Ammonia,	=	0.8	mg/L	5/2/2012	0.92
Effluent	Ammonia,	=	0.9	mg/L	5/9/2012	
Effluent	Ammonia,	=	1.1	mg/L	5/16/2012	
Effluent	Ammonia,	=	1.1	mg/L	5/23/2012	
Effluent	Ammonia,	=	0.7	mg/L	5/30/2012	
Effluent	Ammonia,	=	0.8	mg/L	6/6/2012	0.625
Effluent	Ammonia,	=	0.7	mg/L	6/13/2012	
Effluent	Ammonia,	=	0.7	mg/L	6/20/2012	
Effluent	Ammonia,	=	0.3	mg/L	6/27/2012	
Effluent	Ammonia,	=	0.8	mg/L	7/5/2012	0.875
Effluent	Ammonia,	=	1.2	mg/L	7/11/2012	
Effluent	Ammonia,	=	0.8	mg/L	7/18/2012	
Effluent	Ammonia,	=	0.7	mg/L	7/25/2012	
Effluent	Ammonia,	=	0.8	mg/L	8/1/2012	0.8
Effluent	Ammonia,	=	0.6	mg/L	8/8/2012	
Effluent	Ammonia,	=	0.9	mg/L	8/15/2012	
Effluent	Ammonia,	=	0.9	mg/L	8/22/2012	
Effluent	Ammonia,	=	0.8	mg/L	8/29/2012	
Effluent	Ammonia,	=	0.8	mg/L	9/5/2012	0.825
Effluent	Ammonia,	=	0.8	mg/L	9/12/2012	
Effluent	Ammonia,	=	0.7	mg/L	9/19/2012	
Effluent	Ammonia,	=	1	mg/L	9/26/2012	
Effluent	Ammonia,	=	1.2	mg/L	10/3/2012	0.75
Effluent	Ammonia,	=	0.2	mg/L	10/11/2012	
Effluent	Ammonia,	=	0.7	mg/L	10/17/2012	
Effluent	Ammonia,	=	0.9	mg/L	10/24/2012	
Effluent	Ammonia,	=	1	mg/L	10/31/2012	
Effluent	Ammonia,	=	0.6	mg/L	12/18/2012	0.6
Effluent	Ammonia,	=	0.6	mg/L	12/18/2012	0.6
Effluent	Ammonia,	=	0.8	mg/L	01/09/2013	0.8
Effluent	Ammonia,	=	0.8	mg/L	02/06/2013	0.8
Effluent	Ammonia,	=	0.7	mg/L	03/06/2013	0.7
Effluent	Ammonia,	=	0.8	mg/L	04/18/2013	0.8
maximum			1.3			1.025
minimum			0.2			0.975
average			0.84098			1.025
count			61			
stdeve			0.21223			
coefficient			0.25236			
95%			1.2			
99%			1.24			

Total Ammonia Data Summer October 2011 and May to October 2012

Location	Parameter	Qual	Result	Units	Sampling Date	Average Monthly
Effluent	Ammonia,	=	0.9	mg/L	10/5/2011	0.98
Effluent	Ammonia,	=	1.1	mg/L	10/12/2011	
Effluent	Ammonia,	=	0.9	mg/L	10/18/2011	
Effluent	Ammonia,	=	1	mg/L	10/26/2011	
Effluent	Ammonia,	=	0.8	mg/L	5/2/2012	0.92
Effluent	Ammonia,	=	0.9	mg/L	5/9/2012	
Effluent	Ammonia,	=	1.1	mg/L	5/16/2012	
Effluent	Ammonia,	=	1.1	mg/L	5/23/2012	
Effluent Transfer	Ammonia, Total (as N)	=	0.7	mg/L	5/30/2012	
Effluent Transfer	Ammonia, Total (as N)	=	0.8	mg/L	6/6/2012	0.63
Effluent	Ammonia,	=	0.7	mg/L	6/13/2012	
Effluent	Ammonia,	=	0.7	mg/L	6/20/2012	
Effluent	Ammonia,	=	0.3	mg/L	6/27/2012	
Effluent	Ammonia,	=	0.8	mg/L	7/5/2012	0.88
Effluent	Ammonia,	=	1.2	mg/L	7/11/2012	
Effluent	Ammonia,	=	0.8	mg/L	7/18/2012	
Effluent	Ammonia,	=	0.7	mg/L	7/25/2012	
Effluent	Ammonia,	=	0.8	mg/L	8/1/2012	0.80
Effluent	Ammonia,	=	0.6	mg/L	8/8/2012	
Effluent	Ammonia,	=	0.9	mg/L	8/15/2012	
Effluent	Ammonia,	=	0.9	mg/L	8/22/2012	
Effluent	Ammonia,	=	0.8	mg/L	8/29/2012	
Effluent	Ammonia,	=	0.8	mg/L	9/5/2012	0.93
Effluent	Ammonia,	=	0.7	mg/L	9/12/2012	
Effluent	Ammonia,	=	1	mg/L	9/19/2012	
Effluent	Ammonia,	=	1.2	mg/L	9/26/2012	
Effluent	Ammonia,	=	0.2	mg/L	10/3/2012	0.60
Effluent	Ammonia,	=	0.2	mg/L	10/11/2012	
Effluent	Ammonia,	=	0.7	mg/L	10/17/2012	
Effluent	Ammonia,	=	0.9	mg/L	10/24/2012	
Effluent	Ammonia,	=	1	mg/L	10/31/2012	
maximum			1.2			0.975
minimum			0.2			0.6
average			0.813			0.817143
count			31			7
stdeve			0.243			0.138792
coefficient of			0.299			0.169851
95% Excell			1.15			0.96
99% Excell			1.2			0.972

Tota lAmmonia Winter Data Nov 2011 to Apr 2012, Nov to April 2013

Location	Parameter	Qual	Result	Units	Sampling Date	Average Monthly
Effluent	Ammonia,	=	1.2	mg/L	11/1/2011	1.025
Effluent	Ammonia,	=	0.6	mg/L	11/9/2011	
Effluent	Ammonia,	=	1.1	mg/L	11/17/2011	
Effluent	Ammonia,	=	1.2	mg/L	11/22/2011	
Effluent	Ammonia,	=	0.8	mg/L	12/1/2011	0.72
Effluent	Ammonia,	=	0.7	mg/L	12/7/2011	
Effluent	Ammonia,	=	0.7	mg/L	12/14/2011	
Effluent	Ammonia,	=	0.9	mg/L	12/21/2011	
Effluent Transfer	Ammonia, Total (as N)	=	0.5	mg/L	12/28/2011	
Effluent Transfer	Ammonia, Total (as N)	=	0.8	mg/L	1/4/2012	0.85
Effluent	Ammonia,	=	0.8	mg/L	1/11/2012	
Effluent	Ammonia,	=	0.9	mg/L	1/18/2012	
Effluent	Ammonia,	=	0.9	mg/L	1/25/2012	
Effluent	Ammonia,	=	1.2	mg/L	2/1/2012	0.825
Effluent	Ammonia,	=	0.4	mg/L	2/8/2012	
Effluent	Ammonia,	=	0.8	mg/L	2/15/2012	
Effluent	Ammonia,	=	0.9	mg/L	2/22/2012	
Effluent	Ammonia,	=	0.8	mg/L	3/7/2012	1
Effluent	Ammonia,	=	1	mg/L	3/14/2012	
Effluent	Ammonia,	=	0.9	mg/L	3/21/2012	
Effluent	Ammonia,	=	1.3	mg/L	3/28/2012	
Effluent	Ammonia,	=	0.9	mg/L	4/4/2012	0.933333
Effluent	Ammonia,	=	0.9	mg/L	4/18/2012	
Effluent	Ammonia,	=	1	mg/L	4/25/2012	
Effluent	Ammonia,	=	0.6	mg/L	12/18/2012	0.6
Effluent	Ammonia,	=	0.8	mg/L	01/09/2013	0.8
Effluent	Ammonia,	=	0.8	mg/L	02/06/2013	0.8
Effluent	Ammonia,	=	0.7	mg/L	03/06/2013	0.7
Effluent	Ammonia,	=	0.8	mg/L	04/18/2013	0.8
maximum			1.3			1.025
minimum			0.4			0.6
average			0.85862			0.82303
count			29			11
stdeve			0.20597			0.121391
coefficient of			0.23989			0.147493
95% Excell			1.2			1.0125
99% Excell			1.272			1.0225

R1 to R5 Ammonia Summer Receiving and Projected Limits

Date	Station	Temp [1]	pH [2]	Salinity	I	pKas	Average monthly Ammonia	1/2 Ammonia for ND			
										MDEL	0.772388
										AMEL	0.290793
Oct-11	R1	18.6	7.54	1.5	0.029936	9.248472586	0.5	0.5			
Oct-11	R2	19.3	7.9	1.4	0.027938	9.248240754	2.1	2.1			
Oct-11	R3	18.8	7.72	1.4	0.027938	9.248240754	0.5	0.5			
Oct-11	R4	19.1	7.49	1.4	0.027938	9.248240754	0.7	0.7			
Oct-11	R5	19.7	8.07	1.4	0.027938	9.248240754	0.5	0.5			
May-12	R1	19.8	7.84	3.1	0.061968	9.252188255	1.5	1.5			
May-12	R2	19.6	8.34	2.9	0.057958	9.25172314	0.3	0.3			
May-12	R3	19.72	8.31	2.8	0.055954	9.251490654	0.1	0.1			
May-12	R4	19.6	7.7	1.6	0.031935	9.248704464	0.1	0.1			
May-12	R5	19.26	8.43	2.3	0.045939	9.250328923	0.1	0.1			
Jun-12	R1	20.9	7.83	2.3	0.045939	9.250328923	1.4	1.4			
Jun-12	R2	22	8.53	2.3	0.045939	9.250328923	0.4	0.4			
Jun-12	R3	21.25	8.4	2.2	0.043937	9.250096717	0.4	0.4			
Jun-12	R4	21.21	7.55	1.5	0.029936	9.248472586	0.2	0.2			
Jun-12	R5	21.61	8.43	2.1	0.041936	9.249864558	0.4	0.4			
Jul-12	R1	21.68	8.25	1.7	0.033934	9.24893639	0.7	0.7			
Jul-12	R2	22.76	8.96	1.6	0.031935	9.248704464	0.2	0.2			
Jul-12	R3	22.28	8.93	1.7	0.033934	9.24893639	<.1	0.05			
Jul-12	R4	21.9	7.59	1.3	0.025939	9.248008968	<.1	0.05			
Jul-12	R5	22.69	8.41	1.6	0.031935	9.248704464	<.1	0.05			
Aug-12	R1	22.6	7.87	1.8	0.158078	9.263337081	0.7	0.7			
Aug-12	R2	24.45	8.45	1.7	0.033934	9.24893639	0.6	0.6			
Aug-12	R3	24.88	8.41	1.7	0.033934	9.24893639	0.6	0.6			
Aug-12	R4	23.05	7.42	1.2	0.023942	9.24777723	0.2	0.2			
Aug-12	R5	23.94	7.89	1.8	0.035934	9.249168362	0.3	0.3			
Sep-12	R1										
Sep-12	R2	24.55	9.08	1.3	0.025939	9.248008968	0.1	0.1			
Sep-12	R3	23.07	8.84	1.3	0.025939	9.248008968	0.1	0.1			
Sep-12	R4	22.89	7.35	1.2	0.023942	9.24777723	0.1	0.1			
Sep-12	R5	22.34	8.95	1.4	0.027938	9.248240754	0.1	0.1			
Oct-12	R1	20.06	8.44	1.4	0.027938	9.248240754	0.3	0.3			
Oct-12	R2	22.02	8.85	1.4	0.027938	9.248240754	<.1	0.05			
Oct-12	R3	20.52	8.65	1.4	0.027938	9.248240754	<.1	0.05			
Oct-12	R4	20.28	7.46	1.3	0.025939	9.248008968	<.1	0.05			
Oct-12	R5	20.71	8.88	1.4	0.027938	9.248240754	<.1	0.05			
Max		24.88	9.08	3.1			2.1	2.1			
Mini		18.6	7.35	1.2			0.1	0.05			
STDEV		1.727642	0.51772	0.49018				0.457533			
Avg		21.38588	8.198824	1.717647				0.398529			
CV		0.080784	0.063146	0.285379				1.148052			
90%		23.679	8.915	2.3	0.045939	9.250328923	**0.789705**		**1-hour EPA Objective (total ammonia)**		
50%		21.43	8.325	1.55	0.030936	9.248588519		**0.418235**	**4-day EPA Objective (total ammonia)**		
									Conc.	LTA	
					ECA Multiplier 1-HR 99%			0.180439	0.789705005	0.142493	
					ECA Multiplier 4-Day 959%			0.33323	0.418235307	0.139369	
					MDEL Multiplier 99%			5.542047		MDEL	0.772388
					AMEL Multiplier 95%			2.086503		AMEL	0.290793

R1 to R5 Ammonia Winter Receiving and Projected Limits

Date	Station	Temp [1]	pH [2]	Salinity	I
Nov-11	R2	15.7	8.47	1.4	0.027937532
Nov-11	R3	14.9	8.11	1.3	0.025939383
Nov-11	R4	15.3	7.89	1.3	0.025939383
Dec-11	R2	12.1	7.97	2	0.039934878
Dec-11	R3	10.8	7.81	1.7	0.033934393
Dec-11	R4	10.9	7.77	1.7	0.033934393
Jan-12	R2	13.3	7.88	2.3	0.045938989
Jan-12	R3	12.51	7.72	1.7	0.033934393
Jan-12	R4	12.63	7.74	1.9	0.037934313
Feb-12	R2	14.2	7.93	2.3	0.045938989
Feb-12	R3	13.71	7.79	2.2	0.043937216
Feb-12	R4	13.8	7.62	2.1	0.041935845
Mar-12	R2	14.8	7.8	7	0.14047948
Mar-12	R3	14.65	7.82	8.3	0.166788003
Mar-12	R4	16.31	7.7	1.4	0.027937532
Apr-12	R2	15.5	7.9	21.1	0.4295764
Apr-12	R3	14.59	7.8	21.5	0.437899898
Apr-12	R4	19.33	7.92	2.4	0.047941167
Nov-12	R1	16.43	8.63	1.4	0.027937532
Nov-12	R1	15.7	8.71	1.3	0.025939383
Nov-12	R2	18.03	8.93	1.3	0.025939383
Nov-12	R3	16.5	8.8	1.3	0.025939383
Nov-12	R4	16.59	7.9	1.3	0.025939383
Nov-12	R5	16.74	8.86	1.4	0.027937532
Dec-12	R2	15.175	8.78	1.9	0.037934313
Dec-12	R3	15	8.613	2.1	0.041935845
Dec-12	R4	14.645	8.1125	1.9	0.037934313
Dec-12	R5	14.9225	8.44	1.925	0.038434417
Jan-13	R2				
Jan-13	R3	10.7825	8.78	1.9	0.037934313
Jan-13	R4	10.9025	8.66	1.95	0.038934545
Feb-13	R2				
Feb-13	R3	13.6425	8.825	1.65	0.032934665
Feb-13	R4	13.7875	8.57	1.6	0.031935037
Mar-13	R2				
Mar-13	R3	16.3275	8.79	1.5	0.029936084
Mar-13	R4	16.0725	8.525	1.45	0.028936758
Apr-13	R2				
Apr-13	R3	18.1875	8.4675	1.4	0.027937532
Apr-13	R4	18.82	8.2225	1.325	0.026438883
Max		19.33	8.93	21.5	
Mini		10.7825	7.62	1.3	
STDEV		2.153377	0.42745	4.62964106	
Avg		14.81347	8.229319	3.11666667	
CV		0.145366	0.051942	1.48544633	
90%		17.385	8.795	4.7	0.094102853
50%		14.91125	8.11125	1.7	0.033934393
					ECA M
					ECA Mu
					MDE
					AME

pKas	Ammonia	1/2 Ammonia for ND		MDEL	1.421888
9.248241	0.2	0.2		AMEL	0.618978
9.248009	<0.1	0.05			
9.248009	0.1	0.1			
9.249632	0.2	0.2			
9.248936	0.2	0.2			
9.248936	0.1	0.1			
9.250329	0.3	0.3			
9.248936	0.1	0.1			
9.2494	0.1	0.1			
9.250329	0.2	0.2			
9.250097	0.2	0.2			
9.249865	0.1	0.1			
9.261296	0.1	0.1			
9.264347	0.2	0.2			
9.248241	0.1	0.1			
9.294831	0.7	0.7			
9.295796	0.1	0.1			
9.250561	0.5	0.5			
9.248241	0.2	0.2			
9.248009	0.2	0.2			
9.248009	0.1	0.1			
9.248009	0.1	0.1			
9.248009	0.1	0.1			
9.248241	0.1	0.1			
9.2494	0.2	0.2			
9.249865	0.2	0.2			
9.2494	0.2	0.2			
9.249458	0.3	0.3			
9.2494	,1	0.05			
9.249516	,1	0.05			
9.24882	,1	0.05			
9.248704	,1	0.05			
9.248473	,1	0.05			
9.248357	,1	0.05			
9.248241	0.5	0.5			
9.248067	0.2	0.2			
			Conc.	LTA	
		0.7	1.421888	0.352819	
		0.05	1.055409	0.462116	
		0.139685		MDEL	1.421888
		0.173611		AMEL	0.618978
		0.804587			
9.255916	**1.421888**	**1-hour EPA Objective (expressed as total ammonia)**			
9.248936	**1.055409**	**4-day EPA Objective (expressed as total ammonia)**			
ultiplier 1-HR 99%		0.248135			
ltiplier 4-Day 959%		0.437855			
Multiplier 99%		4.030072			
Multiplier 95%		1.754377			

R4 only Ammonia Summer Receiving and Projected Limits

Date	Station	Temp [1]	pH [2]	Salinity	I	pKas	Average monthly Ammonia	1/2 Ammonia for ND		MDEL	3.528559
										AMEL	2.468574
Oct-11	R4	19.1	7.49	1.4	0.027938	9.248240754	0.7	0.7			
May-12	R4	19.6	7.7	1.6	0.031935	9.248704464	0.1	0.1			
Jun-12	R4	21.21	7.55	1.5	0.029936	9.248472586	0.2	0.2			
Jul-12	R4	21.9	7.59	1.3	0.025939	9.248008968	<.1	0.05			
Aug-12	R4	23.05	7.42	1.2	0.023942	9.24777723	0.2	0.2			
Sep-12	R4	22.89	7.35	1.2	0.023942	9.24777723	0.1	0.1			
Oct-12	R4	20.28	7.46	1.3	0.025939	9.248008968	<.1	0.05			
Max		23.05	7.7	1.6			0.7	0.7			
Mini		19.1	7.35	1.2			0.1	0.05			
STDEV		1.442495	0.107362	0.139971				0.212132			
Avg		21.14714	7.508571	1.357143				0.2			
CV		0.068212	0.014299	0.103136				0.2597			
90%		22.954	7.634	1.54	0.030736	9.248565332	**11.41069**		**1-hour EPA Objective (expressed**		
50%		21.21	7.49	1.3	0.025939	9.248008968		**2.695811**	**4-day EPA Objective (expressed**		
									Conc.	LTA	
						ECA Multiplier 1-HR 99%		0.570296	11.41069	6.50747	
						ECA Multiplier 4-Day 959%		0.746463	2.695811	2.012323	
						MDEL Multiplier 99%		1.753475		MDEL	3.528559
						AMEL Multiplier 95%		1.226728		AMEL	2.468574

R4 only Ammonia Winter Receiving and Projected Limits

Date	Station	Temp [1]	pH [2]	Salinity	I	pKas	Ammonia	1/2 Ammonia for ND		MDEL	2.049708
										AMEL	1.469525
Nov-11	R4	15.3	7.89	1.3	0.025939383	9.248008968	0.1	0.1			
Dec-11	R4	10.9	7.77	1.7	0.033934393	9.24893639	0.1	0.1			
Jan-12	R4	12.63	7.74	1.9	0.037934313	9.24940038	0.1	0.1			
Feb-12	R4	13.8	7.62	2.1	0.041935845	9.249864558	0.1	0.1			
Mar-12	R4	16.31	7.7	1.4	0.027937532	9.248240754	0.1	0.1			
Apr-12	R4	19.33	7.92	2.4	0.047941167	9.250561175	0.5	0.5			
Nov-12	R4	16.59	7.9	1.3	0.025939383	9.248008968	0.1	0.1			
Dec-12	R4	14.645	8.1125	1.9	0.037934313	9.24940038	0.2	0.2			
Jan-13	R4	10.9025	8.66	1.95	0.038934545	9.249516407	0.1	0.05			
Feb-13	R4	13.7875	8.57	1.6	0.031935037	9.248704464	0.1	0.05			
Mar-13	R4	16.0725	8.525	1.45	0.028936758	9.248356664	0.1	0.05			
Apr-13	R4	18.82	8.2225	1.325	0.026438883	9.24806691	0.2	0.2			
l as total ammonia)									Conc.	LTA	
Max		19.33	8.66	2.4				0.5	2.049708	1.21589	
Mini		10.9	7.62	1.3				0.05	1.649075	1.257795	
STDEV		2.59822	0.347445	0.34340892				0.119242		MDEL	2.049708
Avg		14.92396	8.0525	1.69375				0.1375		AMEL	1.469525
CV		0.174097	0.043147	0.20275065				0.23989			
90%		18.597	8.5655	2.085	0.041635674	9.249829738	**2.049708**	**1-hour EPA Objective (expressed as total ammonia)**			
50%		14.9725	7.91	1.65	0.032934665	9.248820421	**1.649075**	**4-day EPA Objective (expressed as total ammonia)**			
					ECA Multiplier 1-HR 99%			0.593201			
					ECA Multiplier 4-Day 95%			0.762728			
					MDEL Multiplier 99%			1.685768			
					AMEL Multiplier 95%			1.208601			

Attachment N-1 Priority Non-Metal Reasonable Potential Analysis and Limit Derivation

CTR#		Units	CV	MEC (Ventura WRP effluent)	CTR CRITERIA: Saltwater: C acute = CMC tot	CTR CRITERIA: Saltwater: C chronic = CCC tot	CTR CRITERIA: Freshwater: C acute = CMC tot	CTR CRITERIA: Freshwater: C chronic = CCC tot	CTR CRITERIA: Human Health: Not applicable C hh W&O	CTR CRITERIA: Human Health: C hh O	SWRCB min	REASONABLE POTENTIAL ANALYSIS (RPA): Lowest C	Tier 1 MEC ≥ Lowest C	B: R3 max	B: R4 max	B: R5 max	Tier 2 B>C & present in Effl.	Recommendation
14	Cyanide	µg/L	0.6	<5	1	1	22	5.2	700	220,000	5	1	NO	<5	<5	<5	NO	Interim Monitoring - No Limit-MDL>C
15	Asbestos	Fibers/L		not measured	NONE	NONE	NONE	NONE	7,000,000	NONE		7x10^6	NO	no sample	no sample	no sample		Interim Monitoring - No Limit
16	2,3,7,8-TCDD (Dioxin)	µg/L	0.6	<.000005	NONE	NONE	NONE	NONE	1.3E-08	1.4E-08		1.4E-08	NO	<5.2	<5.2	<5	NO	Interim Monitoring - No Limit-MDL for B>C
17	Acrolein	µg/L	0.6	<.6	NONE	NONE	NONE	NONE	320	780	2	780	NO	<.6	<.6	<.6	NO	Interim Monitoring - No Limit
18	Acrylonitrile	µg/L	0.6	<.5	NONE	NONE	NONE	NONE	0.059	0.66	2	0.66	NO	<.5	<.5	<.5	NO	Interim Monitoring - No Limit
19	Benzene	µg/L	0.6	<.2	NONE	NONE	NONE	NONE	1.2	71	0.5	71	NO	<.2	<.2	<.2	NO	Interim Monitoring - No Limit
20	Bromoform	µg/L	0.99	4.3	NONE	NONE	NONE	NONE	4.3	360	0.5	360	NO	1.44	2.96		NO	Interim Monitoring - No Limit
21	Carbon Tetrahloride	µg/L	0.6	<.12	NONE	NONE	NONE	NONE	0.25	4.4	0.5	4.4	NO	<.12	<.12	<.12	NO	Interim Monitoring - No Limit
22	Chlorobenzene	µg/L	0.6	<.2	NONE	NONE	NONE	NONE	680	21,000	1	21,000	NO	<.2	<.2	<.2	NO	Interim Monitoring - No Limit
23	Dibromochloromethane	µg/L	0.6	14.5	NONE	NONE	NONE	NONE	0.401	34	0.5	34	NO	2.84	3.63	0.71	NO	Interim Monitoring - No Limit
24	Chloroethane	µg/L	0.6	<.52	NONE	NONE	NONE	NONE	NONE	NONE	0.5	No criteria	No Criteria Available	<.52	<.52	<.52	No Criteria Available	No Limit - No Criteria Available
25	2-chloroethyl vinyl ether	µg/L	0.6	<.13	NONE	NONE	NONE	NONE	NONE	NONE	1	No criteria	No Criteria Available	<.13	<.13	<.13	No Criteria Available	No Limit - No Criteria Available
26	Chloroform	µg/L	0.6	36	NONE	NONE	NONE	NONE	Reserved	Reserved	0.5	Reserved	No Criteria Available	9.55	10.9	1.26	No Criteria Available	No Limit - No Criteria Available
27	Dichlorobromomethane	µg/L	0.6	25.6	NONE	NONE	NONE	NONE	0.56	46	0.5	46	NO	1.12	4.89	0.28	NO	Interim Monitoring - No Limit
28	1,1-Dichloroethane	µg/L	0.6	<.07	NONE	NONE	NONE	NONE	NONE	NONE	0.5	5	NO	<.07	<.07	<.07	NO	Interim Monitoring - No Limit
29	1,2-dichloroethane	µg/L	0.6	<.03	NONE	NONE	NONE	NONE	0.38	99	0.5	99	NO	<.03	<.03	<.03	NO	Interim Monitoring - No Limit
30	1,1-Dichloroethylene	µg/L	0.6	<.13	NONE	NONE	NONE	NONE	0.057	3.2		3.2	NO	<.13	<.13	<.13	NO	Interim Monitoring - No Limit
31	1,2-dichloropropane	µg/L	0.6	<.04	NONE	NONE	NONE	NONE	0.52	39		39	NO	<.04	<.04	<.04	NO	Interim Monitoring - No Limit
32	1,3-dichloropropylene	µg/L	0.6	<.68	NONE	NONE	NONE	NONE	10	1,700		1,700	NO	<.68	<.68	<.68	NO	Interim Monitoring - No Limit
33	Ethylbenzene	µg/L	0.6	<.34	NONE	NONE	NONE	NONE	3100	29,000		29,000	NO	<.34	<.34	<.34	NO	Interim Monitoring - No Limit
34	Methyl bromide	µg/L	0.6	<.5	NONE	NONE	NONE	NONE	48	4,000		4,000	NO	<.5	<.5	<.5	NO	Interim Monitoring - No Limit
35	Methyl chloride	µg/L	0.6	<.08	NONE	NONE	NONE	NONE	Narrative	Narrative		Narrative	No Criteria Available	<.08	<.08	<.08	No Criteria Available	No Limit - No Criteria Available
36	Methylene chloride	µg/L	0.6	<.25	NONE	NONE	NONE	NONE	4.7	1,600		1,600	NO	<.25	<.25	<.25	NO	Interim Monitoring - No Limit
37	1,1,2,2-tetrachloroethane	µg/L	0.6	<.03	NONE	NONE	NONE	NONE	0.17	11		11	NO	<.03	<.03	<.03	NO	Interim Monitoring - No Limit
38	Tetrachloroethylene	µg/L	0.6	<.03	NONE	NONE	NONE	NONE	0.8	8.85		8.85	NO	<.03	<.03	<.03	NO	Interim Monitoring - No Limit
39	Toluene	µg/L	0.6	<.2	NONE	NONE	NONE	NONE	6800	200,000		200,000	NO	<.2	<.2	<.2	NO	Interim Monitoring - No Limit
40	Trans 1,2-Dichloroethylene	µg/L	0.6	<.1	NONE	NONE	NONE	NONE	700	140,000		140,000	NO	<.1	<.1	<.1	NO	Interim Monitoring - No Limit
41	1,1,1-Trichloroethane	µg/L	0.6	<.03	NONE	NONE	NONE	NONE	Narrative	Narrative		Narrative	NO	<0.0365	<0.0365	<0.0365	No Criteria Available	Interim Monitoring - No Limit
42	1,1,2-trichloroethane	µg/L	0.6	<.02	NONE	NONE	NONE	NONE	0.6	42		42	NO	<0.031	<0.031	<0.031	NO	Interim Monitoring - No Limit
43	Trichloroethylene	µg/L	0.6	<.12	NONE	NONE	NONE	NONE	2.7	81		81	NO	<0.0277	<0.0277	<0.0277	NO	Interim Monitoring - No Limit
44	Vinyl chloride	µg/L	0.6	<.18	NONE	NONE	NONE	NONE	2	525		525	NO	<0.0983	<0.0983	<0.0983	NO	Interim Monitoring - No Limit
45	2-chlorophenol	µg/L	0.6	<3.3	NONE	NONE	NONE	NONE	120	400		400	NO	<3.3	<3.3	<3.3	NO	Interim Monitoring - No Limit
46	2,4-dichlorophenol	µg/L	0.6	<2.7	NONE	NONE	NONE	NONE	93	790		790	NO	<2.7	<2.7	<2.7	NO	Interim Monitoring - No Limit
47	2,4-dimethylphenol	µg/L	0.6	<2.7	NONE	NONE	NONE	NONE	540	2,300		2,300	NO	<2.7	<2.7	<2.7	NO	Interim Monitoring - No Limit
48	4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	µg/L	0.6	<10	NONE	NONE	NONE	NONE	13.4	765		765	NO	<10	<10	<10	NO	Interim Monitoring - No Limit
49	2,4-dinitrophenol	µg/L	0.6	<42	NONE	NONE	NONE	NONE	70	14,000		14,000	NO	<42.	<42.	<42.	NO	Interim Monitoring - No Limit
50	2-nitrophenol	µg/L	0.6	<3.6	NONE	NONE	NONE	NONE	NONE	NONE		None	No Criteria Available	<3.6	<3.6	<3.6	No Criteria Available	No Criteria Available
51	4-nitrophenol	µg/L	0.6	<2.4	NONE	NONE	NONE	NONE	NONE	NONE		None	No Criteria Available	<2.4	<2.4	<2.4	No Criteria Available	No Criteria Available
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)	µg/L	0.6	<3	NONE	NONE	NONE	NONE	NONE	NONE		None	No Criteria Available	<3	<3	<3	No Criteria Available	No Criteria Available
53	Pentachlorophenol	µg/L	0.6	<3.6	13	7.9	pH dependent	pH dependent	0.28	8.2		7.9	NO	<3.6	<3.6	<3.6	NO	Interim Monitoring - No Limit
54	Phenol	µg/L	0.6	<1.5	NONE	NONE	NONE	NONE	21,000	4,600,000		4.6x10^6	NO	<1.5	<1.5	<1.5	NO	Interim Monitoring - No Limit
55	2,4,6-trichlorophenol	µg/L	0.6	<2.7	NONE	NONE	NONE	NONE	2.1	6.5		6.5	NO	<2.7	<2.7	<2.7	NO	Interim Monitoring - No Limit
56	Acenaphthene	µg/L	0.6	<2	NONE	NONE	NONE	NONE	1200	2,700		2,700	NO	<2	<2	<2	NO	Interim Monitoring - No Limit
57	Acenaphthylene	µg/L	0.6	<1.9	NONE	NONE	NONE	NONE	NONE	NONE		NONE	No Criteria Available	<1.9	<1.9	<1.9	No Criteria Available	No Criteria Available
58	Anthracene	µg/L	0.6	<1.9	NONE	NONE	NONE	NONE	9600	110,000		110,000	NO	<1.9	<1.9	<1.9	NO	Interim Monitoring - No Limit
59	Benzidine	µg/L	0.6	<4.4	NONE	NONE	NONE	NONE	0.00012	0.00054		0.00054	NO	<4.4	<4.4	<4.4	NO	Interim Monitoring - No Limit-MDL >C
60	Benzo(a)Anthracene	µg/L	0.6	<7.8	NONE	NONE	NONE	NONE	0.0044	0.049		0.049	NO	<7.8	<7.8	<7.8	NO	Interim Monitoring - No Limit-MDL>C
61	Benzo(a)Pyrene	µg/L	0.6	<2.5	NONE	NONE	NONE	NONE	0.0044	0.049		0.049	NO	<2.5	<2.5	<2.5	NO	Interim Monitoring - No Limit-MDL>C
62	Benzo(b)Fluoranthene	µg/L	0.6	<4.8	NONE	NONE	NONE	NONE	0.0044	0.049		0.049	NO	<4.8	<4.8	<4.8	NO	Interim Monitoring - No Limit-MDL>C
63	Benzo(ghi)Perylene	µg/L	0.6	<4.1	NONE	NONE	NONE	NONE	1 NONE	NONE		NONE	No Criteria Available	<4.1	<4.1	<4.1	No Criteria Available	Interim Monitoring - No Limit

CTR#		Units	CV	MEC (Ventura WRP	CTR CRITERIA Saltwater C acute =	Saltwater C chronic	Freshwater C acute =	Freshwater C chronic =	Human Health Not	Human Health	SWRCB min	REASONABLE POTENTIAL ANALYSIS (RPA)	Tier 1	B			Tier 2 B>C &	Recommendation
64	Benzo(k)Fluoranthene	µg/L	0.6	*<5.3*	NONE	NONE	NONE	NONE	0.0044	0.049		0.049	NO	*<5.3*	*<5.3*	*<5.3*	NO	Interim Monitoring - No Limit-MDL>C
65	Bis(2-Chloroethoxy) methane	µg/L	0.6	<5.7	NONE	NONE	NONE	NONE	NONE	NONE		NONE	No Criteria Available	<5.7	<5.7	<5.7	No Criteria Available	No Criteria Available
66	Bis(2-Chloroethyl)Ether	µg/L	0.6	<5.7	NONE	NONE	NONE	NONE	0.031	1.4		1.4	NO	<5.7	<5.7	<5.7	NO	Interim Monitoring - No Limit-MDL>C
67	Bis(2-Chloroisopropyl) Ether	µg/L	0.6	<5.7	NONE	NONE	NONE	NONE	1400	170,000		170,000	NO	<5.7	<5.7	<5.7	NO	Interim Monitoring - No Limit
68	Bis(2-Ethylhexyl) Phthalate	µg/L	0.6	<2.5	NONE	NONE	NONE	NONE	1.8	5.9	5	5.9	NO	7.1	<1.9	<1.9	NO	**No limit: Tier 2, B > C, but nondetect in effluent**
69	4-Bromophenyl Phenyl Ether	µg/L	0.6	<1.9	NONE	NONE	NONE	NONE	NONE	NONE		NONE	No Criteria Available	<1.9	<1.9	<1.9	No Criteria Available	No Criteria Available
70	Butylbenzyl Phthalate	µg/L		<2.5	NONE	NONE	NONE	NONE	3000	5,200		5,200	NO	<2.5	<2.5	<2.5	NO	Interim Monitoring - No Limit
71	2-Chloronaphthalene	µg/L	0.6	<1.9	NONE	NONE	NONE	NONE	1700	4,300		4,300	NO	<1.9	<1.9	<1.9	NO	Interim Monitoring - No Limit
72	4-Chlorophenyl Phenyl Ether	µg/L	0.6	<4.2	NONE	NONE	NONE	NONE	NONE	NONE		NONE	No Criteria Available	<4.2	<4.2	<4.2	No Criteria Available	No Criteria Available
73	Chrysene	µg/L	0.6	<2	NONE	NONE	NONE	NONE	0.0044	0.049		0.049	NO	<2	<2	<2	NO	Interim Monitoring - No Limit-MDL>C
74	Dibenzo(a,h)Anthracene	µg/L	0.6	<2.5	NONE	NONE	NONE	NONE	0.0044	0.049		0.049	NO	<2.5	<2.5	<2.5	NO	Interim Monitoring - No Limit-MDL>C
75	1,2-Dichlorobenzene	µg/L	0.6	<1.9	NONE	NONE	NONE	NONE	2700	17,000		17,000	NO	<1.9	<1.9	<1.9	NO	Interim Monitoring - No Limit
76	1,3-Dichlorobenzene	µg/L	0.6	*<2.5*	NONE	NONE	NONE	NONE	400	2,600		2,600	NO	*<2.5*	*<2.5*	*<2.5*	NO	Interim Monitoring - No Limit
77	1,4-Dichlorobenzene	µg/L	0.6	*<4.4*	NONE	NONE	NONE	NONE	400	2,600		2,600	NO	*<4.4*	*<4.4*	*<4.4*	NO	Interim Monitoring - No Limit
78	3,3'-Dichlorobenzidine	µg/L	0.6	<16.5	NONE	NONE	NONE	NONE	0.04	0.077		0.077	NO	<16.5	<16.5	<16.5	NO	Interim Monitoring - No Limit-MDL>C
79	Diethyl Phthalate	µg/L	0.6	<2.2	NONE	NONE	NONE	NONE	23000	120,000		120,000	NO	<2.2	<2.2	<2.2	NO	Interim Monitoring - No Limit
80	Dimethyl Phthalate	µg/L	0.6	<1.6	NONE	NONE	NONE	NONE	313000	2,900,000		2.9x10^6	NO	<1.6	<1.6	<1.6	NO	Interim Monitoring - No Limit
81	Di-n-Butyl Phthalate	µg/L	0.6	<2.5	NONE	NONE	NONE	NONE	2700	12,000		12,000	NO	<2.5	<2.5	<2.5	NO	Interim Monitoring - No Limit
82	2,4-Dinitrotoluene	µg/L	0.6	<5.7	NONE	NONE	NONE	NONE	0.11	9.1		9.1	NO	<5.7	<5.7	<5.7	NO	Interim Monitoring - No Limit
83	2,6-Dinitrotoluene	µg/L	0.6	<1.9	NONE	NONE	NONE	NONE	NONE	NONE		NONE	No Criteria Available	<1.9	<1.9	<1.9	No Criteria Available	No Criteria Available
84	Di-n-Octyl Phthalate	µg/L	0.6	<2.5	NONE	NONE	NONE	NONE	NONE	NONE		NONE	No Criteria Available	<2.5	<2.5	<2.5	No Criteria Available	No Criteria Available
85	1,2-Diphenylhydrazine	µg/L	0.6	<10	NONE	NONE	NONE	NONE	0.04	0.54		0.54	NO	<10	<10	<10	NO	Interim Monitoring - No Limit-MDL>C
86	Fluoranthene	µg/L	0.6	<2.2	NONE	NONE	NONE	NONE	300	370		370	NO	<2.2	<2.2	<2.2	NO	Interim Monitoring - No Limit
87	Fluorene	µg/L	0.6	<1.9	NONE	NONE	NONE	NONE	1300	14,000		14,000	NO	<1.9	<1.9	<1.9	NO	Interim Monitoring - No Limit
88	Hexachlorobenzene	µg/L	0.6	<1.9	NONE	NONE	NONE	NONE	0.00075	0.00077		0.00077	NO	<1.9	<1.9	<1.9	NO	Interim Monitoring - No Limit-MDL>C
89	Hexachlorobutadiene	µg/L	0.6	<0.9	NONE	NONE	NONE	NONE	0.44	50		50	NO	<0.9	<0.9	<0.9	NO	Interim Monitoring - No Limit
90	Hexachlorocyclopentadiene	µg/L	0.6	<1.9	NONE	NONE	NONE	NONE	240	17,000		17,000	NO	<1.9	<1.9	<1.9	NO	Interim Monitoring - No Limit
91	Hexachloroethane	µg/L	0.6	<1.6	NONE	NONE	NONE	NONE	1.9	8.9		8.9	NO	<1.6	<1.6	<1.6	NO	Interim Monitoring - No Limit
92	Indeno(1,2,3-cd)Pyrene	µg/L	0.6	<3.7	NONE	NONE	NONE	NONE	0.0044	0.049		0.049	NO	<3.7	<3.7	<3.7	NO	Interim Monitoring - No Limit-MDL>C
93	Isophorone	µg/L	0.6	<2.2	NONE	NONE	NONE	NONE	8.4	600		600	NO	<2.2	<2.2	<2.2	NO	Interim Monitoring - No Limit
94	Napthalene	µg/L	0.6	<10	NONE	NONE	NONE	NONE	NONE	NONE		NONE	No Criteria Available	<10	<10	<10	No Criteria Available	No Criteria Available
95	Nitrobenzene	µg/L	0.6	<1.9	NONE	NONE	NONE	NONE	17	1,900		1,900	NO	<1.9	<1.9	<1.9	NO	Interim Monitoring - No Limit
96	N-Nitrosodimethylamine	µg/L	0.6	<.15	NONE	NONE	NONE	NONE	0.00069	8.1		8.1	NO	<.15	<.15	<.15	NO	Interim Monitoring - No Limit
97	N-Nitrosodi-n-Propylamine	µg/L	0.6	<10	NONE	NONE	NONE	NONE	0.005	1.4		1.4	NO	<10	<10	<10	NO	Interim Monitoring - No Limit-MDL>C
98	N-Nitrosodiphenylamine	µg/L	0.6	<10	NONE	NONE	NONE	NONE	5	16		16	NO	<10	<10	<10	NO	Interim Monitoring - No Limit
99	Phenanthrene	µg/L	0.6	*<5.4*	NONE	NONE	NONE	NONE	NONE	NONE		NONE	No Criteria Available	*<5.4*	*<5.4*	*<5.4*	No Criteria Available	No Criteria Available
100	Pyrene	µg/L	0.6	<1.9	NONE	NONE	NONE	NONE	960	11,000		11,000	NO	<1.9	<1.9	<1.9	NO	Interim Monitoring - No Limit
101	1,2,4-Trichlorobenzene	µg/L	0.6	*<1.9*	NONE	NONE	NONE	NONE	NONE	NONE		NONE	No Criteria Available	*<1.9*	*<1.9*	*<1.9*	No Criteria Available	No Criteria Available
102	Aldrin	µg/L	0.6	<.004	1.3	NONE	3	NONE	0.00013	0.00014		0.00014	NO	<.004	<.004	<.004	NO	Interim Monitoring - No Limit-MDL>C
103	alpha-BHC	µg/L	0.6	<.003	NONE	NONE	NONE	NONE	0.0039	0.013		0.013	NO	<.003	<.003	<.003	NO	Interim Monitoring - No Limit
104	beta-BHC	µg/L	0.6	<.006	NONE	NONE	NONE	NONE	0.014	0.046		0.046	NO	<.006	<.006	<.006	NO	Interim Monitoring - No Limit
105	gamma-BHC(aka Lindane)	µg/L	0.4	<.004	*0.16*	NONE	0.95	NONE	0.019	0.063		0.063	NO	<.004	<.004	<.004	NO	Interim Monitoring - No Limit-MDL>C
106	delta-BHC	µg/L	0.6	<.009	NONE	NONE	NONE	NONE	NONE	NONE		NONE	No Criteria Available	<.009	<.009	<.009	No Criteria Available	Interim Monitoring - No Limit
107	Chlordane	µg/L	0.6	<.014	0.09	0.04	2.4	0.0043	0.00057	0.00059		0.00059	NO	<.014	<.014	<.014	NO	Interim Monitoring - No Limit-MDL>C
108	4,4'-DDT	µg/L	0.6	<4.7	0.13	0.001	1.1	0.001	0.00059	0.00059		0.00059	NO	<4.7	<4.7	<4.7	NO	Interim Monitoring - No Limit-MDL>C
109	4,4'-DDE	µg/L	0.6	<5.6	NONE	NONE	NONE	NONE	0.00059	0.00059		0.00059	NO	<5.6	<5.6	<5.6	NO	Interim Monitoring - No Limit-MDL>C
110	4,4'-DDD	µg/L	0.6	<2.8	NONE	NONE	NONE	NONE	0.00083	0.00084		0.00084	NO	<2.8	<2.8	<2.8	NO	Interim Monitoring - No Limit-MDL>C
111	Dieldrin	µg/L	0.6	<.002	0.71	0.0019	0.24	0.056	0.00014	0.00014		0.00014	NO	<.002	<.002	<.002	NO	Interim Monitoring - No Limit-MDL>C
112	alpha-Endosulfan	µg/L	0.6	<.0014	0.034	0.0087	0.22	0.056	110	240		0.0087	NO	<.0014	<.0014	<.0014	NO	Interim Monitoring - No Limit
113	beta-Endosulfan	µg/L	0.6	<.004	0.034	0.0087	0.22	0.056	110	240		0.0087	NO	<.004	<.004	<.004	NO	Interim Monitoring - No Limit
114	Endosulfan Sulfate	µg/L	0.6	<..066	NONE	NONE	NONE	NONE	110	240		240	NO	<..066	<..066	<..066	NO	Interim Monitoring - No Limit
115	Endrin	µg/L	0.6	<.006	0.037	0.0023	0.086	0.036	0.76	0.81		0.0023	NO	<.006	<.006	<.006	NO	Interim Monitoring - No Limit-MDL>C
116	Endrin Aldehyde	µg/L	0.6	<.023	NONE	NONE	NONE	NONE	0.76	0.81		0.81	NO	<.023	<.023	<.023	NO	Interim Monitoring - No Limit
117	Heptachlor	µg/L	0.6	<.003	0.053	0.0036	0.52	0.0038	0.00021	0.00021		0.00021	NO	<.003	<.003	<.003	NO	Interim Monitoring - No Limit-MDL>C
118	Heptachlor Epoxide	µg/L	0.6	<.083	0.053	0.0036	0.52	0.0038	0.0001	0.00011		0.00011	NO	<2	<2	<2	NO	Interim Monitoring - No Limit-MDL>C
	Polychlorinated biphenyls (PCBs)	µg/L																
119	Aroclor 1016	µg/L	0.6	<.065	NONE	0.03	NONE	0.014	0.00017	0.00017		0.00017	NO	<.065	<.065	<.065	NO	Interim Monitoring - No Limit-MDL>C
120	Aroclor 1221	µg/L	0.6	<.065	NONE	0.03	NONE	0.014	0.00017	0.00017		0.00017	NO	<.065	<.065	<.065	NO	Interim Monitoring - No Limit-MDL>C
121	Aroclor 1232	µg/L	0.6	<.065	NONE	0.03	NONE	0.014	0.00017	0.00017		0.00017	NO	<.065	<.065	<.065	NO	Interim Monitoring - No Limit-MDL>C
122	Aroclor 1242	µg/L	0.6	<.065	NONE	0.03	NONE	0.014	0.00017	0.00017		0.00017	NO	<.065	<.065	<.065	NO	Interim Monitoring - No Limit-MDL>C

CTR#		Units	CV	MEC (Ventura WRP	CTR CRITERIA Saltwater C acute =	Saltwater C chronic	Freshwater C acute =	Freshwater C chronic =	Human Health Not		SWRCB min	REASONABLE POTENTIAL ANALYSIS (RPA)	Tier 1	B			Tier 2 B>C &	Recommendation
123	Aroclor 1248	µg/L	0.6	<.065	NONE	0.03	NONE	0.014	0.00017	0.00017		0.00017	NO	<.065	<.065	<.065	NO	Interim Monitoring - No Limit-MDL>C
124	Aroclor 1254	µg/L	0.6	<.065	NONE	0.03	NONE	0.014	0.00017	0.00017		0.00017	NO	<.065	<.065	<.065	NO	Interim Monitoring - No Limit-MDL>C
125	Aroclor 1260	µg/L	0.6	<.065	NONE	0.03	NONE	0.014	0.00017	0.00017		0.00017	NO	<.065	<.065	<.065	NO	Interim Monitoring - No Limit-MDL>C
126	Toxaphene	µg/L	0.6	<10	0.21	0.0002	0.73	0.0002	0.0073	0.00075		0.0002	NO	<10	<10	<10	NO	Interim Monitoring - No Limit-MDL>C

These metals are hardness dependent. CTR criteria was calculated using a hardness capped at 400 mg/L, pursuant to CTR.

Attachment N-2 Priority Metal Criterion Calculation

Copper	Freshwater						Freshwater						Saltwater			Saltwater			Human Health
	CMC or Acute						CCC or Chronic												
	CMC = WER x Conversion Factor x (exp {mA [ln(Hardness)] + bA})						CCC = WER x Conversion Factor x (exp {mC [ln(Hardness)] + bC})						CMC			CCC			Organisms only
HARDNESS	WER	Conversion Factor	mA	bA	Total Recoverable Limit	Dissolved Fraction Limit	WER	Conversion Factor	mC	bC	Total Recoverable Limit	Dissolved Fraction Limit	Conversion Factor	Total Recoverable Limit	Dissolved Fraction Limit	Conversion Factor	Total Recoverable Limit	Dissolved Fraction Limit	
(mg/L)	1	0.96	0.9422	-1.7		(µg/L)	1	0.96	0.8545	-1.702		(µg/L)	0.83	5.78313253	4.8	0.83	3.734939759	3.1	---
100	1	0.96	0.9422	-1.7	14.00	13.44	1	0.96	0.8545	-1.702	9.33	8.96	0.83	5.78313253	4.8	0.83	3.734939759	3.1	---
200	1	0.96	0.9422	-1.7	26.90	25.82	1	0.96	0.8545	-1.702	16.87	16.19	0.83	5.78313253	4.8	0.83	3.734939759	3.1	---
300	1	0.96	0.9422	-1.7	39.41	37.84	1	0.96	0.8545	-1.702	23.85	22.90	0.83	5.78313253	4.8	0.83	3.734939759	3.1	---
400	1	0.96	0.9422	-1.7	**51.68**	49.62	1	0.96	0.8545	-1.702	30.50	29.28	0.83	5.78313253	4.8	0.83	**3.734939759**	3.1	---
413	1	0.96	0.9422	-1.7	53.27	51.14	1	0.96	0.8545	-1.702	31.34	30.09	0.83	5.78313253	4.8	0.83	3.734939759	3.1	---
494	1	0.96	0.9422	-1.7	63.06	60.53	1	0.96	0.8545	-1.702	36.53	35.07	0.83	5.78313253	4.8	0.83	3.734939759	3.1	---
										Applied	Discharger 2002	Metal translator	0.86	6.724572709	6.72457271		4.342953208	4.34295321	
										Applied	Discharger 2009	WER total copper	2.08	13.98711124	13.9871112		9.033342673	9.03334267	
											(geometric mean of 12 tests)								

Lead	CMC or Acute						CCC or Chronic												
	CMC = WER x Conversion Factor x (exp {mA [ln(Hardness)] + bA})						CCC = WER x Conversion Factor x (exp {mC [ln(Hardness)] + bC})						CMC			CCC			Organisms only
HARDNESS	WER	Conversion Factor*	mA	bA	Total Recoverable Limit	Dissolved Fraction Limit	WER	Conversion Factor	mC	bC	Total Recoverable Limit	Dissolved Fraction Limit	Conversion Factor	Total Recoverable Limit	Dissolved Fraction Limit	Conversion Factor	Total Recoverable Limit	Dissolved Fraction Limit	
(mg/L)	1	0.791	1.273	-1.46		(µg/L)	1	0.791	1.273	-4.705		(µg/L)	0.951	220.8201893	210	0.951	8.517350158	8.1	narrative
100	1	0.791001442	1.273	-1.46	81.65	64.58	1	0.791001442	1.273	-4.705	3.18	2.52	0.951	220.8201893	210	0.951	8.517350158	8.1	narrative
200	1	0.69000158	1.273	-1.46	197.31	136.14	1	0.69000158	1.273	-4.705	7.69	5.31	0.951	220.8201893	210	0.951	8.517350158	8.1	narrative
300	1	0.630920448	1.273	-1.46	330.60	208.58	1	0.630920448	1.273	-4.705	12.88	8.13	0.951	220.8201893	210	0.951	8.517350158	8.1	narrative
400	1	0.589001718	1.273	-1.46	476.82	280.85	1	0.589001718	1.273	-4.705	18.58	10.94	0.951	**220.8201893**	210	0.951	**8.517350158**	8.1	narrative
										Not applied	Discharger 2002	No Translator							
										Not applied	Discharger 2007	No WER							

Nickel	Freshwater						Freshwater						Saltwater			Saltwater			
	CMC or Acute						CCC or Chronic												
	CMC = WER x Conversion Factor x (exp {mA [ln(Hardness)] + bA})						CCC = WER x Conversion Factor x (exp {mC [ln(Hardness)] + bC})						CMC			CCC			Organisms only
HARDNESS	WER	Conversion Factor	mA	bA	Total Recoverable Limit	Dissolved Fraction Limit	WER	Conversion Factor	mC	bC	Total Recoverable Limit	Dissolved Fraction Limit	Conversion Factor	Total Recoverable Limit	Dissolved Fraction Limit	Conversion Factor	Total Recoverable Limit	Dissolved Fraction Limit	
(mg/L)	1	0.998	0.846	2.255		(µg/L)	1	0.997	0.846	0.0584		(µg/L)	0.99	74.74747475	74	0.99	8.282828283	8.2	4600
100	1	0.998	0.846	2.255	469.17	468.24	1	0.997	0.846	0.0584	52.16	52.01	0.99	74.74747475	74	0.99	8.282828283	8.2	4600
200	1	0.998	0.846	2.255	843.35	841.66	1	0.997	0.846	0.0584	93.76	93.48	0.99	74.74747475	74	0.99	8.282828283	8.2	4600
300	1	0.998	0.846	2.255	1188.44	1186.07	1	0.997	0.846	0.0584	132.13	131.74	0.99	74.74747475	74	0.99	8.282828283	8.2	4600
400	1	0.998	0.846	2.255	1515.92	1512.89	1	0.997	0.846	0.0584	168.54	168.04	0.99	74.74747475	74	0.99	8.282828283	8.2	4600
										Applied	Discharger 2002	metal translator	0.81	**91.35802469**	91.3580247		**10.22571393**	10.2257139	
										Not applied	Discharger 2007	No WER							

Selenium	Freshwater						Freshwater						Saltwater			Saltwater			
	CMC or Acute						CCC or Chronic												
	Bioaccumulative						Bioaccumulative						CMC			CCC			Organisms only
HARDNESS	WER	Conversion Factor	mA	bA	Total Recoverable Limit	Dissolved Fraction Limit	WER	Conversion Factor	mC	bC	Total Recoverable Limit	Dissolved Fraction Limit	Conversion Factor	Total Recoverable Limit	Dissolved Fraction Limit	Conversion Factor	Total Recoverable Limit	Dissolved Fraction Limit	
(mg/L)	1					reserved	1				5		0.998	290.58	290	0.998	71.14	71	none

Attachment N-3 Priority Reasonable Potential Analysis and Limit Derivation

CTR#		Units	CV	MEC (Ventura WRP effluent)	CTR CRITERIA Saltwater C acute = CMC tot	Saltwater C chronic = CCC	Freshwater C acute = CMC tot	Freshwater C chronic = CCC	Human Health Not applicable C hh W&O	Human Health C hh O	SWRCB min	REASONABLE POTENTIAL ANALYSIS (RPA) Lowest C	Tier 1 MEC ≥ Lowes	B R3 max	B R4 max	B R5 max	Tier 2 B>C & present In	Need limit?	AQUATIC LIFE CALCULATIONS (ckish) Lowest Freshwater or Saltw ECA acute multi	LTA acute	ECA chronic	LTA chronic	Lowest LTA	AQUATIC LIFE CALCULATIONS (ckish (Lowest Freshwater or Saltwa AMEL multiplier (n=4)	AMEL aq.life	MDEL multiplier	MDEL aqlife	ROPOSED LIMIT Lowest AMEL	Lowest MDEL	Recommendation
1	Antimony	µg/L		<1	NONE	NONE	NONE	NONE	14	4300	0.5	4300	NO	<1		<1	NO	NO												Interim Monitoring - No CTR-based Limit
2	Arsenic	µg/L		<2	69	36	340	150	Narrative	Narrative	1	36	NO	7.7	7.35	6.26	NO	NO												Interim Monitoring - No CTR-based Limit
3	Beryllium	µg/L		<2	NONE	NONE	NONE	NONE	Narrative	Narrative	0.5	no criteria	NO	<.2	<.2	<.2	NO	NO												Interim Monitoring - No CTR-based Limit
4	Cadmium	µg/L		*<4*	*42.25*	*9.36*	21.58	7.31	Narrative	Narrative	0.25	7.31	NO	*<4*	*<4*	*<4*	NO	NO												Interim Monitoring - No CTR-based Limit
5a	Chromium III*	µg/L		<7	Narrative	Narrative	5404.62	644.2	Narrative	Narrative		644.2	NO	9.05	<7	7.43	NO	NO												Interim Monitoring - No CTR-based Limit
5b	Chromium VI	µg/L		<1	1107.75	50.35	16.3	11.4	Narrative	Narrative	5	11.4	NO	not sampled	not sampled	not sampled	NO	NO												Interim Monitoring - No CTR-based Limit
6	Copper*	µg/L	0.79	8.88	13.99	9.033	51.68	30.5	1300	NONE	0.5	9.033	YES	3.01	4.97	3.54	NO	YES	0.252	3.529	0.443	4.006	3.529	1.740	6.140	3.964	13.990	6.1	14.0	New limit: Tier 1, MEC > C, with 2008 WER of 2.08 and dissolved conversion factor of .83. Correcting old MDEL = 8.8, AMEL = 4.2 with WER of 2007 1.58 and conversion factor.
7	Lead	µg/L	0.6	*9.44*	*220.8*	8.5	476.82	18.58	Narrative	Narrative	0.5	8.5	YES	7.63	<5	5.54	NO	YES	0.321	70.895	0.527	4.483	4.483	1.552	6.960	3.114	13.963	7.0	14.0	Reinstate limit: Tier 1, MEC > C, MDEL = 14, AMEL = 7.
8	Mercury	µg/L	0.6	<.02	-	-	-	-	0.05	0.051	0.2	0.05	NO	*<2*	*<2*	*<2*	NO	NO												Interim Monitoring - No CTR-based Limit
9	Nickel*	µg/L	1.09	35.4	91.36	10.23	1515.92	168.54	610	4600	1	10.23	YES	50.2	30.2	42	YES	YES	0.189	17.254	0.348	3.558	3.558	2.032	7.229	5.295	18.839	7.2	18.8	New limit: Tier 1, MEC > C, Update from Order 00-143 MDEL = 15.2, AMEL = 5.3 without translator.
10	Selenium	µg/L	0.6	13.7	290.58	71.14	-	5	Narrative	Narrative	5	5	YES	7.65	8.07	20.1	YES	YES			0.527	2.637	2.637	1.552	4.094	3.114	8.213	4.1	8.2	New limit for MDEL: Tier 1, MEC > C, Update from Order 00-143 MDEL = 8.8, AMEL= 2.9.
11	Silver*	µg/L	0.6	<.2	2.24	NONE	44.05	NONE	NONE	NONE	0.25	2.24	NO	*<.2*	*<.2*	*<.2*	NO	NO												Interim Monitoring - No CTR Limit
12	Thallium	µg/L	0.6	<1	NONE	NONE	NONE	NONE	1.7	6.3	1	6.3	NO	<1	<1	<1	NO	NO												Interim Monitoring - No CTR Limit
13	Zinc	µg/L	0.33	68.8	107.1	96.4	387.83	388	NONE	NONE	1	96.4	NO	*32.4*	*31.5*	*20.1*	NO	NO												Interim Monitoring - No CTR Limit

ATTACHMENT P – PRETREATMENT REPORTING REQUIREMENTS

The Discharger is required to submit annual Pretreatment Program Compliance Report (Report) to the Regional Water Board and USEPA Region 9. This Attachment outlines the minimum reporting requirements of the Report. If there is any conflict between requirements stated in this attachment and provisions stated in the Waste Discharge Requirements (WDR), those contained in the WDR will prevail.

A. Pretreatment Requirements

1. The City shall be responsible and liable for the performance of all Control Authority pretreatment requirements contained in 40 CFR Part 403, including any subsequent regulatory revisions to Part 403. Where Part 403 or subsequent revision places mandatory actions upon the City as Control Authority but does not specify a timetable for completion of the actions, the City shall complete the required actions within six months from the issuance date of this permit or the effective date of the Part 403 revisions, whichever comes later. For violations of pretreatment requirements, the City shall be subject to enforcement actions, penalties, fines and other remedies by the U.S. Environmental Protection Agency (EPA) or other appropriate parties, as provided in the Act. EPA may initiate enforcement action against a nondomestic user for noncompliance with applicable standards and requirements as provided in the act.

2. The City shall enforce the requirements promulgated under sections 307(b), 307(c), 307(d) and 402(b) of the Act with timely, appropriate and effective enforcement actions. The City shall cause all nondomestic users subject to federal categorical standards to achieve compliance no later than the date specified in those requirements or, in the case of a new nondomestic user, upon commencement of the discharge.

3. The City shall perform the pretreatment functions as required in 40 CFR Part 403 including, but not limited to:

   a. Implement the necessary legal authorities as provided in 40 CFR Part 403.8(f)(1);

   b. Enforce the pretreatment requirements under 40 CFR Part 403.5 and 403.6;

   c. Implement the programmatic functions as provided in 40 CFR Part 403.8(f)(2); and

   d. Provide the requisite funding and personnel to implement the pretreatment program as provided in 40 CFR Part 403.8(f)(3).

4. The City shall submit annually a report to EPA Pacific Southwest Region, and the State describing its pretreatment activities over the previous year. In the event the City is not in compliance with any conditions or requirements of this permit, then the City shall also include the reasons for noncompliance and state how and when the City shall comply with such conditions and requirements. This annual report shall cover operations from January 1 through December 31 and is due on March 1 of each year. The report shall contain, but not be limited to, the following information:

   a. A summary of analytical results from representative, flow proportioned, 24-hour composite sampling of the POTW's influent and effluent for those pollutants EPA has identified under section 307(a) of the Act which are known or suspected to be discharged by nondomestic users. This will consist of an annual full priority pollutant scan, with quarterly samples analyzed only for those pollutants detected in the full scan. The City is not required to sample and analyze for asbestos. Sludge sampling and analysis are covered in the sludge

section of this permit. The City shall also provide any influent or effluent monitoring data for nonpriority pollutants which the City believes may be causing or contributing to interference or pass through. Sampling and analysis shall be performed with the techniques prescribed in 40 CFR Part 136;

b. A discussion of Upset, Interference or Pass Through incidents, if any, at the treatment plant which the City knows or suspects were caused by nondomestic users of the POTW system. The discussion shall include the reasons why the incidents occurred, the corrective actions taken and, if known, the name and address of the nondomestic user(s) responsible. The discussion shall also include a review of the applicable pollutant limitations to determine whether any additional limitations, or changes to existing requirements, may be necessary to prevent pass through or interference;

c. An updated list of the City's significant industrial users (SIUs) including their names and addresses, and a list of deletions, additions and SIU name changes keyed to the previously submitted list. The City shall provide a brief explanation for each change. The list shall identify the SIUs subject to federal categorical standards by specifying which set(s) of standards are applicable to each SIU. The list shall also indicate which SIUs are subject to local limitations;

d. The City shall characterize the compliance status of each SIU by providing a list or table which includes the following information:

   i. Name of the SIU;
   ii. Category, if subject to federal categorical standards;
   iii. The type of wastewater treatment or control processes in place;
   iv. The number of samples taken by the POTW during the year;
   v. The number of samples taken by the SIU during the year;
   vi. For an SIU subject to discharge requirements for total toxic organics, whether all required certifications were provided;
   vii. A list of the standards violated during the year. Identify whether the violations were for categorical standards or local limits;
   viii. Whether the facility is in significant noncompliance (SNC) as defined at 40 CFR part 403.8(f)(2)(viii) at any time during the year; and
   ix. A summary of enforcement or other actions taken during the year to return the SIU to compliance. Describe the type of action, final compliance date, and the amount of fines and penalties collected, if any. Describe any proposed actions for bringing the SIU into compliance.

e. A brief description of any programs the POTW implements to reduce pollutants from nondomestic users that are not classified as SIUs;

f. A brief description of any significant changes in operating the pretreatment program which differ from the previous year including, but not limited to, changes concerning the program's administrative structure, local limits, monitoring program or monitoring frequencies, legal authority, enforcement policy, funding levels, or staffing levels;

g. A summary of the annual pretreatment budget, including the cost of pretreatment program functions and equipment purchases; and

h. A summary of activities to involve and inform the public of the program including a copy of the newspaper notice, if any, required under 40 CFR 403.8(f)(2)(viii).

B. LOCAL LIMITS EVALUATION

1. In accordance with 40 CFR 122.44(j)(2)(ii), the POTW shall provide a written technical evaluation of the need to revise local limits under 40 CFR Part 4035.(c)(1) within 180 days of issuance or reissuance of the NPDES permit.

C. SIGNATORY REQUIREMENTS AND REPORT SUBMITTAL

1. Signatory Requirements.

   The annual report must be signed by a principal executive officer, ranking elected official or other duly authorized employee if such employee is responsible for the overall operation of the POTW. Any person signing these reports must make the following certification [40 CFR 403.6(a)(2)(ii)]:

   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.

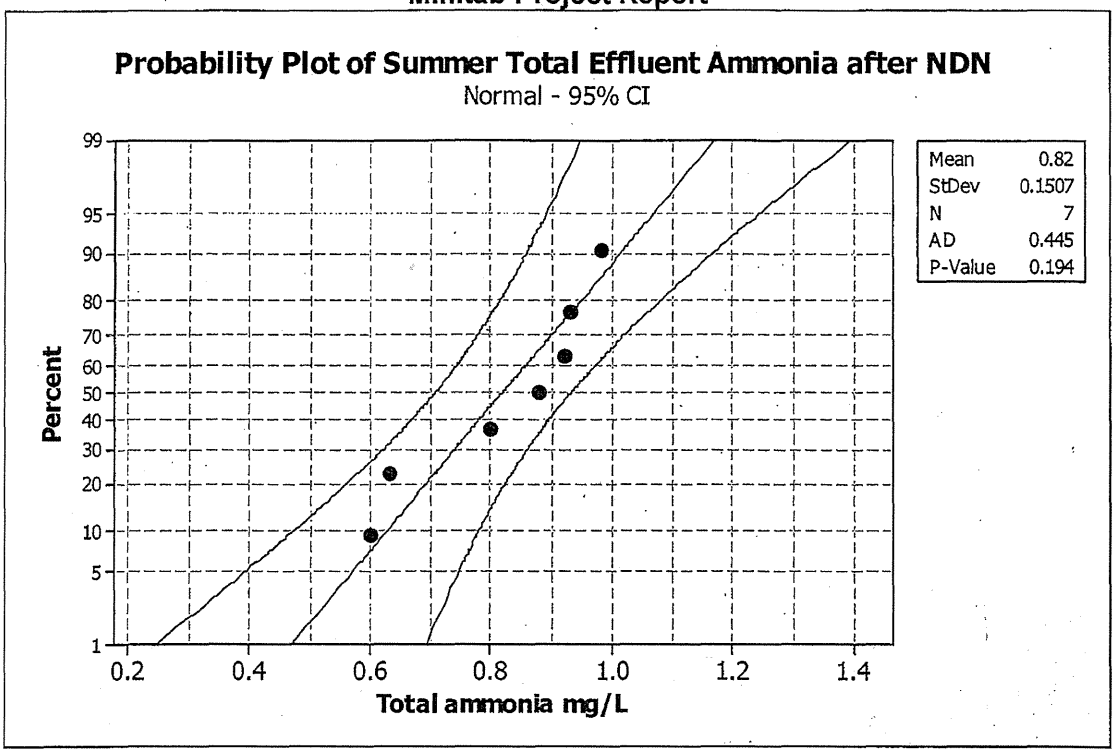
2. Report Submittal.

   An original copy of the Annual Report must be sent to the Pretreatment Program Coordinator of the Regional Water Board and the duplicate copies of the Report must be sent to USEPA through the following addresses:

   Information and Technology Unit
   Attn: Pretreatment Program Coordinator
   California Regional Water Quality Control Board, Los Angeles Region
   320 West 4th Street, Suite 200
   Los Angeles, CA 90013

   Pretreatment Program
   CWA Compliance Office (WTR-7)
   Water Division
   U.S. Environmental Protection Agency, Region IX
   75 Hawthorne Street
   San Francisco, CA 94105-3901

Minitab Project Report



Percent	C2	Lower Bound	Upper Bound
1	0.469500	0.245831	0.693169
2	0.510572	0.306271	0.714872
3	0.536630	0.344238	0.729022
4	0.556233	0.372563	0.739902
5	0.572178	0.395430	0.748926
6	0.585750	0.414756	0.756743
7	0.597650	0.431586	0.763713
8	0.608305	0.446555	0.770054
9	0.617995	0.460081	0.775909
10	0.626915	0.472451	0.781378
20	0.693197	0.561384	0.825010
30	0.740991	0.621131	0.860851
40	0.781829	0.668239	0.895420
50	0.82	0.708388	0.931612
60	0.858171	0.744580	0.971761
70	0.899009	0.779149	1.01887
80	0.946803	0.814990	1.07862
90	1.01309	0.858622	1.16755
91	1.02201	0.864091	1.17992
92	1.03170	0.869946	1.19344
93	1.04235	0.876287	1.20841
94	1.05425	0.883257	1.22524
95	**1.06782**	0.891074	1.24457
96	1.08377	0.900098	1.26744
97	1.10337	0.910978	1.29576
98	1.12943	0.925128	1.33373
99	**1.17050**	0.946831	1.39417

Appendix E: Information Regarding Operation of the Recycled Water Fill Station

Kennedy/Jenks Consultants

2775 North Ventura Road, Suite 100
Oxnard, California 93036
805-973-5700
FAX: 805-973-1440

Information to Support the Ventura Water Reclamation Facility Mobile Reuse Program

September 2015

Prepared for

Ventura Water
P.O. Box 99
Ventura, CA 93001
Office: 805-677-4127

K/J Project No. 1444238.01

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B – Recycled Water Use Permit (Order 87-045)

C – Approval of Residential and Limited Commercial Recycled Water Fill Station

D – Water Reuse Permit for Mobile Users

Section 1: Project Overview

Due to current and anticipated drought conditions over the coming years, the City of San Buenaventura (Ventura, City) is expecting increased frequency and duration of potable water shortages. As such, the City is proposing to expand the use of recycled water permitted under Recycled Water Use Permit (Order 87-045), which allows for the delivery of recycled water for irrigation of golf courses, cemeteries, freeway landscapes, and landscapes in other areas where the public has similar access or exposure. The City has received multiple requests to obtain recycled water from their existing WRF by entities such as AERA Energy LLC, and the Ventura County Transportation Department, as well as residents within the community of Ventura. All entities have requested the use of recycled water, as opposed to potable water, for their dust control and irrigation needs. One customer of the City for example, the City of Ventura Parks, Recreation and Community Partnerships Department (Parks Department), has requested additional recycled water to irrigate park trees. Without recycled water the irrigation of park trees may result in violation of drought conservation requirements and/or the loss of park trees. The majority of these proposed additional uses would be via additional truck trips to load the trucks with the recycled water and deliver to these uses within the City limits. The City has also received multiple requests from residential homeowners requesting to use the recycled water to irrigate their private residences, as opposed to irrigating with potable water. Thus the City would like to implement a truck hauling program for recycled water where commercial and residential entities can obtain water from the Ventura WRF.

Appendix A provides a listing of the new users and provides for their location.

The City would be in charge of overseeing recycled water distribution as part of the currently operating WRF, and no expansion of the WRF is required for the intended uses of this program. To do so, the City must request a wastewater change petition from the State Water Resources Quality Control Board reflecting the additional uses, as well as consulting with the Division of Drinking Water and Los Angeles Regional Water Quality Control Board to approve the new uses will be handled in a manner that protects public health and safety.

As part of the project, Ventura Water is proposing to expand their Recycled Water Program (RWP), permitted under Recycled Water Use Permit (Order 87-045), which allows for the delivery of recycled water for irrigation of golf courses, cemeteries, freeway landscapes, and landscapes in other areas where the public has similar access or exposure. The permit however does not currently allow for the delivery of recycled water via tanker trucks for non-potable uses and dust control, which is the focus of this additional information. The recycled water delivered to users is tertiary treated recycled water, as described in California Code of Regulations, Title 22. The RWP intends to offset unnecessary depletion of potable water supplies with allowable non-potable uses.

No increase in the delivery capacity of the existing WRF is necessary. Ventura Water plans to add a commercial and residential managed recycled water distribution program for mobile users as part of the currently operating WRF.

The purpose of this report is to provide information on the Ventura Water WRF and planned mobile filling station to demonstrate the ability to reliably serve tertiary treated recycled water, as described in Title 22 that is in compliance with the WRF permit requirements.

Specifically, this report describes:

- water quality and planned uses of recycled water,
- monitoring and reporting programs to ensure that Ventura Water stays in compliance with the regulations of the WRF,
- elements of the expanded use program that pertain to safe and compliant distribution of recycled water from the WRF to users, and
- activities associated with employee training and permitting and inspection of users.

1.1 Rules and Regulations

1.1.1 California Code of Regulations, Title 22

Recycled water in California is regulated by the State Water Resources Control Board (SWRCB) Division of Drinking Water (DDW)[1] and individual Regional Water Quality Control Boards (RWQCBs). Requirements are contained in the California Code of Regulations, Title 22, Division 4, Chapter 3 Water Recycling Criteria (DDW, 2014). Recycled water produced at the Ventura WRF meets Title 22 requirements for tertiary treated recycled water, defined as:

"Disinfected tertiary recycled water" means a filtered and subsequently disinfected wastewater that meets the following criteria: (a) The filtered wastewater has been disinfected by either: (1) A chlorine disinfection process following filtration that provides a CT (the product of total chlorine residual and modal contact time measured at the same point) value of not less than 450 milligram-minutes per liter at all times with a modal contact time of at least 90 minutes, based on peak dry weather design flow; or (2) A disinfection process that, when combined with the filtration process, has been demonstrated to inactivate and/or remove 99.999 percent of the plaque forming units of F-specific bacteriophage MS2, or polio virus in the wastewater. A virus that is at least as resistant to disinfection as polio virus may be used for purposes of the demonstration. (b) The median concentration of total coliform bacteria measured in the disinfected effluent does not exceed an MPN of 2.2 per 100 milliliters utilizing the bacteriological results of the last seven days for which analyses have been completed and the number of total coliform bacteria does not exceed an MPN of 23 per 100 milliliters in more than one sample in any 30 day period. No sample shall exceed an MPN of 240 total coliform bacteria per 100 milliliters."

[1] The Drinking Water Program for the California Department of Public Health (CDPH) moved to the SWRCB and was renamed the Division of Drinking Water as of July 1, 2014.

1.1.2 Los Angeles Regional Water Quality Control Board Order 87-045

Los Angeles RWQCB Order 87-045 (Recycled Water Use Permit [Order 87-045]), provided as Appendix B, regulates the conditions under which the City is allowed to distribute recycled water to users. Recycled Water Use Permit (Order 87-045) indicates that recycled water may be used for the irrigation of golf courses, cemeteries, freeway landscapes, and landscapes in other areas where the public has similar access or exposure. Order 87-045 also includes recycled water quality monitoring and reporting requirements. Allowed recycled water use areas and provisions under which users are permitted and inspected are described by the Order.

Under Recycled Water Use Permit Order 87-045, the City is the party responsible for ensuring recycled water is of sufficient quality and for notifying the LARWQCB of any violations. It is the City's responsibility to document effluent quality and file reports on effluent quality and water usage by permitted users in reports to the Regional Board. The City is also responsible for inspecting and documenting that recycled water users are in compliance with order requirements.

1.1.3 Los Angeles Regional Water Quality Control Board Order R4-2013-0174 (NPDES No. CA0053651)

The Ventura WRF has been granted a National Pollutant Discharge Elimination System (NPDES) permit to discharge tertiary treated wastewater to the Estuary from the LARWQCB. The Ventura WRF currently discharges to the SCR Estuary under existing NPDES permit (CA0053651) which was adopted by the LARWQCB on March 6, 2008, and updated in November of 2013. The next update of the permit is due in 2019.

Section 2: Wastewater Treatment

2.1 Raw Wastewater

The City owns and operates the Ventura WRF, which discharges tertiary treated municipal wastewater to the Santa Clara River Estuary (Estuary) just south of the City near the mouth of the Santa Clara River (Figure 1). The design capacity of the WRF is 14 mgd but discharge is limited to 9 mgd[2]. Discharge to the Estuary is permitted under NPDES Order No. R4-2008-0012, CA0053651.

The Ventura WRF also currently produces Title 22 tertiary treated water that is used for local landscape irrigation that is regulated by separate Waste Discharge Requirements and Recycled Water Permit (Order 87-045). Recycled water from the Ventura WRF is used for general irrigation of golf courses, parks and similar landscape areas. Existing recycled water customers include: golf courses - Olivas Links Golf Course and Buenaventura Golf Course; parks - Marina Park; and landscape irrigation near Olivas Drive and in the Harbor area. If regulatory limits are met, Ventura WRF recycled water is approved for unrestricted irrigation of golf courses, parks, playgrounds, school yards, and other landscaped areas with similar public access (unrestricted reuse).

The remaining treated wastewater is conveyed via the effluent transfer station (ETS) to a 20-acre system of wildlife ponds and flows from west to east through "Bone," "Snoopy" and "Lucy" (see Figure 2) prior to being discharged through the outfall junction structure to the Santa Clara River Estuary via an effluent channel. There are losses due to evaporation and percolation in the wildlife ponds prior to final discharge of effluent to the Estuary. The average annual effluent flow (as measured at the ETS) from 2007 to 2014 was 8.5 mgd (Ventura Water Annual Reports, 2007-2014). From the wildlife ponds the flow discharges into the Santa Clara River Tidal Prism and treated effluent is used for landscape irrigation.

[2] The design flow of 14 mgd is limited to 9 mgd discharge to the Santa Clara River Estuary, the 2000-2008 annual average flow, at which time the Regional Water Board mandated studies to determine if the estuary water quality and beneficial uses were enhanced by the effluent.

Figure 1 Ventura Water WRF Location

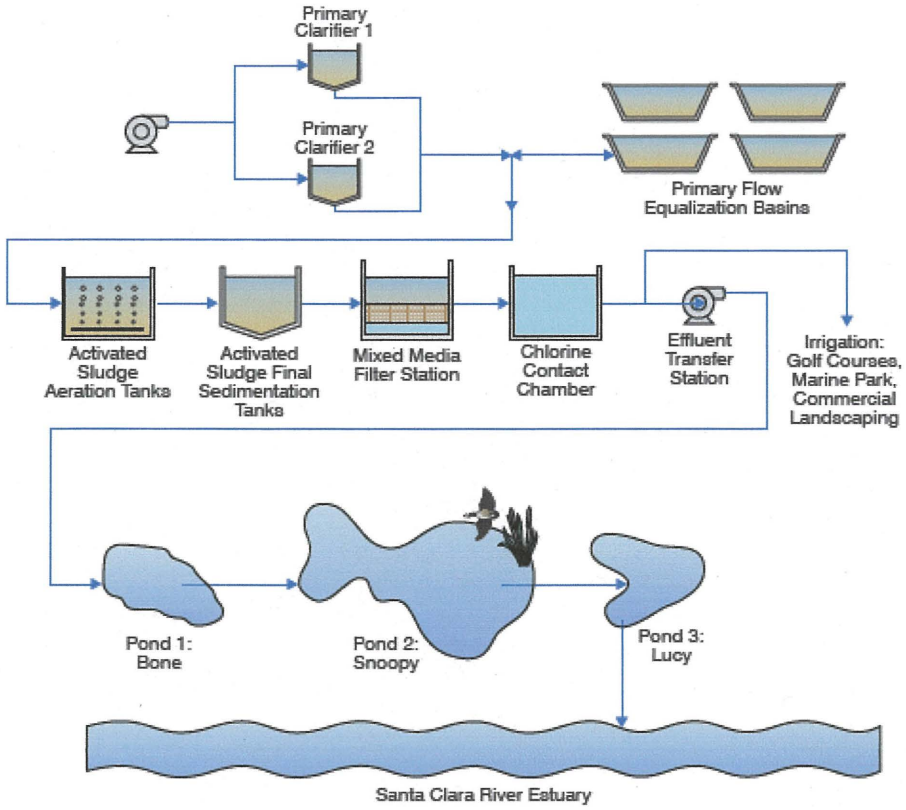
2.2 Treatment Processes

Figure 2 provides a process flow schematic of the Ventura Water WRF. Additional information is also available in the Ventura Water NPDES Order No. R4-2008-0012, CA0053651.

Treatment processes employed at the Ventura WRF include: influent screening, grit removal, primary sedimentation, primary flow equalization, activated sludge secondary biological treatment, including biological nitrification, de-nitrification, tertiary effluent filtration chlorination and de-chlorination.

Process solids are treated by anaerobic digestion to class B standards, dewatered and sent to Toland Road Landfill in Santa Paula, California and processed further to class A standards. Solids are both heat treated and landfill applied. Screenings and grit removed during the treatment process are disposed of at the Toland Road Landfill.

Figure 2 Ventura Water Process Flow Diagram



Source: Corollo, 2014

2.3 Treatment Plant Effluent Quality

The treatment plant effluent quality reliably complies with the Ventura Water NPDES Order No. R4-2008-0012, CA0053651, which details the Agency's wastewater treatment and reporting requirements (see Table 1). The measured concentration parameters in Ventura Water WRF's effluent have been consistently below the NPDES permit limits.

Table 2 provides the recycled water quality limitations for certain constituents as identified in the Recycled Water Use Permit (Order 87-045).

Table 1 Current 2008 NPDES Permit Effluent Limitations

Parameter	Units	Effluent limitations		
		Monthly Ave	Weekly Ave	Daily Max
5-day BOD	mg/L	20	30	45
TSS	mg/L	15	40	45
pH	standard units	---	---	---
Oil and Grease	mg/L	10	---	15
Settleable Solids	mg/L	0.1	---	0.3
Total Residual Chlorine	mg/L	0.1	---	---
MBAS	mg/L	0.5	---	---
Summer Ammonia Nitrogen (May – October)	mg/L	0.045	---	0.30
Winter Ammonia Nitrogen (November – April)	mg/L	0.079	---	0.53
Nitrate + Nitrite as Nitrogen	mg/L	10	---	62
Nitrite as Nitrogen	mg/L	1	---	---
Nitrate as Nitrogen	mg/L	10	---	---
Selenium	ug/L	2.9	---	8.2
Copper	ug/L	4.2	---	8.8
Mercury	ug/L	0.051	---	0.10
Lead	ug/L	7.0	---	14
Silver	ug/L	0.71	---	2.2
Zinc	ug/L	45	---	107

Source: Los Angeles RWQCB NPDES Permit No. CA0053651 for Ventura WRF

Table 2 Recycled Water Quality Requirements per Recycled Water Use Permit (Order 87-045)

Constituent	Unit	Tertiary Treated Recycled Water
Total Dissolved Solids	mg/L	3,000
Chloride	mg/L	500
Sulfate	mg/L	1,000
Boron	mg/L	--

Source: Los Angeles RWQCB Recycled Water Use Permit (Order 87-045)

2.4 Plant Reliability Features

Each treatment process is comprised of multiple unit processes and equipment to provide redundancy so that plant effluent reliably complies with its NPDES permit effluent limits even when unit processes or equipment are out of service. For over 10 years, the level of conventional pollutants in the plant effluent is well below the tertiary treatment limits. All of the conventional treatment processes lead to the well-controlled reliable production of secondary treated effluent that is then further treated and monitored as part of the WRF. This section summarizes the existing plant reliability features, which are an integral part of consistent recycled water production.

The chlorination system has redundant equipment and instrumentation so that the plant effluent and recycled water production are reliably chlorinated in compliance with the permit limits. Specifically, these systems include multiple chlorine feed pumps and analyzers, process flow meters and level and pressure instruments, and a variety of devices and inputs that are transmitted to the supervisory control and data acquisition (SCADA) system. The SCADA system is used to control and monitor the process and equipment and also transmits alarms to warn the operations staff if equipment is not functioning properly.

Alarm information is received at 15 SCADA monitoring stations distributed throughout the treatment plant. Ventura Water has 14 state certified wastewater treatment plant operators which are authorized to receive and mitigate process alarms. Maintenance staff consists of three California Water Environment Association certified electrical and instrumentation technicians and six California Water Environment Association certified mechanical technicians. The Ventura WRF is staffed 24/7 by operations staff members and either a mechanic or electrician is on-stand-by duty during non-regular business hours.

2.5 Supplemental Water Supply

The project will not include a supplemental water supply. In the event that recycled water was not available; customers will revert to using potable water.

2.6 Monitoring, Sampling, and Reporting

2.6.1 Monitoring

Ventura Water completes a wide variety of sampling and analysis of the wastewater treatment processes to comply with its NPDES requirements. The Ventura Water staff collects all samples needed at the City of San Buenaventura Wastewater Laboratory. All analyses for purposes of the NPDES permit and the Safe Drinking Water Act (SDWA) reporting or for industrial waste monitoring conforms to the current requirements of 40 CFR Part 136, "Guidelines Establishing Test Procedures for the Analysis of Pollutants" or of 40 CFR Part 141, "National Interim Primary Drinking Water Regulations."

There are four monitoring locations for taking sample data at the WRF as described in NPDES Order No. R4-2008-0012, CA0053651.

Location 1 – Influent Pump Station (IPS): This location receives all raw wastewater flow to the treatment plant unless failure of pumping systems occurs. If such failure occurs, or should storm flows exceed the capacity of this primary station, all or part of the influent flow will be diverted to a standby facility, which has no provision for sampling or flow measurement. Such events are infrequent and a duplicate influent sampling programs is not warranted. IPS coordinates are 34 ° 14'21.45" N /119° 115' 25.53" W.

The samplers used here are the ISCO 6712R which is programmed flow proportion. The sampler is located in the main stream of the influent channel prior to the headwork adjacent to Harbor Boulevard.

Sampling is performed here for compliance monitoring and for process control. IPS is analyzed daily for pH, 5-day BOD, COD, suspended solids; weekly for ammonia; monthly for TKN; quarterly grab for metals and semi-annual priority pollutants.

Location 2 – Flow Equalization Basin – Primary Effluent (EPE); All effluent from the Primary Clarifier passes through this location. This sample station can be bypassed and raw sewage delivered directly to the Activated Sludge System for routine maintenance or emergency. EPE coordinates are 34°14'29.83" N /119°15'27.88" w. ISCO Modei6712R sampler programmed to collect samples at uniform time intervals proportional to the flow to the secondary treatment process was used for sample collection.

Sampling is performed at this location is for process control. Analyses performed daily at this location are 5-day BOD, COD, pH, suspended solids; weekly for ammonia; monthly for TKN and MBAS.

Location 3 – Activated Sludge Process Effluent: This site is at the end of the 36 inch line from the Activated Sludge Final Sedimentation {FS) Tanks and before the Mixed Media Filter Station Pump Wet Well. FS coordinates are 34° 14'22.89" N /119° 15'27.45" W. ISCO Modei6712R programmed to collect samples at uniform time intervals proportional to the flow to the Activated Sludge System was used for sample collection. Sampling at this site is for process control.

Analyses performed are: daily 5-day BOD, COD, suspended solids; weekly for ammonia, nitrate, nitrite and monthly for TKN and MBAS. The stream from the Activated Sludge System is monitored continuously by a process turbidimeter.

Location 4 – Effluent Transfer Station (ETS): This location follows the plant's filtration and disinfection. From here all treated effluent is pumped to the Wildlife Ponds. ETS coordinates are 34° 14'21.45" N /119° 15' 31.26" W.

ISCO Modei6712FR programmed to collect samples at uniform time intervals proportional to the flow leaving the Mixed Media Filter Station was used for sample collection. Sampling is conducted here for compliance monitoring and for process control. ETS is analyzed daily for pH, 5-day BOD, COD, turbidity, chlorine residual, temperature, settleable solids, suspended solids and total dissolved solids. Weekly analyses include ammonia, nitrate and nitrite, chloride, sulfate, grease and oil, and ammonia.

Monthly analyses are phosphate, TKN, total phosphorous, MBAS, boron, fluoride, sodium, calcium, magnesium, potassium, chlorophyll A , chronic bioassay, and metals. Analyses conducted semi-annually are phenols, pesticides, 17 dioxin congeners and the remaining priority pollutants. The flow from the Filtration and Disinfection processes is also continuously monitored here by a process turbidimeter.

Grab samples for bacteriological examination, pH, total chlorine residual and temperature are collected daily at 11:00 AM from the Chlorine Contact Chamber and Effluent Transfer Station. Five receiving sample stations, designated R1 through R4 and R5 (formerly L5) within the Santa Clara Tidal Prism are specified by the RWQCB in the NPDES Permit CA0053651. Location coordinates are:

R1 – 34° 13'55.58"N/119° 15'27.59" W.
R2 – 34° 13'47.37"N/119° 15'43.15" W.
R3 – Variable at the mouth of the river.
R4 – 34° 14'04.15"N/119° 15'54.19" W.
R5 – 34° 14'01.63"N/119° 15'23.79" W.

Water quality observations and field analyses performed at these sites are water color, odor, visible sludge, foam, oil or grease, pH, temperature (air and water), salinity, chlorine residual and dissolved oxygen.

Weekly grab samples are analyzed for total coliform, fecal coliform and total hardness. Monthly analyses performed are total phosphorous, nitrogen compounds, metals, and chlorophyll A.

Ventura Water will conduct additional sampling and monitoring as required in its role as the recycled water producer under Recycled Water Use Permit (Order 87-045). The Ventura Water staff will collect and analyze the recycled water monitoring samples at the required sampling frequency to comply with Recycled Water Use Permit (Order 87-045).

Section 3: Recycled Water Use

Recycled water from the Ventura WRF is used for general irrigation of golf courses, parks and similar landscape areas. Existing recycled water customers are listed in below.

- Buena Ventura Golf Course
- Olivas Links Golf Course
- MBL Golf Course LLC
- Harbortown Point
- Ventura Port District (2 sites)
- Marina Park
- MBL Properties Stormwater Detention Basin
- MBL Olivas at Bunsen
- MBL Olivas at Seaborg
- Olivas Adobe
- Four Points Sheraton Hotel
- San Buenaventura Outside Irrigation Contracts
- Holiday Inn Express

The recycled water demand varies seasonally with minimum demands in the winter and maximum demands in the summer. Monthly demands range from approximately 0.07 mgd to 1 mgd, with an average demand of 0.5 mgd. The demands vary significantly across the recycled water customers. Two golf course customers, Olivas Links Golf Course and the Buenaventura Golf Course, account for between 78 percent and 91 percent of the total recycled water demand.

Due to current and anticipated drought conditions over the coming years, the City is expecting increased frequency and duration of potable water shortages. As such, the City is proposing to expand the use of recycled water permitted under Recycled Water Use Permit (Order No. 87-045), which allows for the delivery of recycled water for irrigation of golf courses, cemeteries, freeway landscapes, and landscapes in other areas where the public has similar access or exposure.

The City has received multiple requests to obtain recycled water from WRF to serve commercial and industrial entities, as well as residents within the community. All entities have requested the use of recycled water, as opposed to potable water, for their dust control and irrigation needs.

These additional uses will increase recycled water use from the existing 0.5 mgd to about 1.25 mgd, well within the ability of the facility to provide the additional volumes.

Refer to Appendix A for identification of the users and the specific location for their use of the recycled water.

Section 4: Recycled Water Fill Program

4.1 General Requirements

The mobile filling station is the only component necessary to deliver recycled water off the Ventura Water WRF plant site. No other transmission methods are planned at this time. Off-site cross-connection controls and related contingency plans are not necessary.

The mobile filling station will be supplied by a four inch flow meter and recycled water line as shown in Figure 3.

The Ventura WRF filling station location is identified as map ID location number 15 on Figure B in Appendix A).

4.2 Location

Only one tanker truck filling station is planned for distribution of recycled water from the Ventura Water WRF on Spinnaker Drive. This filling station will be located within Ventura Water WRF plant premises, on the main plant road east of the chlorine contact tanks, as shown in Figure 4. To access the filing station, trucks will enter and exit the plant from Spinnaker Drive. The designated truck route through the plant to the filling station is also shown on Figure 4.

Figure 3 – Schematic of Ventura WRF Mobile Fill Station

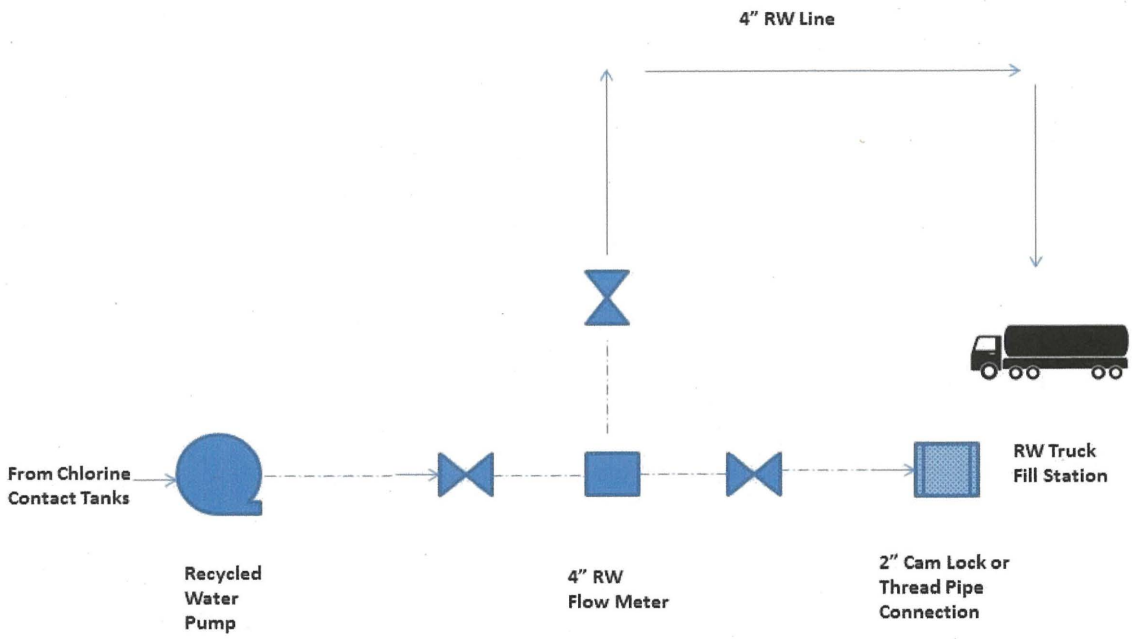
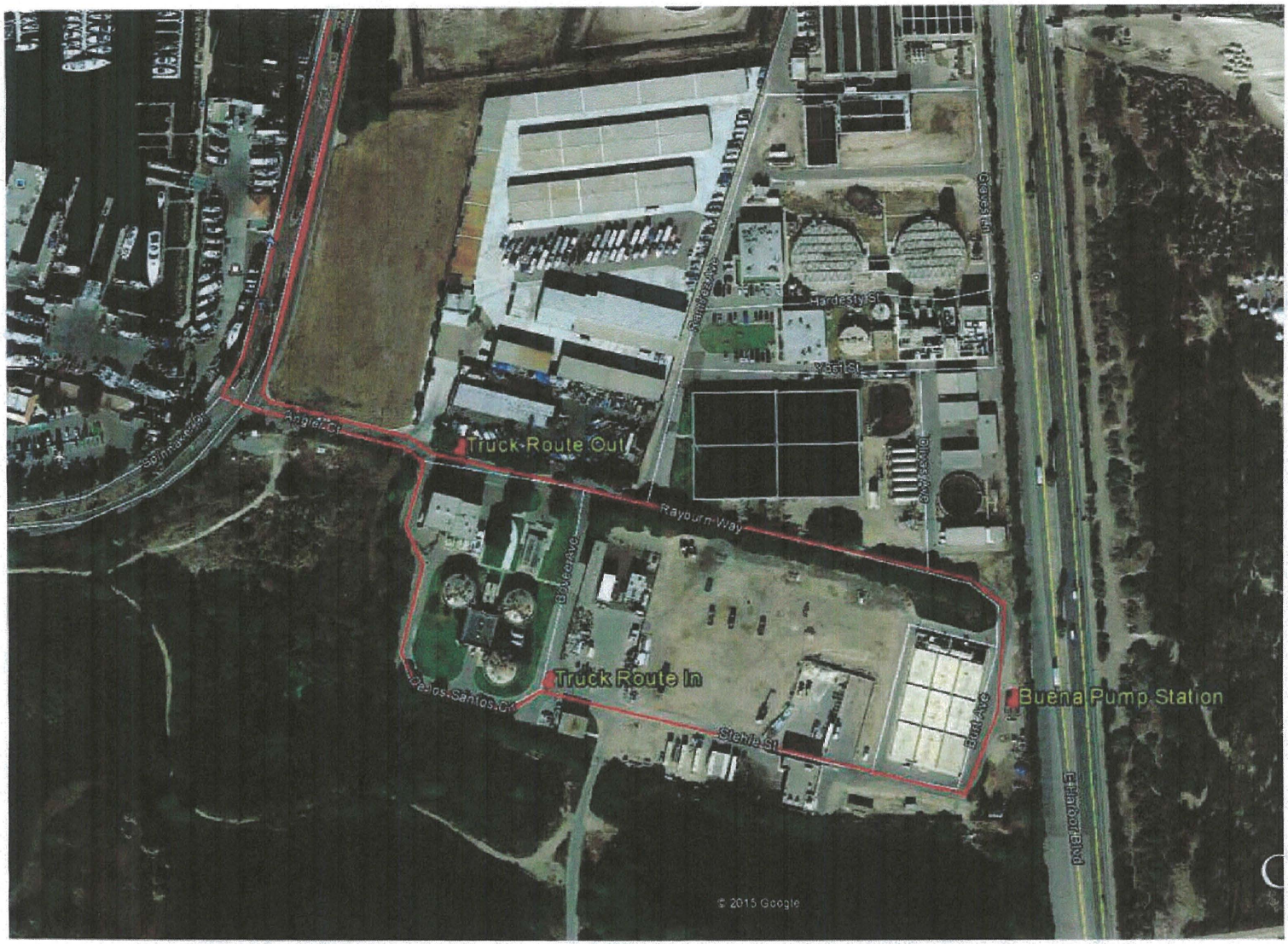


Figure 4 – Designated Truck Route



4.3 Use Areas

4.3.1 Allowable Uses

In compliance with California Title 22 Disinfected-23 Recycled Water regulations and Recycled Water Use Permit (Order 87-045), uses for recycled water in the WRF will be limited to:

Irrigation of golf courses, cemeteries, freeway landscapes, and landscapes in other areas where the public has similar access or exposure. Tertiary treated water is safe for human contact and can be used on food crops.

Potential geographic area of recycled water applications will be limited to the current service area for Ventura Water WRF.

The general requirements for the WRF are described in Appendix B – Recycled Water Use Permit (Order 87-045) and summarized below:

Customers interested in getting recycled water must apply to Ventura Water for a "Water Reuse Permit for Mobile Users" (included in Appendix C).

The Use Permit will require that the recycled water be used/delivered only in the Ventura Water service area.

Before trucks can be filled for the first time, all truck owners and/or drivers shall be required to attend a brief on-site orientation/training in order to learn about using the truck filling station and how to properly handle and use of recycled water. Users shall be required to repeat this training annually.

Trucks will sign in at the front desk of the Ventura Water WRF and show their Recycled Water Use Permit prior to filling.

The following sections describe how Ventura Water will meet the WRF regulatory requirements for permitting, training, preventing cross-contamination, and protecting workers, the public and the environment.

4.3.2 Non Allowable Uses

Tertiary treated recycled water is not allowable for:

- Drinking
- Cooking
- Bathing or showering
- Filling swimming pools or spas
- Children's water toys
- Plumbing it to household water system
- Discharging to gutters & storm drains

To minimize public contact with recycled water and to inform the public where recycled water is in use, as required by Recycled Water Use Permit (Order 87-045), conspicuous warning signs shall be posted at intervals around the use area unless public access is otherwise restricted.

Recycled water signage is currently posted at all recycled water distribution points within the Ventura Water WRF facility where tertiary treated water is used. Example signage is shown below. Areas of use outside the Ventura Water WRF facility will abide by the signage requirements of the Division of Drinking Water.

Examples of Recycled Water Signage

4.4 Regulatory Compliance

4.4.1 Producer

Ventura Water will establish procedures to track actual water deliveries from the plant to each permitted user. Ventura Water will be responsible for providing proper training to all employees involved in the WRF regarding in the handling and distribution of recycled water according to requirements in Recycled Water Use Permit (Order 87-045), Ventura Water WRF's guidelines and other relevant program requirements. Ventura Water will provide recycled water quality monitoring results and recycled water usage records for each user for regulatory reporting requirements.

4.4.2 Distributor

Ventura Water, as the distributor, will be responsible for following and implementing stipulations contained in Sections B, C and D of Recycled Water Use Permit (Order 87-045); see Appendix B.

4.4.3 User

A user will be responsible for following and implementing stipulations contained in Sections B, C and D of the Recycled Water Use Permit (Order 87-045), in addition to the requirements in the "Water Reuse Permit for Mobile Users" (see Appendix C).

4.5 User Guidelines and Orientation/Training

4.5.1 Distributor

Ventura Water will provide annual user training in proper compliance in accordance with their existing WRF procedures. Before user trucks can fill for the first time, all truck owner and/or drivers are required to attend an on-site orientation/training in order to learn about using the filling station and the proper handling and use of recycled water.

Ventura Water's User Guidelines for the WRF are as follows:

1. Workers should be informed that although recycled water has been treated to lower health risks, bacterial and viral contamination is still present and may potentially cause illness or infection. Contact with recycled water by ingestion, inhalation of mist, or on cuts or abrasions should be avoided and the precautionary measures listed below should be carefully reviewed and followed.

2. Do not drink recycled water or use it for food preparation. Additionally, the tanker truck driver must notify workers and/or the public when recycled water is used at a site and tell them that they are not to drink recycled water or use it for food preparation. Avoid irrigating when the public is present to minimize contact.

3. Workers should not be subjected to recycled water sprays, mists or aerosols.

4. Precautionary measures should be taken to minimize worker contact with constituents of recycled water.

5. Workers should wear protective clothing, when more than casual contact with the recycled water is anticipated.

6. Safe drinking water should be supplied for workers. Where bottled water is provided, the water should be in contamination proof containers and protected from recycled water and dust.

7. Workers should not apply recycled water by hand held nozzles or other hand held devices that can produce sprays, mists or aerosols.

8. Recycled water users should apply hand sanitizer or wash their hands with soap and potable water after working with recycled water and especially before eating or smoking.

9. Tanker truck drivers should be equipped with an adequate first aid kit. Cuts or abrasions should be promptly washed, disinfected, and bandaged.

10. Recycled water shall not be allowed to spray onto external drinking water fountains.

11. Recycled water shall not be applied where it could contact or enter passing vehicles, building areas where food is handled or eaten, or storm drains.

12. Recycled water users shall take adequate measures to prevent overspray, ponding or runoff of recycled water from the authorized recycled water use area. Ponding and runoff are not allowed and must be minimized at all times.

13. There shall be no irrigation or impoundment of recycled water within a minimum of 50 feet of any domestic (drinking water) well.

14. Vehicles used for transportation and distribution of recycled water must have watertight valves and fittings, must not leak, and tanks must be cleaned of contaminants prior to use. A truck or tank that has contained material from a septic tank or cesspool shall not be used to convey recycled water.

15. Recycled water must not be introduced into any permanent piping system and no connection shall be made between the tank truck and any part of a potable water system. Offsite storage of recycled water is not allowed.

16. Tanker trucks used to transport recycled water should not be used to carry potable water.

17. Tanker trucks shall be constructed for the purpose of conveying water without leaking or spilling.

18. Truck operators shall take care to inspect fill and discharge hoses regularly to ensure they do not leak and that recycled water is not discharged when hoses are disconnected. Hose bibs are not allowed.

4.5.2 Users

Users shall be required to comply with the stipulations in the Recycled Water Use Permit (Order 87-045) and complete Ventura Water's "Water Reuse Permit for Mobile Users" (Appendix C). Prior to receiving and distributing recycled water, all users must attend training sessions by Ventura Water on the safe handling of recycled water. The appropriate recycled water signage shall be displayed on tanker trucks, as provided by Ventura Water.

In the event that a user fails a site inspection, Ventura Water shall identify the reason(s) for the failure and withdraw the Recycled Water Use permit until such time as the user is able to complete the annual training again. In the event of a second failure the user shall be prohibited from using recycled water for a period of thirty days and required to complete the annual training again. Upon the third inspection resulting in failure to use recycled water according to the permit the user shall not be permitted to use recycled water. Ventura Water has the authority to revoke the recycled water user privilege at any time where violations warrant it.

4.5.3 Controlling Access/Monitoring Use

No user will be provided with recycled water unless the truck driver presents the authorized User Permit issued by Ventura Water. Copies of the Water Reuse Permit for Mobile Users and Recycled Water Use Permit (Order 87-045) shall be provided to the user by Ventura Water and the user must have these available for inspection at all times.

Ventura Water will meter recycled water usage by each user.

Random, periodic inspections of permitted recycled water Users are required while recycled water use is in progress to ensure compliance with use prohibitions as described in Recycled Water Use Permit (Order 87-045). It is the responsibility of Ventura Water to perform these inspections. The user inspection checklist already in use for current operations of the WRF, which will also be applied to users of recycled water from Ventura Water, is included in the submitted materials for Recycled Water Use Permit Order 87-045).

4.6 Contingency Plan

In instances when Ventura Water's WRF recycled water quality does not comply with the criteria of Recycled Water Use Permit (Order 87-045), the truck fill program will cease until such time as recycled water becomes compliant. Delivery of recycled water to users will be suspended and notification signs that water is non-compliant will be placed at the truck fill station. Delivery of recycled water will not be resumed until the recycled water quality again becomes compliant.

4.6.1 Notifications

If recycled water that does not meet the coliform standards is served the customers will immediately be contacted by telephone. If the water has not been used customers shall return the water to the Ventura Water WRF. If the water has been used, the Agency will obtain a description of the use and assess if the water use was consistent with its quality. In the event that water use is inconsistent with the recycled water quality delivered as described in Title 22, the Agency will report such use by email to the RWQCB and Division of Drinking Water as soon as possible, as well as in the monthly reports.

4.7 Recycled Water Handling and Use Requirements/Precautions for Truck Handling

4.7.1 Recycled Water User Training

Prior to obtaining recycled water from the Ventura WRF, haulers will need to undergo appropriate training on the use and transport of such water. Below is a summary of the training that will be offered as well as specific direction on the operation of the recycled water fill station.

Haulers will be required to, at a minimum, fill out a recycled water application form and complete the Water Reuse Permit for Mobile Users Form. Users must obtain Ventura Water approval. Collection and storage containers shall have Ventura Water's Recycled Water Notice stickers placed on them to ensure everyone is aware recycled water is stored in the container and the water is not suitable for human consumption. It is illegal to connect recycled water containers

and equipment to buried irrigation systems or to onsite drinking water supply. If an illegal connection does occur there is the potential for the drinking the recycled water. Violators are subject to fines up to $1,000 and loss of pickup privileges.

Recycled water shall not be discharged to the street gutter or storm drain system. After working with recycled water, remember to apply hand sanitizer or wash hands with soap and domestic drinking water, especially before eating or smoking. DO NOT DRINK recycled water, place in swimming pools, or use it for food preparation. Take precautions to avoid contact with food while using recycled water. Wash vegetables with domestic water prior to eating or cooking (the majority of the vegetables in the grocery stores are irrigated with recycled water). No one shall play with or drink recycled water. Ventura Water may conduct site visits to ensure your proper use of recycled water and to ensure the health and safety of your family and the public.

4.7.2 Procedures to Obtain Recycled Water

Recycled water users must complete the use agreement and bring it to the Ventura WRF fill station during designated hours for new customer sign-ups (see Appendix C). Hours will be posted online and at the WRF site. The on-duty attendant will provide required training in the proper use of recycled water and procedures for collection, issue you a wallet card, and answer any questions you may have. During training users will be provided with Recycled Water Notice stickers that need to be placed on all containers used to transport and store recycled water. After training is complete and stickers have been installed on the containers, users will be able to pick up recycled water during the designated residential fill station "open" hours, posted on the City's website and at the WRF. Users will be required to show the attendant the wallet card you received at the time of training. This wallet card cannot be shared with others. All users must receive training to ensure they are informed of the use requirements. During each pickup, the attendant will scan the bar code that is on back of the wallet card and will enter the amount of recycled water you are collecting.

4.7.3 Specific Provisions

1. These truck hauling requirements are for the use of Title 22 recycled water produced by the Ventura WRF and are for the use of landscape irrigation and dust control pending final approval of the State Water Resources Quality Control Board Division of Drinking Water and the Los Angeles Regional Water Quality Control Board. All other non-irrigation uses, including but not limited to street sweeping, pressure washing, soil compaction, and sewer flushing, must be submitted to the Ventura WRF prior to use for determination of SWRCB Division of Drinking Water and Regional Water Quality Control Board permit applicability and approval.

2. The requirements for truck hauling listed below are the minimum requirements that must be met. Ventura Water may add any other requirements or criteria specific to its own program needs. Ventura Water WRF staff may, from time to time, conduct inspection visits of the truck end use facilities to ensure compliance with these requirements.

3. Ventura Water shall keep track of each and every individual user or entity applying for truck hauling use.

4. Ventura Water shall keep daily records for each truck load dispensed, including: a) volume of recycled water delivered to each individual reuse site, b) location of reuse site, and c) type of reuse (e.g., irrigation, dust control, etc.). This information must be summarized on a monthly basis for each individual reuse site within 30 days of the end of each calendar month.

5. Ventra Water shall adequately control the point of distribution to prevent unauthorized access. Offsite storage of recycled water is not allowed.

6. Before trucks can be filled with recycled water for the first time, all truck owners and/or drivers are required to attend a brief on-site ("tail-gate") orientation/training, conducted by Ventura Water staff, in order to learn about using the filling station and the proper handling and use of recycled water. Offsite filling stations are not allowed.

7. Each truck that hauls recycled water must have either purple stickers or magnetic placards on the sides and back of the vehicle that identify it as carrying recycled water, containing the words and symbol for "Do Not Drink".

8. Truck drivers or others in contact with the vehicles shall **not** drink recycled water or use it for food preparation. Truck drivers shall notify workers and/or the public when recycled water is used at a site and tell them that they are not to drink recycled water or use it for food preparation.

9. Recycled water users should apply hand sanitizer or wash their hands with soap and potable water after working with recycled water and especially before eating or smoking.

10. Precautions should be taken to avoid food coming into contact with recycled water while the reuse site is still wet.

11. Truck drivers should be equipped with an adequate first aid kit. Cuts or abrasions should be promptly washed with potable water, disinfected, and bandaged.

12. Recycled water shall not be allowed to spray onto potable water drinking water fountains or faucets.

13. Recycled water shall not be applied where it could contact or enter passing vehicles, buildings, areas where food is handled or eaten, storm drains, or surface water.

14. Adequate measures must be taken to prevent recycled water overspray, ponding, or run off from the authorized reuse area. Ponding and runoff are not allowed and must be minimized at all times.

15. It is strongly recommended that all water trucks carry a push broom on the vehicle to spread out ponded or puddled recycled water to facilitate evaporation.

16. There shall be no irrigation or impoundment of recycled water within a minimum of 50 feet of any domestic (drinking water) well.

17. Recycled water users must comply with all requirements and restrictions specified by the Regional Board and the Water Recycling Criteria in Title 22 of the California Code of Regulations.

18. Vehicles used for transportation and distribution of recycled water must have water-tight valves and fittings, and must not leak.

19. Spills of recycled water must be immediately reported to Ventura WRF along with the circumstances involved with the incident.

20. Vehicle storage tanks must be cleaned of contaminants prior to filling with recycled water to prevent contamination of the recycled water. A truck or tank that has contained material from a septic tank, cesspool, or hazardous waste (within the meaning of federal or State of California definitions of hazardous or toxic materials, wastes or substances or poison) cannot be used to convey recycled water. The use of vehicle storage tanks for the storage and transport of recycled water must comply with all applicable federal, State of California, and local requirements.

21. Recycled water shall not be introduced into any permanent piping system and no connection shall be made between the filled tank truck and any part of a potable water system. Offsite storage of recycled water is not allowed.

22. Tank trucks used to transport recycled water should not be used to carry potable water for potable water purposes (i.e., drinking or washing). Once a recycled water hauling vessel, it cannot be converted back to hauling for potable hauling purposes.

23. If these tank trucks are to be filled with potable water for irrigation, they must be filled through an air-gap prior to filling the truck. No direct connection to the potable system will be allowed for recycled water use, even with the use of a backflow prevention device. Use a separate fill hose for recycled water that is clearly marked with either purple paint or labeling. Do not switch back and forth between potable water and recycled water using the same hose. Hose bibs are not allowed.

References

California Regional Water Quality Control Board, Los Angeles Region, National Pollution Discharge Elimination System Permit No. CA0053651.

California Regional Water Quality Control Board, Los Angeles Region, Water Reclamation Requirements for City of San Buenaventura Water Reclamation Facility, Recycled Water Use Permit (Order 87-045).

Division of Drinking Water (DDW). 2014. California Division of Drinking Water Regulations Related to Recycled Water. June 2014

Division of Drinking Water (DDW). 2001. Guidelines for the Preparation of an Engineering Report for the Production, Distribution and Use of Recycled Water. March 2001

Appendix A – Recycled Water User Location and Maps

Current Recycled Water Users

Recycled water from the Ventura WRF is used for general irrigation of golf courses, parks and similar landscape areas. Existing recycled water customers (and their locations) are listed in Table 1 and on Figure A.

Table 1 - Current Recycled Water Users

Map ID No. (1)	Recycled Water User	Location (Lat/Long)	Section, Township, Range
1	Buena Ventura Golf Course	34.237827°, -119.208869°	S20, T2N, R22W
2	Olivas Links Golf Course	34.241005°, -119.253587°	S23, T2N, R22W
3	MBL Golf Course LLC	34.242424°, -119.207441°	S17, T2N, R22W
4	Harbortown Point	34.251905°, -119.266464°	S14, T2N, R23W
5	Ventura Port District (2 sites)	a) 34.249185°, -119.258440°	S14, T2N, R23W
		b) 34.245041°, -119.257187°	S14, T2N, R23W
6	Marina Park	34.253536°, -119.267317°	S15, T2N, R23W
7	MBL Properties Stormwater Detention Basin	34.241908°, -119.207405°	S17, T2N, R22W
8	MBL Olivas at Bunsen	34.243037°, -119.210090°	S17, T2N, R22W
9	MBL Olivas at Seaborg	34.243318°, -119.211213°	S17, T2N, R22W
10	Olivas Adobe	34.244004°, -119.242033°	S13, T2N, R23W
11	Four Points Sheraton Hotel	34.226334°, -119.257675°	S26, T2N, R23W
12	San Buenaventura Outside Irrigation Contracts	34.240611°, -119.261065°	S23, T2N, R23W
13	Holiday Inn Express	34.248885°, -119.258425°	S14, T2N, R23W

Source: www.earthpoint.us

Note (1) Map identification numbers correspond to Figure A.

Proposed New Recycled Water Users

Proposed new recycled water users include the following (summarized on Figure B):

AERA Energy, LLC

AERA Energy, LLC (AERA); an oil and gas production facility with multiple locations within California, including an onshore facility that covers approximately 4,300 acres in Ventura County (see Figure C). AERA is requesting recycled water for dust control purposes on some of its oilfield operations to minimize their use of potable water for the same purpose.

AERA's Ventura lease property is map ID location number 14 on Table 2 and Figure B.

Contact information:

Kim L. Drews
Aera Energy LLC | Ventura Field
Office: (805) 648-8547 | Cell: (805) 701-3613
9/80B Schedule

Ventura County Department of Transportation

The Ventura County Department of Transportation (Department) is responsible for planning, designing, funding, building, operating and maintaining approximately 544 miles of roadway, bridges, drainage and related transportation facilities in Ventura County. The Department is requesting to utilize recycled water for dust control and maintenance of unimproved, earth, shoulder areas that are used as staging areas for construction projects and for emergency equipment and personnel. They are proposing to designate 2 water trucks that hold 3,000 gallons each for the recycled water application. The locations of the proposed construction areas are located on multiple medians and shoulders, located throughout Ventura and provided in Table 2, and on Figure B.

Contact information:

Raul Gallo, P. E.
Division Manager – Transportation Department
(805) 672-2132
Raul.Gallo@ventura.org

Table 2 - Ventura Department of Transportation Proposed Recycled Water Locations

Map ID No.	Recycled Water Location	Location (Lat/Long)	Section, Township, Range
14	AERA Energy, LLC	34.315273°, -119.289925°	S17, 18, 19, 20, 29, 30, T3N, R22W
			13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30, T3N, R23W
15	Ventura WRF Filling Station	34.239692, -119.258869	S21, T2N, R23W
16	Harbor Blvd.	34.264304, -119.269869	S10, T2N, R23W
17	Gonzales Road	34.219255, -119.236437	S25, T2N, R23W
18	Doris Avenue	34.208689, -119.229735	S31, T2N, R22W
19	5th Street	34.197549, -119.220956	S31, T2N, R22W
20	Arnold Road	34.134447, -119.153555	S26, T1N, R22W
21	Casper Road	34.136232, -119.144588	S26, T1N, R22W
22	Hueneme Road	34.147045, -119.121771	S19, T1N, R21W
23	Olds Road	34.160004, -119.148808	S14, T1N, R22W
24	Nauman Road	34.158282, -119.122493	S19, T1N, R21W
25	Etting Road	34.161637, -119.122519	S18, T1N, R21W
26	Hailes Road	34.166686, -119.124883	S13, T1N, R22W
27	Wood Road	34.170405, -119.096376	S17, T1N, R21W
28	Foothill Road	34.286641, -119.209889	S32, T3N, R22W
29	Telegraph Road	34.279602, -119.203944	S5, T2N, R22W
30	Cummings Road	34.331689, -119.119684	S19, T3N, R21W
31	Olive Road	34.317203, -119.138612	S24, T3N, R22W
32	Briggs Road	34.323764, -119.102324	S20, T3N, R21W
33	Aliso Canyon Road	34.320415, -119.148020	S23, T3N, R22W
34	Wheeler Canyon Road	34.343711, -119.144288	S14, T3N, R22W
35	Rose Avenue	34.193122, -119.159857	S3, T1N, R22W
36	Central Avenue	34.245548, -119.135025	S13, T2N, R22W
37	Santa Clara Avenue	34.231047, -119.133853	S24, T2N, R22W
38	Beardsley Road	34.239915, -119.101564	S20, T2N, R21W
39	Wright Road	34.231693, -119.163123	S22, T2N, R22W
40	San Buenaventura State Parks	34.268667, -119.277028	S15 T2N R22W

Source: www.earthpoint.us

Note (1) Map identification numbers correspond to Figure B.

City of Ventura City Parks Department

The City of Ventura City Parks Department is requesting to increase the amount of reclaimed water they currently use by a maximum of .02 MGD for tree irrigation. The continued conservation requirements are forcing the City to either pay penalty fees for continued irrigation or suffer costs in losing the trees. The trees contribute to the beautification of the city, enhance the green areas and overall wellbeing of the community. A list of the proposed use locations is provided in Table 3, and shown on Figure C.

Contact information:

Raul Gallo, P. E.
Division Manager – Transportation Department
(805) 672-2132
Raul.Gallo@ventura.org

Nancy O'Connor - Parks Division Manager
Ventura Parks, Recreation, and Community Partnerships
City of Ventura
(805) 652-4552
noconnor@cityofventura.net

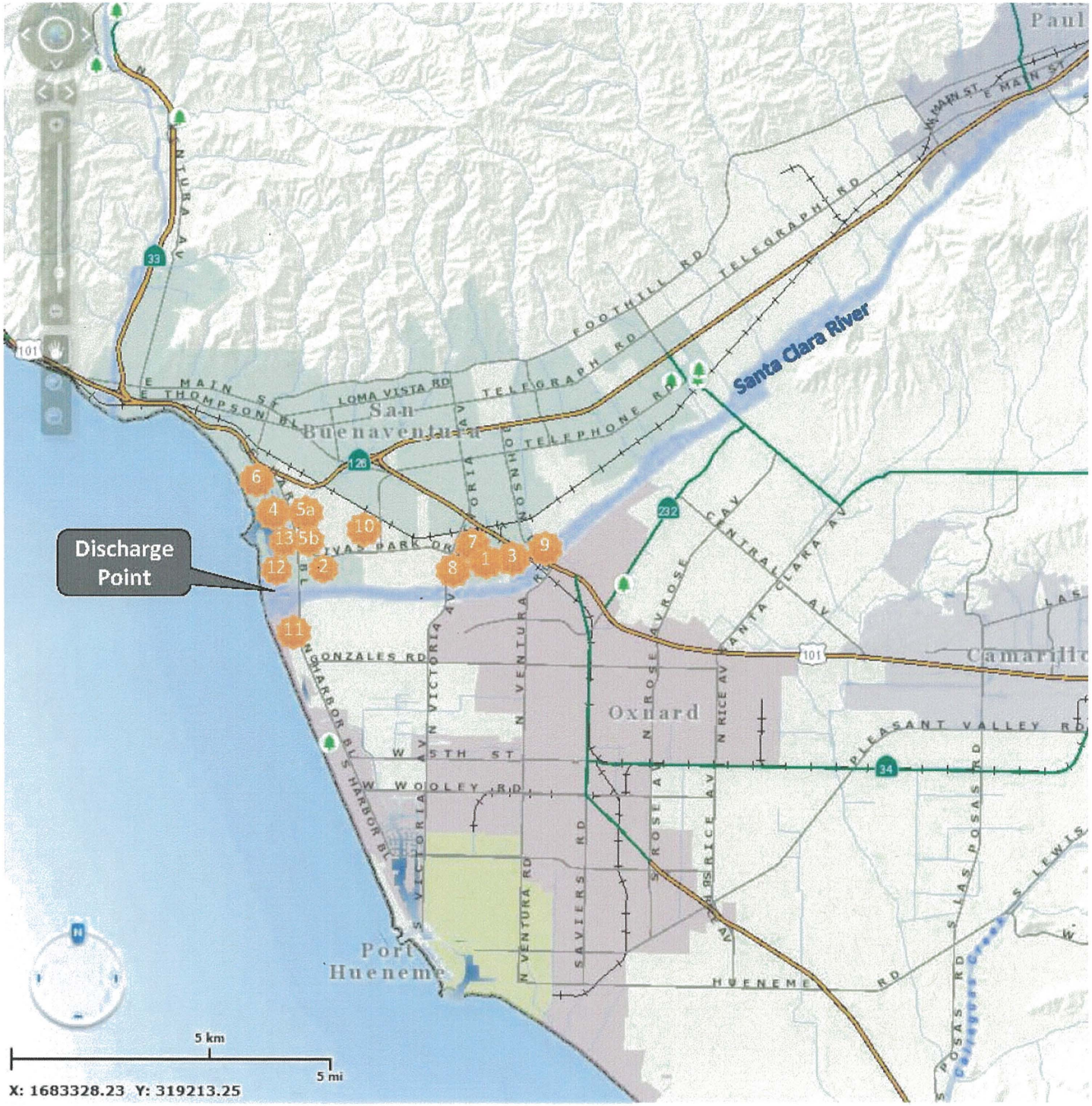
Table 3 City of Ventura Parks Department Proposed Recycled Water Locations

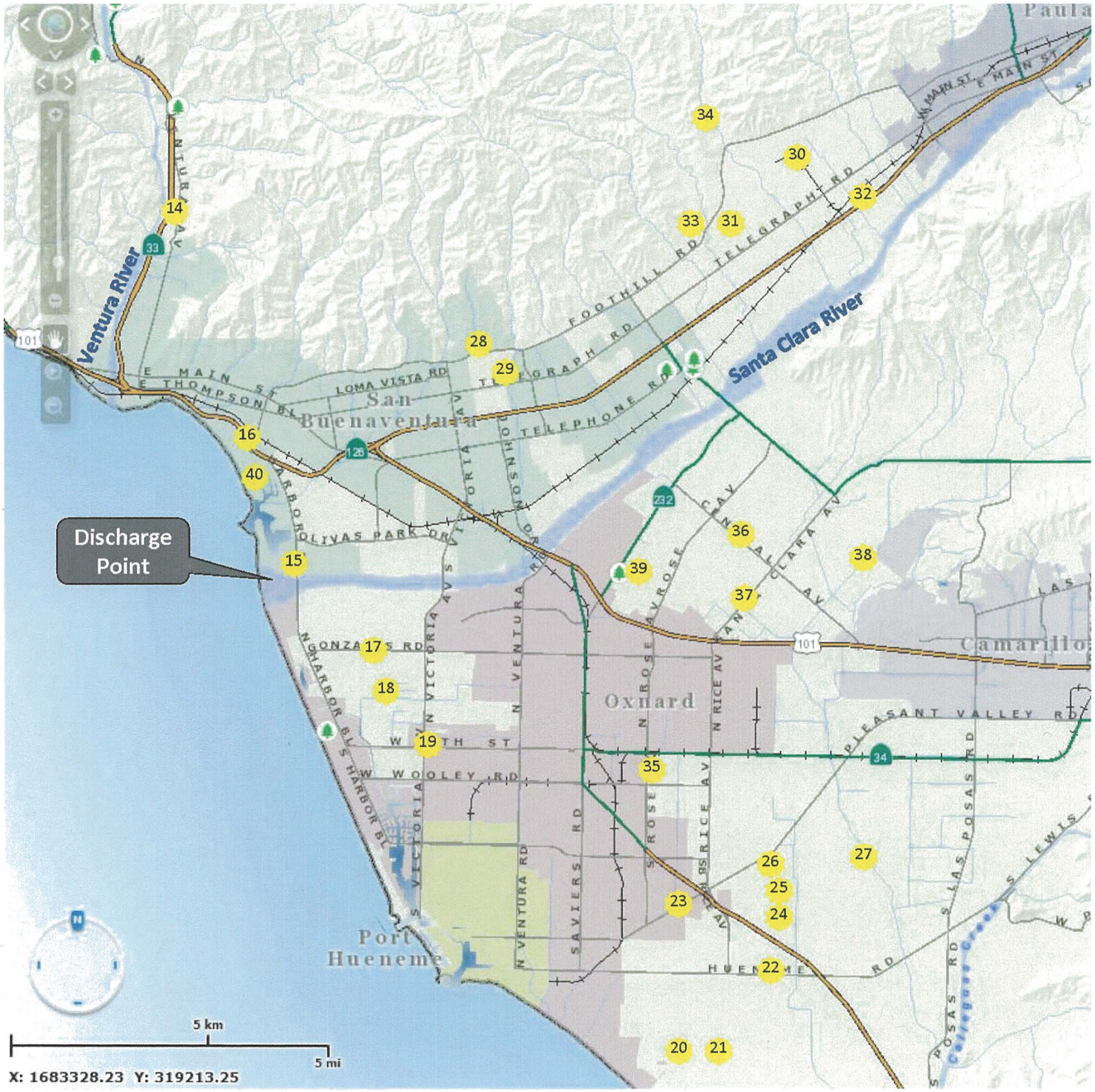
ID	Name	Lat	Long	Township and Range
A	HILL ST	34°16'18.37"N	119°12'27.21"W	S T2N R22W
B	TELEPHONE	34°16'4.49"N	119°11'39.62"W	S T2N R22W
C	LOMA VISTA	34°16'40.76"N	119°14'58.27"W	S T2N R22W
D	SEAWARD	34°16'8.17"N	119°16'4.41"W	S T2N R22W
E	THOMPSON	34°16'33.60"N	119°16'42.49"W	S T2N R22W
F	CHESNUT	34°16'55.61"N	119°17'29.56"W	S T4N R23W
G	SANTA CLARA	34°16'46.19"N	119°18'10.64"W	S T4N R23W
H	VENTURA AVE	34°17'26.67"N	119°17'52.52"W	S T4N R23W
I	CAMINO REAL PARK	34°16'2.14"N	119°14'8.58"W	S T2N R22W
J	AV PARK	34°17'57.81"N	119°17'32.12"W	S T4N R23W
K	CHUMASH	34°16'33.86"N	119°10'32.11"W	S T2N R22W
L	SERRA PARK	34°15'57.70"N	119°10'21.65"W	S T2N R22W
M	WEBSTER	34°16'16.76"N	119°12'38.77"W	S T2N R22W
N	JOHNSON	34°15'26.64"N	119°11'53.63"W	S T2N R22W
O	SHERWIN	34°14'57.24"N	119°11'54.93"W	S T2N R22W
P	CRESCENT	34°15'0.32"N	119°11'55.01"W	S T2N R22W
Q	BV LINEAR	34°16'52.28"N	119° 9'22.25"W	S T2N R22W
R	DAKOTA	34°18'33.61"N	119°17'20.85"W	S T4N R23W
S	FRITZ	34°16'53.54"N	119° 9'27.36"W	S T2N R22W

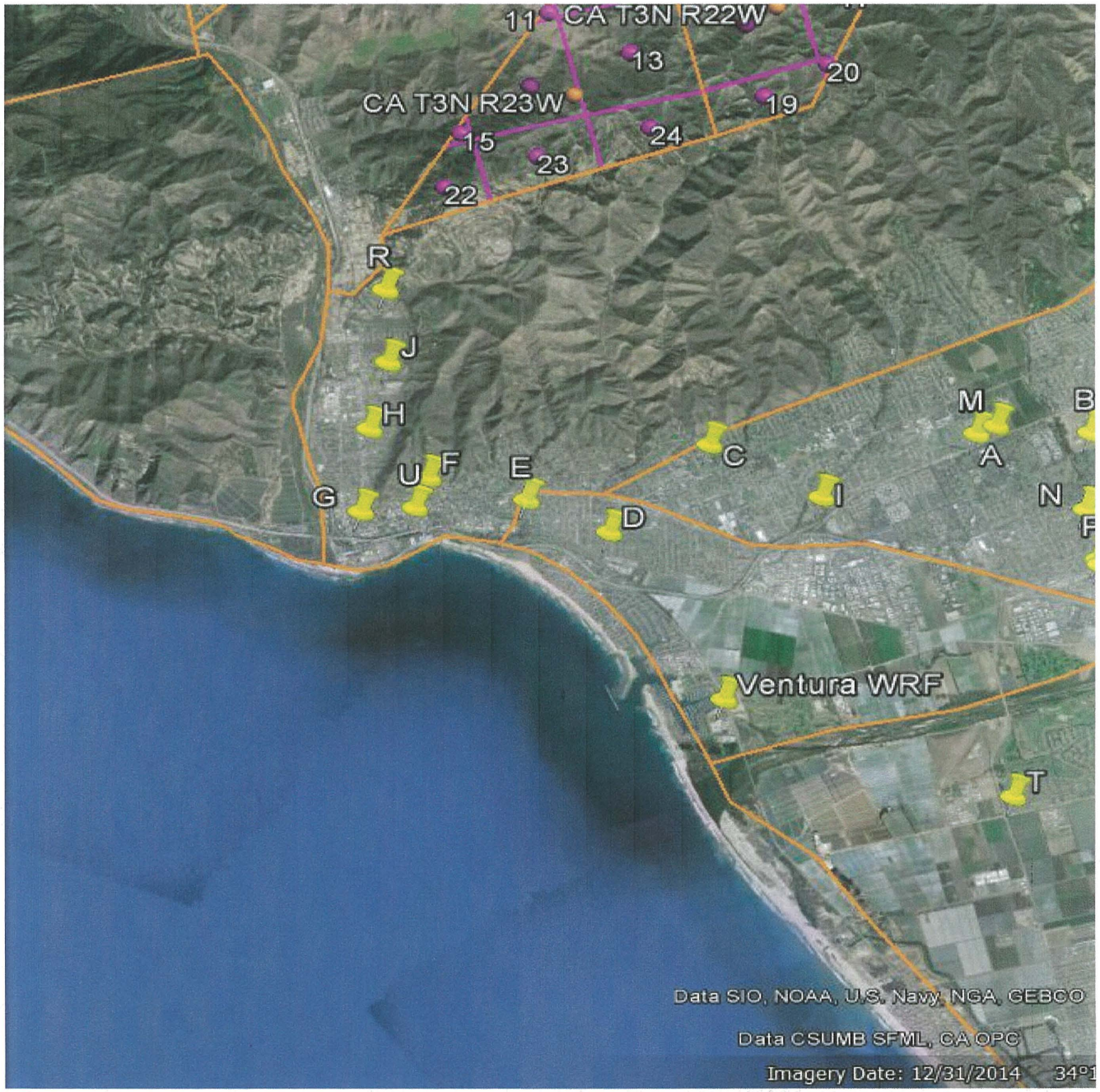
ID	Name	Lat	Long	Township and Range
T	VICTORIA	34°13'9.75"N	119°13'15.92"W	S T1N R22W
U	375 THOMPSON	34°16'42.15"N	119°17'41.74"W	S T4N R23W

Source: www.earthpoint.us

Note (1) Map identification numbers correspond to Figure C


Discharge Point
Santa Clara River
San Buenaventura
Oxnard
Port Hueneme
Camarillo
Paul
1
2
3
4
5a
5b
6
7
8
9
10
11
12
13
5 km
5 mi
X: 1683328.23 Y: 319213.25


Ventura River
Santa Clara River
Discharge Point
San Buenaventura
Oxnard
Port Hueneme
Camarillo
Pauta
E MAIN ST
E THOMPSON BL
LOMA VISTA RD
FOOTHILL RD
TELEGRAPH RD
TELEPHONE RD
OLIVAS PARK DR
HARBOR BL
W 5TH ST
W WOOLEY RD
N VICTORIA AV
N VENTURA RD
SAVIERS RD
N ROSE AV
N RICE AV
CLARA AV
PLEASANT VALLEY RD
LAS POSAS RD
HUENEME RD
5 km
5 mi
X: 1683328.23 Y: 319213.25


CA T3N R22W
CA T3N R23W
11
13
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19
15
24
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22
R
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H
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F
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C
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M
A
B
N
Ventura WRF
T
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Data CSUMB SFML, CA OPC
Imagery Date: 12/31/2014

Appendix B – Recycled Water Use Permit (Order 87-045)

STATE OF CALIFORNIA
GEORGE DEUKMEJIAN, Governor
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
LOS ANGELES REGION
107 SOUTH BROADWAY, SUITE 4027
LOS ANGELES, CALIFORNIA 90012-4596
(213) 620-4460

July 9, 1987

Mr. Dan Rayburn
Sanitation Superintendent
City of San Buenaventura
P. O. Box 99
Ventura, California 93002

WATER RECLAMATION REQUIREMENTS - VENTURA WATER RENOVATION FACILITY.
(File No. 57-68; CI No. 6190)

Reference is made to our letter dated May 4, 1987 which transmitted the requirements for your reuse of treated effluent.

By mistake, the copy transmitted did not include the revisions made on April 10, 1987. Enclosed is the corrected copy of the requirements as adopted by the Board on April 27, 1987.

We regret any inconvenience this may have caused.

If you have any questions, please call Gregg Kwey at (213) 620-2784.

J. E. Ross
Senior Water Resource
Control Engineer

cc: See attached mailing list

Enclosures

RECEIVED
JUL 15 1987
SANITATION DIV.

Mr. Dan Rayburn
Mailing List

State Water Resources Control Board, Division of Water Quality, Attn: Archie Matthews
Department of Water Resources
Department of Health Services, Sanitary Engineering Section, Santa Babara
Ventura County Planning Commission
Ventura County Department of Environmental Health Services
Ventura County Department of Public Works, Water and Sanitation Division
Ventura County Department of Public Works, Flood Control and Drainage Division

State of California
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, LOS ANGELES REGION

ORDER NO. 87-45

WATER RECLAMATION REQUIREMENTS
FOR

CITY OF SAN BUENAVENTURA
(Ventura Water Renovation Facility)
(File No. 57-68)

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

1. City of San Buenaventura (hereinafter referred to as "Reclaimer") operates the Ventura Water Renovation Facility, located at 1400 Spinnaker Drive, Ventura, California, with a design flow capacity of 14 million gallons per day (mgd). The plant discharges all or part of its treated effluent to Olivas Park and Buenaventura Municipal golf courses to be used for recreational impoundment and turf irrigation, and to the Ventura Port District for landscape irrigation under requirements contained in Order 80-34, adopted by this Board on July 28, 1980. The Average flow for 1986 was 8.64 mgd to the Santa Clara Tidal Prism and 0.67 mgd for irrigation purpose.

2. Surface water discharge to the Santa Clara Tidal Prism is in accordance with a National Pollution Discharge Elimination System permit (NPDES Permit No. CA0053651) adopted by this Board.

3. The water reclamation treatment consists of primary sedimentation, activated sludge, biofiltration, secondary sedimentation, filtration, chlorination, dechlorination, and ponding for storage.

4. A review of the current requirements has been conducted by Board staff in accordance with California Administration Code, Title 23, Chapter 3, Subchapter 9, Article 2, Section 2232.2.

5. The areas of irrigation and impoundment reuse overlie ground water in the Oxnard Hydrologic Subarea. Ground waters in the Oxnard Hydrologic Subarea are beneficially used for municipal and domestic supply, agricultural supply, and industrial service and process supply. However, the ground waters of the shallow semiperched zone are of very poor quality and are not beneficially used in any significant amounts.

March 23, 1987
Revised April 10, 1987

quality and are not beneficially used in any significant amounts.

6. The Board adopted a Revised Water Quality Control Plan for Santa Clara River Basin on March 27, 1978. The Plan contains water quality objectives for ground water in the Oxnard Hydrologic Subarea. The requirements contained in this Order, as they are met, will be in conformance with the goals of the Water Quality Control Plan.

7. Section 13523 of the California Water Code provides that a Regional Board, after consulting with and receiving the recommendations of the State Department of Health Services and after any necessary hearing, shall, if it determines such action to be necessary to protect the public health, safety, or welfare, prescribe water reclamation requirements for water which is used or proposed to be used as reclaimed water. Section 13523 further provides that such requirements shall include, or be in conformance with, the statewide reclamation criteria.

8. The use of reclaimed water for impoundments or for irrigation could affect the public health, safety, or welfare; requirements for such use are therefore necessary in accordance with Section 13523 of the Water Code.

9. This project involves an existing facility and as such is exempt from the provisions of the California Environmental Quality Act in accordance with California Administrative Code, Title 14, Chapter 3, Section 15301.

The Board has notified the Reclaimer and interested agencies and persons of its intent to prescribe water reclamation requirements for this facility and has provided them with an opportunity to submit their written views and recommendations.

The Board in a public meeting heard and considered all comments pertaining to the direct beneficial use and to the tentative water reclamation requirements.

IT IS HEREBY ORDERED, that City of San Buenaventura, shall comply with the following:

A. Reclaimed Water Limitations

1. Reclaimed water shall be limited to treated municipal wastewater only, as proposed.

2. Reclaimed water shall not contain constituents in excess of the following limits:

Constituent	Unit	Maximum Limitations
Total dissolved solids	mg/l	3,000
Chloride	mg/l	500
Sulfate	mg/l	1,000
Boron	mg/l	--

3. The pH of reclaimed water shall at all times be within the range 6.0 to 9.0.

4. Reclaimed water shall not contain trace constituents or other substances in concentrations exceeding the limits contained in the current edition of the California Department of Health Services Drinking Water Standards.

5. Radioactivity shall not exceed the limits specified in Title 22, Chapter 15, Article 5, Sections 64441 and 64443, California Administrative Code, or subsequent revisions.

6. Reclaimed water shall not cause the nitrogen content in the receiving ground water to exceed the objectives in the Water Quality Control Plan.

7. Reclaimed water, used for agricultural supply, shall not contain concentrations of chemical constituents in amounts that adversely affect such beneficial use.

B. Specifications for Use of Reclaimed Water

1. Reclaimed water used for the irrigation of golf courses, cemeteries, freeway landscapes, and landscapes in other areas where the public has similar access or exposure shall be at all times an adequately disinfected, oxidized wastewater.

The wastewater shall be considered adequately disinfected if the median number of coliform organisms in the effluent does not exceed 23 per 100 milliliters, as determined from the bacteriological results of the last 7 days for which analyses have been completed, and the number of coliform organisms does not exceed 240 per 100 milliliters in any two consecutive samples.

Oxidized wastewater means wastewater in which the organic matter has been stabilized, is nonputrescible, and contains dissolved oxygen.

Disinfected wastewater means wastewater in which the pathogenic organisms have been destroyed by chemical, physical or biological means.

2. Reclaimed water used for the irrigation of parks, playgrounds, schoolyard, and other areas where the public has similar access or exposure shall be at all times an adequately disinfected, oxidized, coagulated, clarified, filtered wastewater or a wastewater treated by a sequence of unit processes that will assure an equivalent degree of treatment and reliability.

The wastewater shall be considered adequately disinfected if the median number of coliform organisms in the effluent does not exceed 2.2 per 100 milliliters, as determined from the bacteriological results of the last 7 days for which analyses have been completed, and the number of coliform organisms does not exceed 23 per 100 milliliters in any sample.

A coagulated wastewater means an oxidized wastewater in which colloidal and finely divided suspended matter have been destabilized and agglomerated by the addition of suitable floc-forming chemicals or by an equally effective method.

A filtered wastewater means an oxidized, coagulated, clarified wastewater which has been passed through natural undisturbed soils or filter media, such as sand or diatomaceous earth, so that the turbidity as determined by an approved laboratory method does not exceed an average operating turbidity of 2 turbidity units and does not exceed 5 turbidity units more than 5 percent of the time during any 24-hour period.

3. Reclaimed water used as a source of supply in a nonrestricted recreational impoundment shall be at all times an adequately disinfected, oxidized, coagulated, clarified, filtered wastewater.

The wastewater shall be considered adequately disinfected if at some location in the treatment process the median number of coliform organisms does not exceed 2.2 per 100 milliliters and the number of coliform organisms does not exceed 23 per 100

milliliters in more than one sample within any 30-day period. The median value shall be determined from the bacteriological results of the last 7 days for which analyses have been completed.

4. Reclaimed water used as a source of supply in a restricted recreational impoundment shall be at all times an adequately disinfected, oxidized wastewater.

   The wastewater shall be considered adequately disinfected if at some location in the treatment process the median number of coliform organisms does not exceed 2.2 per 100 milliliters, as determined from the bacteriological results of the last 7 days for which analyses have been completed.

5. Reclaimed water used as a source of supply in a landscape impoundment shall be at all times an adequately disinfected, oxidized wastewater.

   The wastewater shall be considered adequately disinfected if at some location in the treatment process the median number of coliform organisms does not exceed 23 per 100 milliliters, as determined from the bacteriological results of the last 7 days for which analyses have been completed.

6. Reclaimed water shall not be directly used for uses other than those enumerated above until requirements for these uses have been established by this Board in accordance with Section 13523 of the California Water Code, unless the Board waives such requirements or finds that the above cited standards are applicable to these uses.

7. Reclaimed water uses shall meet the requirements specified in the "Guidelines for Use of Reclaimed Water" issued by the State Department of Health Services.

8. Reclaimed water used for irrigation shall be retained on the areas of use and shall not be allowed to escape as surface flow except as provided for in a National Pollutant Discharge Elimination System Permit.

   For the purpose of this requirement, however, minor amounts of irrigation return water from peripheral areas shall not be considered a violation of this Order provided the discharge meets the requirements contained

in a National Pollutant Discharge Elimination System Permit issued to the City of San Buenaventura (Ventura Water Renovation Facility).

9. Reclaimed water shall be applied at such a rate and volume as not to exceed vegetative demand and soil moisture conditions. Special precautions must be taken to prevent clogging of spray nozzles, to prevent overwatering and to exclude the production of runoff. Pipelines shall be maintained so as to prevent leaks.

10. Reclaimed water used for irrigation shall not be allowed to run off into recreational lakes unless it meets the criteria for such lakes.

C. General Requirements

1. The discharge or use of raw or inadequately treated sewage at any time is prohibited.

2. Reclaimed water shall not be used for irrigation during periods of extended rainfall and/or runoff.

3. Standby or emergency power facilities and/or sufficient capacity shall be provided for reclaimed water storage during rainfall or in the event of plant upsets or outages, and at times when spray irrigation cannot be practiced.

4. Reclaimed water use or disposal shall not result in earth movement in geologically unstable areas.

5. Adequate facilities shall be provided to protect the sewage treatment and reclamation facilities from damage by storm flows and runoff.

6. Adequate freeboard shall be maintained in reclaimed water storage pond to ensure that direct rainfall will not cause overtopping.

7. Neither treatment of waste nor any reclaimed water use or disposal shall cause pollution or nuisance.

8. Water reclamation and reuse or disposal shall not result in problems due to breeding of mosquitoes, gnats, midges, or other pests.

9. Reclaimed water use or disposal shall not impart

tastes, odors, color, foaming, or other objectionable characteristics to receiving ground waters.

10. Reclaimed water use or disposal which could affect receiving ground waters shall not contain any substance in concentrations toxic to human, animal, or plant life.

11. Odors of sewage origin shall not cause a nuisance.

D. Provisions

1. A copy of these requirements shall be maintained at the reclamation facility so as to be available at all times to operating personnel.

2. In the event of any change in name, ownership, or control of these waste treatment and reclamation facilities, the Reclaimer shall notify this Board of such change and shall notify the succeeding owner or operator of the existence of this Order by letter, copy of which shall be forwarded to the Board.

3. In accordance with Section 13522.5 of the Water Code and Section 60323 of the Wastewater Reclamation Criteria, the Reclaimer shall file an engineering report, prepared by a properly qualified engineer registered in California, of any material change or proposed change in character, location or volume of the reclaimed water or its uses to the Board and State Department of Health Services.

4. The Reclaimer shall file with the Board technical reports on self monitoring work performed according to the detailed specifications contained in the Monitoring and Reporting Programs, as directed by the Executive Officer.

5. The Reclaimer shall notify this Board by telephone within 24 hours of any violations of reclaimed water use conditions or any adverse conditions as a result of the use of reclaimed water from this facility; written confirmation shall follow within one week.

6. The Reclaimer shall notify Board staff by telephone immediately of any confirmed coliform counts that could cause a violation of the 7-day median limit, including the date(s) thereof. This information shall be confirmed in the next monitoring report; in addition,

for any actual coliform limit violations that occurred, the report shall also include the reasons for the high coliform results, the steps being taken to correct the problem (including dates thereof), and the steps being taken to prevent a recurrence.

7. These requirements do not exempt the Reclaimer from compliance with any other laws, regulations, or ordinances which may be applicable; they do not legalize this reclamation facility, and they leave unaffected any further restraint on the use of reclaimed water at this site which may be contained on other statutes or required by other agencies.

8. The Reclaimer shall be responsible to insure that all users of reclaimed water comply with the specifications and requirements for such use.

9. This Order does not alleviate the responsibility of the Reclaimer to obtain other necessary local, state, and federal permits to construct facilities necessary for compliance with this Order; nor does this Order prevent imposition of additional standards, requirements, or conditions by any other regulatory agency. Expansion of this facility from its current capacity shall be contingent upon issuance of all necessary permits, including a conditional use permit.

10. Supervisors and operators of this publicly owned wastewater treatment plant shall possess a certificate of appropriate grade as specified in California Administrative Code, Title 23, Chapter 3, Subchapter 14, Section 2455 and 2460.

11. The Reclaimer shall provide to each user of reclaimed water from Ventura Water Renovation Facility a copy of these requirements, to be maintained at the user's facility as to be available at all times to operating personnel.

12. For any extension of the reclaimed water system, the Reclaimer shall submit a report detailing the extension for the approval of the Executive Officer. Following construction, as built drawings shall be submitted to the Executive Officer for approval prior to use of reclaimed water.

13. The Reclaimer shall submit to the Board within 60 days

of the adoption of this Order, a fail-safe procedure for approval by the Executive Officer.

14. Order No. 80-34 adopted by this Board on July 28, 1980, is hereby rescinded.

I, Robert P. Ghirelli, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on April 27, 1987.

Robert P. Ghirelli

ROBERT P. GHIRELLI, D.Env.
Executive Officer

GK/

State of California
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, LOS ANGELES REGION

MONITORING AND REPORTING PROGRAM NO. 6190
FOR

CITY OF SAN BUENAVENTURA
(Ventura Water Renovation Facility)
(File No. 57-68)

The Reclaimer shall implement this monitoring program on the effective date of this Order.

Monitoring reports shall be submitted by the dates in the following schedule:

Reporting period	Report Due
January - March	May 15
April - June	August 15
July - September	November 15
October - December	February 15

The first monitoring report under this program shall be submitted by August 15, 1987.

By March 1 of each year, the Reclaimer shall submit an annual report to the board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year. In addition, the Reclaimer shall discuss the compliance record and the corrective actions taken or planned which may be needed to bring the discharge into full compliance with the Requirements.

Values obtained for the NPDES monitoring report during periods of discharge to surface waters may be reported here in lieu of duplicate testing, if representative. However, non-NPDES self-monitoring reports shall be submitted separately from the NPDES monitoring reports.

Reclaimed Water Monitoring

A sampling station shall be established where representative samples of reclaimed water can be obtained. Reclaimed water samples may be obtained at a single station provided that station is representative of the quality at all discharge points. Each sampling station shall be identified. The following shall constitute the reclaimed water monitoring program:

Constituent	Units	Type of Sample	Minimum Frequency of Analysis
Turbidity[1]	NTU	continuous	-----
Total flow[2]	gallon	continuous	-----
Coliform group[3]	MPN/100ml	grab	daily
pH	pH units	grab	daily
Total dissolved solids	mg/l	24-hr composite	monthly
Chloride	mg/l	24-hr composite	monthly
Boron	mg/l	24-hr composite	monthly
Sulfate	mg/l	24-hr composite	monthly
Arsenic	mg/l	24-hr composite	quarterly
Barium	mg/l	24-hr composite	quarterly
Cadmium	mg/l	24-hr composite	quarterly
Chromium	mg/l	24-hr composite	quarterly
Lead	mg/l	24-hr composite	quarterly
Mercury	mg/l	24-hr composite	quarterly
Selenium	mg/l	24-hr composite	quarterly
Silver	mg/l	24-hr composite	quarterly
Cyanide	mg/l	24-hr composite	quarterly
Nitrate	mg/l	24-hr composite	quarterly
Fluoride	mg/l	24-hr composite	quarterly
Radioactivity	pCi/l	24-hr composite	quarterly

[1]Required only for applications having a turbidity limit. The average value recorded each day and amount of time that 5 NTU was exceeded each day shall be reported. Turbidity samples may be obtained anywhere in the treatment process subsequent to the filtration procedure.

[2]Shall report the daily volume of reclaimed water used at each site of use.

[3]Samples shall be obtained at some point in the treatment process at a time when wastewater flow and characteristics are most demanding on the treatment facility and disinfection procedures. The location(s) of the sampling point(s) and any changes thereto must be approved by the Executive Officer, and proposed changes shall not be made until such approval has been granted. If reclaimed water is used for irrigation of golf courses, cemeteries, freeway landscapes, parks, playgrounds, schoolyards, or other areas where the public has similar access or exposure, samples shall be obtained subsequent to the chlorination procedure. Coliform values obtained must meet the strictest requirement specified for all uses during periods of multiple use, unless separate coliform analyses are obtained at each particular point of use.

Total identifiable chlorinated hydrocarbon	ug/l	grab	quarterly
Priority Pollutants	ug/l	grab	semi-annually

General Provisions for Sampling and Analysis

All sampling, sample preservation, and analyses shall be performed in accordance with the latest edition of "Guidelines Establishing Test Procedures for Analysis of Pollutants", promulgated by the United States Environmental Protection Agency.

All chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the State Water Resources Control Board or approved by the Executive Officer.

General Provisions for Reporting

For every item where the requirements are not met, the Reclaimer shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time and submit a timetable for correction.

The Reclaimer shall maintain all sampling and analytical results, including strip charts; date, exact place, and time of sampling; dates analyses were performed; analyst's name; analytical techniques used; and results of all analyses. Such records shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Board.

In reporting the monitoring data, the Reclaimer shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized to demonstrate compliance with Water Reclamation Requirements and, where applicable, shall include results of receiving water observations.

The Reclaimer shall file a report with this Board describing the purposes for which reclaimed water from this facility is used, estimating quantities used for each type of use, depicting on a map or drawing the area(s) of use, and stating the name and address of each user of reclaimed water if other than the Reclaimer. This report shall be updated at least annually, and shall be included with the annual report due March 1 each year.

Each quarterly report shall include a statement that all reclaimed water was used only as specified in the requirements during the quarter.

If no water was delivered for reuse during the quarter, the report shall so state.

Monitoring reports shall be signed by:

a. In the case of corporations, by a principal executive officer at least of the level of vice-president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which discharge originates;

b. In the case of a partnership, by a general partner;

c. In the case of a sole proprietorship, by the proprietor;

d. In the case of municipal, state or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.

Each report shall contain the following completed declaration:

"I declare under penalty of perjury that the foregoing is true and correct.

Executed on the _____ day of _____ at _____.

_____(Signature)

_____(Title)"

Ordered by Robert P. Gherelli
Executive Officer

April 27, 1987
Date

GK/

Appendix C – Approval of Residential and Limited Commercial Recycled Water Fill Station

CALIFORNIA
Water Boards

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Los Angeles Regional Water Quality Control Board

September 24, 2015

Ms. Gina Dorrington
Wastewater Utility Manager
City of Ventura
Ventura Water Reclamation Plant
P.O. Box 99
Ventura, CA 93002-0099

APPROVAL OF THE RESIDENTIAL AND LIMITED COMMERCIAL RECYCLED WATER FILL STATION PROGRAM, COVERAGE UNDER WATER RECLAMATION REQUIREMENTS FOR THE CITY OF VENTURA, VENTURA WATER RECLAMATION FACILITY (WRR ORDER NO. 87-45, CI NO. 6190, NPDES ORDER R4-2013-0174, CI NO. 1822)

Dear Ms. Dorrington:

The Los Angeles Regional Water Quality Control Board (Regional Water Board) received a letter dated August 19, 2015 and a document titled "Information to Support the Ventura Water Reclamation Facility Fill Station Program" from the City of Ventura (City) requesting approval of the Residential and Commercial Recycled Water Fill Station Program (Water Fill Station Program). On September 17, 2015, the Regional Water Board received the updated document "Information to Support the Ventura Water Reclamation Facility Mobile Reuse Program" which incorporated the comments from the Regional Water Board and the State Water Resources Control Board, Division of Drinking Water (DDW). In light of the current statewide drought emergency, the City requests a "fast-track" approval of the Water Fill Station Program that involves distribution of tertiary-treated recycled water for irrigation and dust control. The irrigation users include local residents and the City's Parks, Recreation and Community Partnerships Department. The proposed users for dust control are AERA Energy LLC and the Ventura County Department of Transportation.

The recycled water that will be used in the Water Fill Station Program will be produced at the Ventura Water Reclamation Facility (Ventura WRF) in Ventura, CA. The production, distribution, and reuse of recycled water from Ventura WRF are currently regulated under Water Reclamation Requirements (WRRs) Order No. 87-45, adopted by this Board on April 27, 1987. This Order permits the City to use recycled water from the Ventura WRF for irrigation of landscaping, parks, school yards, green belt areas, golf courses, agricultural areas, and pastures.

The Water Fill Station Program will be located at the Ventura WRF located at 1400 Spinnaker Drive in Ventura and will be covered under Order No. 87-45. All customers must complete a brief education training program and sign an agreement certifying that they acknowledge and understand the recycled water usage restrictions, prior to handling the Title 22 tertiary-treated recycled water. Once training is complete, residential customers may receive between one and three hundred gallons of recycled water per visit and water trucks from the City or other approved non-residential users may receive up to three thousand gallons per visit.

Within the draft "Information to Support" document included with the August 19th letter, the City submitted for review (1) a program description, (2) draft Recycled Water Use Application, Agreement, and Training Verification Forms, and (3) procedures for operation of the fill station. Pursuant to California Water Code 13523, this package was reviewed by DDW.

To receive permission to use additional treated effluent as recycled water, the City submitted a change petition to the Division of Water Rights requesting a decreased flow rate to the Santa Clara River Estuary. Protection of the estuary ecosystem, which supports endangered species, has been the focus of intense study over the last decade and public review of the proposed new recycled water use was necessary. Near term approval from Division of Water Rights is anticipated.

Order 87-45 does not allow for the delivery of recycled water for non-potable use for dust control. The Regional Water Board staff has considered expansion of the uses under Order 87-45 to include dust control and the expansion of the distribution of recycled water for irrigation to include the Recycled Water Fill Station Program. The Regional Water Board staff has reviewed the information submitted and approves the proposed Recycled Water Fill Station Program, as well as the new use dust control, with the condition that the City also receives approval from DDW.

Given the drought and in the interest of expediting the approval process, the implementation of the Water Fill Station Program and the additional dust control use will not require an immediate amendment to the existing Order before this project can proceed. This program will be reflected in the upcoming revision to the WRRs to include the new users and expansion of the recycled water program.

If you have any questions, please contact Cris Morris at (213) 620-2083 or Elizabeth Erickson at (213) 576-6665.

Sincerely,

Samuel Unger

Samuel Unger, P. E.
Executive Officer

Enclosure: City of Ventura Letter without Enclosure, Request for Approval of the Residential and Commercial Recycled Water Fill Station Program, Coverage under Reclamation Requirements for the City of Ventura's Wastewater Reclamation Facility (WRF) (Order No. 87-45), dated August 19, 2015.

cc: Environmental Protection Agency, Region 9, Permits Branch (WTR-5)
NOAA, National Marine Fisheries Service
Department of Interior, U.S. Fish and Wildlife Service
Department of Fish and Game, Region 5
State Water Resources Control Board, Office of Chief Counsel
State Water Resources Control Board, Division of Drinking Water- Jeff Densmore
State Water Resources Control Board, Drinking Water Field Operations – Southern California- Shu-Fang Orr
California Department of Water Resources, Water Recycling Program – Nancy King
California State Parks and Recreation
State Coastal Conservancy
Ventura County, Environmental Services
Ventura County, Department of Public Health
Ventura Regional Sanitation District
The City of Oxnard- Dan Rydberg
Fox Canyon Groundwater Management Agency- Gerhard Huebner
United Water Conservation District- Michael Solomon
Water Replenishment District of Southern California - Ted Johnson,
West Basin Municipal Water District - Uzi Daniel
Main San Gabriel Basin Watermaster – Carol Williams
Wishtoyo/Ventura Coast Keeper-Steve Weiner
Heal the Bay
Environment Now
Los Angeles Waterkeeper
Natural Resources Defense Council
Sierra Club
Southern California Coastal Water Research Project
Kennedy Jenks - Lauren Everett

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VENTURA WATER

www.venturawater.net

August 19, 2015

Cristine Morris
Senior WRC Engineer
Los Angeles Regional Water Quality Control Board
320 West 4th St., Suite 200
Los Angeles, CA 90013

Subject: Request for Approval of the Residential and Commercial Recycled Water Fill Station Program, Coverage under Water Reclamation Requirements for the City of Ventura's Wastewater Reclamation Facility (WRF) (Order No. 87-45)

Dear Ms. Morris:

Due to current and anticipated drought conditions over the coming years, the City of San Buenaventura (Ventura, City) is expecting increased frequency and duration of potable water shortages. As such, the City is proposing to expand the use of recycled water permitted under Order No. 87-45, which allows for the delivery of recycled water for irrigation of golf courses, cemeteries, freeway landscapes, and landscapes in other areas where the public has similar access or exposure. Thus the City would like to implement a truck hauling program (Fill Program) for recycled water where commercial and residential entities can obtain water from the Ventura WRF in Ventura, CA.

In light of the current statewide drought emergency, the City requests a "fast-track" approval of the Fill Program that involves distribution of tertiary-treated recycled water to, and at minimum, recycled water deliver to the City of Ventura Parks, Recreation and Community Partnerships Department (Parks Department), which has requested additional recycled water to irrigate park trees. Without recycled water the irrigation of park trees may result in violation of drought conservation requirements, the loss of park trees, and associated economic impacts.

The production, distribution, and reuse of recycled water from Ventura WRF are currently regulated under Water Reclamation Requirements (WRR) Order No. 87-45, adopted by this Board on April 27, 1987. This Order permits the use of recycled water from the Ventura WRF for irrigation of golf courses, cemeteries, freeway landscapes, and landscapes in other areas where the public has similar access or exposure.

The permit however does not currently allow for the delivery of recycled water via tanker trucks for non-potable uses, including sewer flushing, street cleaning, and dust control, which is the focus of this additional information. The recycled water delivered to users is tertiary treated recycled water, as described in California Code of Regulations, Title 22. A change petition was submitted in February 2015 requesting expanded use to include dust control and trucking of recycled water and has had to undergo a lengthy CEQA process. This additional use will

1400 Spinnaker Drive, PO Box 99
Ventura, CA 93002-0099

increase the maximum reclaimed water use identified in the wastewater change petition (WW0083) by 1%, or from 1.97MGD to 1.99 MGD. Conversely, this additional use will reduce the maximum reclaimed water discharge to the Santa Clara River Estuary by .03 MGD, from 5.83 MGD to 5.80 MGD.

The Fill Program will be located at the Ventura WRF facility, located at Spinnaker Drive in Ventura and will be covered under Order No. 87-45. All customers must complete a training program on the safe use of recycled water prior to handling Title 22 tertiary-treated recycled water, and once training is complete, customers may receive an approved amount of recycled water per visit.

No increase in the delivery capacity of the existing WRF is necessary. Ventura Water plans to add a commercial and residential managed recycled water distribution program by tanker truck as part of the currently operating WRF and will work with local Regional Water Quality Control Board staff to implement the full residential and commercial program as described in the attached document, Information to Support the Ventura WRF Fill Program.

The Fill Program is an acceptable improvement to the existing recycled water distribution program permitted under Order No. 87-45. In the interest of expediting the approval process, the implementation of the Fill Program will not require an immediate amendment to the existing Order before this project can proceed because it only constitutes new users that have now been approved, and not a new use; however, this program will be reflected in an upcoming revision to the WRRs to include the new users and expansion of the recycled water program.

Respectfully,

Gina Dorrington
Wastewater Utility Manager
Ventura Water

Enclosure(s)

cc: Shana Epstein, General Manager, Ventura Water
Samuel Unger, P.E., Executive Officer, Los Angeles Regional Water Quality Control Board
Jeff Densmore, P.E., State Water Resources Control Board (SWRCB), Division of Drinking Water
Elizabeth Erickson, Engineering Geologist, Los Angeles Regional Water Quality Control Board
Mitchell Moody, Mitchell Moody, P.E., SWRCB, Division of Water Rights
Matthew McCarthey, SWRCB, Division of Water Rights
Melinda Talent, Ventura County Department of Environmental Health, Drinking Water
Lauren Everett, Water Resources Project Manager, Kennedy/Jenks Consultants

Appendix D – Water Reuse Permit for Mobile Users

CITY OF VENTURA
VENTURA WASTEWATER RECLAMATION FACILITY
RECYCLED WATER MANAGEMENT PROGRAM

VENTURA WATER

DRAFT: Vers 2013-06-01

RECYCLED WATER USER INSPECTION GUIDE AND REPORT FORM

Emergency/Spill Line: (See Below)

Inspection Date:

RW User/Permit No.

RW Customer:
Name:
Address:

Phone:
Email:

Purveyor / Location: City Of Ventura Wastewater Reclamation Facility
1400 Spinnaker Drive
Ventura, CA 93001
General Office (805) 677-4114; VWRF Inspector: 805-654-4135 Cell 805-822-3737
Spill Line: Non-Emergency 805-650-8010 Emergency (police) 805-339-4399
(Unauthorized discharge of more than 1,000 gallons of Recycled Water must be reported immediately: either orally or electronically.)
Email: wwtemp@venturawater.net; ghibberd@venturawater.net

RW Distributor: Same

Regulation Criteria of RW Distributed: Disinfected Tertiary Recycled Water
Title 22 Sections 13521(general) and Sections 60301.230 & 60301.320

Use Site Supervisor, Title: **Phone:**

Contact Person, Title: **Phone:**

Contact Initials:

VWRF Inspector:

Annual Report Due Date: By March 15th of each year.

Report Certification:

I declare under the penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment.

Printed or Typed Name:

Signature of Recycled Water User: _____ Date:_____

CITY OF VENTURA
VENTURA WASTEWATER RECLAMATION FACILITY
RECYCLED WATER MANAGEMENT PROGRAM

VENTURA WATER

√
X

Recycle Water Duties and Responsibilities:

√ Checked boxes indicate acceptable use of Recycled Water.

X Marked boxes indicates corrective actions are needed.

A. ☐ **The duties and responsibilities of the Use Site Supervisor shall include but not be limited to the following:**

a) Proper installation, operation and maintenance of irrigation systems;

b) Retain construction plans of recycled water distribution system on site for inspection.

c) Development of and implementation of a set of procedures to verify on an ongoing basis that cross-connections have not occurred between potable water supplies and recycled water supplies;

d) Routine inspection and maintenance of backflow prevention devices installed to protect potable water supplies, consistent with section 7605 of Title 17, California Code of Regulations;

e) General responsibilities to ensure compliance with the City of Ventura regulations and continuous implementation of any Best Management Practices identified as necessary to prevent potential hazards to public health and to protect the environment.

f) Irrigation Plan: Ensure compliance of the use site with the Ventura Water Reclamation Facility's (VWRF) Rules and Regulations.

g) Act as a 24-hour contact and liaison with the City VWRF and accompany water agency and VWRF personnel during the recycled water use site inspection and cross-connection control shut down tests.

h) Site Supervisor Continuing Training: Documentation of periodic education for Recycled Water Use Supervisors. At a minimum, such training shall include the following elements:
   - The safe and efficient operation and maintenance of recycled water use facilities.
   - Prevention of runoff from Recycled Water Use Areas.
   - Matching irrigation rates to the water requirements of the landscape, and not applying when the soil is saturated.
   - Means for ensuring recycled water and other supplemental nutrients (including fertilizers) are used pursuant to the Irrigation Management Plan (i.e., at agronomic rates)
   - Prevention of cross-connections with potable water systems

Comments: _____

_____

_____

_____

_____

Recycled Water Application

B. ☐ Application of recycled water to the Use Area shall be at reasonable agronomic rates and shall consider soil, climate, and nutrient demand. Application rates shall ensure that a nuisance is not created. Degradation of groundwater, considering soil, climate, and nutrient demand, shall be minimized consistent with applicable provisions of the Recycled Water Policy.
Comments: _____

C. ☐ The seasonal nutritive loading of the Use Area including the nutritive value of organic and chemical fertilizers and of the recycled water, shall not exceed the nutritive demand of the landscape.
Comments: _____

D. ☐ Use Areas that are spray irrigated and allow public access shall be irrigated during periods of minimal use. Consideration shall be given to allow maximum drying time prior to subsequent public use.
Comments: _____

Recycled Water Utilities, Equipment, Signage, and Use Areas

E ☐ All newly installed or any accessible reclamation equipment, pumps, piping, valves, and outlets shall be appropriately marked to differentiate them from potable facilities. All newly installed or any accessible reclamation distribution system piping shall be purple or adequately identified with purple tape, tags, or stickers per Section 116815(a) of the California Health and Safety Code.

F ☐ No physical connection shall be made or allowed to exist between any recycled water system and any separate system conveying potable water. Supplementing recycled water with potable water is not allowed.
Comments: _____

G ☐ A 4-foot horizontal and 1-foot vertical separation[9] shall be maintained between all new pipelines transporting recycled water and those transporting domestic water, unless approved by the City and CDPH. Domestic water pipelines shall be configured above recycled water pipelines, unless approved by the City and CDPH.
Comments: _____

H ☐ All recycled water valves, outlets, and quick couplers should be of a type or secured in a manner that precludes operation by unauthorized personnel.
Comments: _____

I ☐ The main shutoff valve of the recycled water meter shall be tagged with a recycled water warning sign. The valve shall be equipped with an appropriate locking device to prevent unauthorized operation of the valve.
Comments: _____

J ☐ Except where the City or CDPH has approved alternative signage and wording or an educational program pursuant to Title 22 Requirements, (1) all use areas where recycled water is used that are accessible to the public shall be posted with signs that are visible to the public in a size no less than four inches high by eight inches wide that include the following wording "RECYCLED WATER-DO NOT DRINK", and (2) each sign shall display an international symbol similar to that shown in Attachment D.
Comments: _____

K ☐ Spray, mist, or runoff of recycled water shall not enter dwellings, designated outdoor eating areas, or food handling facilities. Drinking water fountains shall be protected against contact with recycled water spray, mist or runoff.
Comments: _____

L ☐ Recycled water shall be managed to minimize contact with workers.

Comments: _____

M ☐ Best Management Practices (BMPs) shall be developed and implemented to achieve a safe and efficient irrigation system. At a minimum, Users shall implement the Required BMPs identified in Attachment B (I.A. – I.D.) and other BMPs as appropriate.
Comments: _____

N ☐ Recycled water shall not be allowed to escape from the Use Area by overspray, mist or by surface flow except in minor amounts such as that associated with BMPs for good irrigation practices.
Comments: _____

O Areas irrigated with recycled water shall be managed to prevent ponding or other conditions conducive to the proliferation of mosquitoes and other vectors, and to avoid creation of a public nuisance or health hazard. The following practices shall be implemented, at a minimum:

a. Irrigation water must infiltrate completely within **a 48-hour period**.
b. Ditches receiving irrigation runoff, not serving as wildlife habitat, shall be maintained free of emergent, marginal, and floating vegetation.
c. Low-pressure and unpressurized pipelines and ditches that may be accessible to mosquitoes shall not be used to store recycled water.

Comments: _____

_____

P Verify on an ongoing basis that cross-connections have not occurred between potable water supplies and recycled water supplies.

Comments: _____

_____

R Cross-connection programs shall be conducted in accordance with backflow prevention regulations adopted by the City and CDPH and may require water users to comply with all orders, instructions, regulations, and notices from the local health officer with respect to the installation, testing, and maintenance of backflow prevention devices. Cross-connection tests shall be performed at least once every 4 years .

Comments: _____

_____

S Impoundments containing Recycled Water shall be confined to the approved (Use Area). User shall maintain adequate capacity in the ponds to ensure that direct rainfall or runoff will not cause flooding beyond the banks. Recycled Water shall not be used for irrigation during periods of extended rainfall and or runoff.

Comments: _____

_____

T. The application of recycled water within fifty (50) feet of a domestic well, or impound--ment of recycled water within one hundred (100) feet of a domestic well is prohibited.

Comments:

U The City shall discontinue delivery of recycled water during any period in which it has reason to believe that the requirements for use as specified herein or the requirements of CDPH are not being met. The delivery of recycled water shall not resume until all conditions have been corrected

Comments: _____

_____

_____

CITY OF VENTURA
VENTURA WASTEWATER RECLAMATION FACILITY
RECYCLED WATER MANAGEMENT PROGRAM

VENTURA WATER

INSPECTION SUMMARY PAGE

Ref#	**Additional Inspection Check Box Comments:**
	Attachment A – Prohibition Comments:
	Attachment B – Best Management Practices Comments:
	Violation or Correction Issued:
	Response or Correction Date:

California Health and Safety Code (HSC) section 116555 requires that a public water system shall ensure that the system will not be subject to backflow under normal operating conditions. HSC Section 116800 et. seq. authorizes local health officers to maintain a program for the control of cross-connections by water users where public exposure to drinking water contaminated by backflow may occur.

Author:
Gene Hibberd, Senior Environmental Compliance Inspector
Wastewater Division
805-677-4114
ghibberd@venturawater.net

PROHIBITIONS OF RECYCLE WATER USE

P.1 The use of recycled water pursuant to this General Permit is prohibited unless the Administrator has submitted a complete Notice of Intent (NOI) form, Operation & Maintenance Plan, and application fee and has received confirmation of enrollment under this General Permit.

P.2 The use of recycled water in a manner different than described in the Operation & Maintenance Plan is prohibited.

P.3 The use of recycled water, pursuant to this General Permit, for individually owned residences other than as described in Finding No. 3 is prohibited.

P.4 In conformance with Title 22 Requirements, recycled water shall not be used for direct human consumption or for the processing of food or drink intended for human consumption.

P.5 The use of recycled water for uses other than landscape irrigation uses is prohibited.

P.6 The use of recycled water on water-saturated or frozen ground or during periods of precipitation such that runoff is induced, is prohibited.

P.7 The direct or indirect discharge from use areas of recycled water to surface waters, either perennial or ephemeral, including wetlands, vernal pools, etc. is prohibited, unless otherwise authorized by an NPDES permit.

P.8 The application of recycled water within fifty (50) feet of a domestic well, and impoundment of recycled water within one hundred (100) feet of a domestic well, unless approved by CDPH, is prohibited.

P.9 Use or installation of hose bibbs in areas accessible by the public on any irrigation system presently operating or designed to operate with recycled water, regardless of construction or identification, is prohibited.

P.10 Use of any equipment or facilities that have been used to convey recycled water (e.g., tanks, temporary piping or valves, and portable pumps) also used for potable water supply conveyance, is prohibited.

P.11 The discharge or use of recycled water in a manner that causes or contributes to an exceedance of an applicable water quality objective is prohibited.

P.12 The use of recycled water for landscape irrigation shall not cause or threaten to cause pollution or nuisance as defined in Water Code section 13050.

INSPECTION FORM: RW-1
LANDSCAPE IRRIGATION
OF RECYCLED WATER

CITY OF VENTURA
VENTURA WASTEWATER RECLAMATION FACILITY
RECYCLED WATER MANAGEMENT PROGRAM

VENTURA WATER

WATER QUALITY ORDER NO. 2009-0006-DWQ

California Health Laws Related to Recycled Water *June 2001 Edition*
Title 22

RECYCLED WATER DO NOT DRINK

FIGURE A

VENTURA WASTEWATER RECLAMATION FACILITY
RECYCLED WATER MANAGEMENT PROGRAM
BEST MANAGEMENT PRACTICES (BMPS)

VENTURA WATER

Producers, Distributors, and Users associated with landscape irrigation are required to implement the BMPs identified in Section I and to consider implementing other BMPs (Sections II – IV) as appropriate for a Recycled Water Use Area.

I. REQUIRED BMPs

A. Implementation of operations and management plan that provides for detection of leaks, and correction either within 72 hours of learning of a leak, or prior to the release of 1,000 gallons.
B. Proper design and operation of sprinkler heads.
C. Refraining from application during precipitation events.
D. Management of any impoundment such that no discharge occurs unless the discharge is a result of a 25-year, 24-hour storm event or greater. In the event of an unauthorized discharge, the Executive Officer of the appropriate Regional Water Board shall be notified, as described in Provision C.16.

II. OTHER POTENTIAL BMPs: GENERAL OPERATIONAL CONTROLS

A. The Recycled Water Use Supervisor attends regular training regarding the safe and efficient operation and maintenance of recycled water use facilities.
B. The Recycled Water Use Supervisor ensures that all recycled water facilities are maintained, operated and repaired at all times in a manner that does not cause illness or injury to any person and in a manner that does not cause damage or injury to the real or personal property of any person or entity.
C. Where feasible, different piping materials are used to assist in water system identification.

III. WORKER/PUBLIC PROTECTION

A. Workers, residents, and the public are made aware of the potential health risks associated with contact or ingestion of recycled water, and are educated about proper hygienic practices to protect themselves and their families.
B. Workers are provided with the appropriate safety equipment and clothing during prolonged contact with recycled water.
C. Potable drinking water is provided for workers.
D. Toilet and washing facilities are provided.
E. Precautions are taken to avoid contact of recycled water with food and food is not allowed into areas that are still wet with recycled water.
F. A first aid kit is available on site, to prevent the contact of cuts and other injuries with recycled water.

VENTURA WASTEWATER RECLAMATION FACILITY
RECYCLED WATER MANAGEMENT PROGRAM
BEST MANAGEMENT PRACTICES (BMPS)

VENTURA WATER

EFFICIENT IRRIGATION cont.

Management:

S. Determined the optimum duration and frequency for irrigation cycles considering evapotranspiration, soil type, plant varieties being irrigated, climatic conditions, and any other factors affecting optimum irrigation efficiencies.

T. Irrigation with recycled water only occurs during periods of minimal public use of the Use Area with consideration given to allow an adequate dry-out time before the Use Area will be used by the public.

U. The frequency of respective irrigation cycles is only as often as necessary to meet the water requirements of the landscape. This is determined by measuring the amount of moisture remaining in the root zone reservoir between irrigation cycles. Moisture levels in the root zone is measured and optimized via the use of tensiometers, gypsum blocks, soil probes, the "feel method", an on-site weather station, and or the California Irrigation Management Information System (CIMIS) to estimate soil moisture levels. These methods are reviewed, inspected, and maintained regularly to ensure accuracy and reliability.

V. Use automatic rain shut-off devices to reduce irrigation if significant rainfall occurs.

W. Use multiple rain shut-off devices to reduce ponding if precipitation rate is higher than the infiltration rate of the soil.

X. Majority of irrigation occurs in the evening or early morning to avoid the heat and/or windy parts of the day.

Y. Irrigated areas grouped into zones of similar water use.

Z. As needed, aerate the soil to improve infiltration of air and water into the soil.

AA. Perform good horticultural practices; fertilization, mowing, de-thatching, aeration, and pest control, as necessary to create the best growing environment for landscape vegetation.

BB. Provided infiltration areas at the lowest elevation of the Use Area.

CC. Installed storm drain inlet valves or plugs to contain accidental discharges during dry weather

DD. Implemented low impact development practices to minimize runoff that contains recycled water.

EE. Employ water budgeting using evapotranspiration data from CIMIS or an on-site weather station and crop coefficients from Water Use Classification of Landscape Species (WUCOLS)

FF. Dedicated landscape water meters for monitoring of water budget and leak detection.

GG. Conformance to local or the State Water Efficient Landscape Ordinance.

HH. Education of residents, customers and employees regarding the importance of efficient water use.

II. Each site supervisor has been provided a conductivity tester as a tool to help them determine the difference between recycled water and potable water.