

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

ORDER NO. 2008-0083-A01
MONITORING AND REPORTING PROGRAM NO. 9456
FOR CITY OF OXNARD
GROUNDWATER ENHANCEMENT AND TREATMENT PROGRAM – NONPOTABLE REUSE
PROJECT
(File No. 08-070)

The City of Oxnard (City) shall implement this monitoring and reporting program on the effective date of this Order.

PURPOSE OF AMENDED MONITORING AND REPORTING PROGRAM FOR ORDER NO. R4-2011-0079-A01 AND ORDER NO. R4-2008-0083

The Pleasant Valley County Water District (PVCWD) and the City of Oxnard (City) requested the delivery of recycled water produced by the Advanced Water Purification Facility (AWPF) starting in August of 2015 to offset the loss of agricultural water due to the extended drought. The City's AWPF is part of the Groundwater Recovery, Enhancement, and Treatment (GREAT) Program, which is scheduled to deliver the water to Pleasant Valley growers in 2017. The PVCWD requests that the water be transported into the PVCWD's irrigation distribution system and to the Oxnard Plain immediately via the Calleguas Regional Salinity Management Pipeline (RSMP) until the planned permanent connection can be constructed or additional flows into the RSMP render the option not feasible, whichever comes first.

I. SUBMITTAL OF REPORTS

1. The City shall submit the required reports, outlined in the following paragraphs, to the California Regional Water Quality Control Board, Los Angeles Region (Regional Board), and to the State Water Resource Control Board Division of Drinking Water (DDW). The reports shall be received at the Regional Board and the DDW on the dates indicated as follows:

- A. **Quarterly Monitoring Reports** shall be received at the Regional Board by the 15th day of the second month following the end of each quarterly monitoring period according to Table M1. The first Quarterly Monitoring Report under this program shall be received at the Regional Board and the DDW by the quarter following startup.

Table M1 Quarterly Report Periods and Due Dates	
Reporting Period	Report Due
January – March	May 15 th
April – June	August 15 th
July – September	November 15 th
October – December	February 15 th

- B. **Annual Summary Report** shall be received at the Regional Board and the DDW by March 1 of each year and cover the monitoring period from January to December.
 - C. **Monthly Monitoring Reports** shall be received at the Regional Board by the 15th day of each month during the first two months of operation of the RSMP for PVCWMD irrigation.
2. The Permittee shall electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program website (<http://www.waterboards.ca.gov/ciwqs/index.html>) no later than the 15th day following the end of the second month of the designated monitoring period. The CIWQS website will provide additional information for SMR submittal in the event there will be a planned service interruption for electronic submittal.

II. **MONITORING REQUIREMENTS**

1. Quarterly monitoring shall be performed during the 1st quarter (January, February, and March), the 2nd quarter (April, May, and June), the 3rd quarter (July, August, and September), and the 4th quarter (October, November, and December); and annual monitoring shall be conducted during the third quarter of each calendar year. However, if the use of recycled water does not occur during that monitoring period, the City shall collect a sample during the next reuse event. Results of quarterly and annual analyses shall be reported in the following quarterly monitoring report. If there is no use of recycled water during the reporting period, the report shall so state. Monitoring reports shall continue to be submitted to the Regional Board, regardless of whether or not there was a use of recycled water.
2. Monitoring shall be used to determine compliance with the requirements of this Order and shall include, but not limited to, the following:
 - A. Sampling protocols (specified in 40 CFR part 136 or AWWA standards where appropriate) and chain of custody procedures.
 - B. Laboratory or laboratories, which conducted the analyses. Include copy or copies of laboratory certifications by the State Water Resource Control Board Division of Drinking Water Environmental Laboratory Accreditation Program(ELAP¹) every year or when the City changes their contract laboratory.
 - C. Analytical test methods used for recycled water and the corresponding detection limits.
 - D. Quality assurance and control measures.

The samples shall be analyzed using analytical methods described in 40 CFR part 136; or where no methods are specified for a given pollutant, by commercially available methods approved by the USEPA. The City shall select the analytical

¹ ELAP is a part of the DDW.

- methods that provide reporting detection limits (DLRs) lower than the limits prescribed in this Order. For those constituents that have drinking water notification levels (NLs) and/or public health goals (PHGs), the DLRs shall be equal to or lower than either the NLs or the PHGs. If this is not feasible, each quarterly monitoring report shall report efforts to modify the process, the equipment or the laboratory to provide the desirable DLRs. The City shall instruct its laboratories to establish calibration standards so that the DLRs (or its equivalent if there is a different treatment of samples relative to calibration standards) are the lowest calibration standard. At no time shall the City use analytical data derived from extrapolation beyond the lowest point of the calibration curve.
3. Upon request by the City, the Regional Board, in consultation with the USEPA and the State Board Quality Assurance Program, may establish DLRs, in any of the following situations:
 - A. When the pollutant has no established method under 40 CFR 136 (revised May 14, 1999, or subsequent revision);
 - B. When the method under 40 CFR 136 for the pollutant has a DLR higher than the limit specified in this Order; or,
 - C. When the City agrees to use a test method that is more sensitive than those specified in 40 CFR part 136 and is commercially available.
 4. Samples of final effluent must be analyzed within allowable holding time limits as specified in 40 CFR part 136.3. All QA/QC analyses must be run on the same dates when samples were actually analyzed. The City shall make available for inspection and/or submit the QA/QC documentation upon request by Regional Board staff. Proper chain of custody procedures must be followed and a copy of that documentation shall be submitted with the quarterly report.
 5. For all bacterial analyses, sample dilutions should be performed so the range of values extends from 1 to 800. The detection methods used for each analysis shall be reported with the results of the analyses.

III. REPORTING REQUIREMENTS

The City shall submit all reports, shown on Section I SUBMITTAL OF REPORTS to the Regional Board and the DDW by the dates indicated. All quarterly, and annual monitoring reports should contain a separate section titled “Summary of Non-Compliance”, which discusses the compliance records and corrective actions taken or planned that may be needed to bring the reuse into full compliance with water recycling requirements. This section shall clearly list all non-compliance with water recycling requirements, as well as all excursions of effluent limitations.

1. Quarterly Reports

- A. These reports shall include, at a minimum, the following information:

- a. The volume of the secondary-treated influent and Advanced Wastewater Purification Facility (AWPF) treated recycled water. If no recycled water is used during the quarter, the report shall so state. To monitor the flow rate variation during the use of the RSMP and the potential impact it has on the water quality at the Wood Road sampling point, the average daily flow rate at the AWPF discharge to the RSMP shall also be reported. In addition, the weekly flow amounts at each connection to the Oxnard Plain growers shall be recorded and included as daily average for each week, weekly total and monthly amount..
 - b. A summary report of the use of recycled water via tanker truck and/or a residential fill station, if any, shall be included in the quarterly report.
 - c. The date and time of sampling and analyses.
 - d. All analytical results of samples collected during the monitoring period of the secondary-treated influent and AWPF-treated recycled water.
 - e. UV dose calculations, lamp intensity readings, and UV transmittance.
 - f. Records of any operational problems, plant upset and equipment breakdowns or malfunctions, and any discharge(s) of the AWPF-treated recycled water.
 - g. Discussion of compliance, noncompliance, or violation of requirements.
 - h. All corrective or preventive action(s) taken or planned with schedule of implementation, if any.
- B. For the purpose of reporting compliance with numerical limitations, analytical data shall be reported using the following reporting protocols:
- a. Sample results greater than or equal to the DLR must be reported “as measured” by the laboratory (i.e., the measured chemical concentration in the sample); or
 - b. Sample results less than the DLR, but greater than or equal to the laboratory’s method detection limit (MDL), must be reported as “Detected, but Not Quantified”, or DNQ. The laboratory must write the estimated chemical concentration of the sample next to DNQ as well as the words “Estimated Concentration” (may be shortened to Est. Conc.); or
 - c. Sample results less than the laboratory’s MDL must be reported as “Not-Detected”, or ND.
- C. If the City samples and performs analyses (other than for process/operational control, startup, research, or equipment testing) on any sample more frequently than required in this MRP using approved analytical methods, the results of those analyses shall be included in the report. These results shall be reflected

in the calculation of the average used in demonstrating compliance with average effluent, receiving water, etc., limitations.

- D. The Regional Board may request supporting documentation, such as daily logs of operations.

2. Annual Reports

- A. Tabular and graphical summaries of the monitoring data (AWPF-treated recycled water) obtained during the previous calendar year.
- B. Discussion of the compliance record and corrective or preventive action(s) taken or planned that may be needed to bring the AWPF-treated recycled water into full compliance with the requirements in this Order.
- C. The description of any changes and anticipated changes including any impacts in operation of any unit processes or facilities shall be provided.
- D. A list of the analytical methods employed for each test and associated laboratory quality assurance/quality control procedures shall be included. The report shall restate, for the record, the laboratories used by the City to monitor compliance with this Order, their status of certification, and provide a summary of performance.
- E. The report shall confirm operator certification and provide a list of current operating personnel, their responsibilities, and their corresponding grade of certification.
- F. The report shall also include the date of the facility's Operation and Maintenance Management Plan, the date the plan was last reviewed, and whether the plan is complete and valid for the current facilities.
- G. During the period when the RSMP is being utilized to facilitate the distribution of AWPF treated recycled water to the growers in the Oxnard Plain, the report shall include any issues or problems associated with the groundwater and a discussion of the Permittee's compliance with Resolution No. 2013-02 of the Fox Canyon Groundwater Management Agency (GMA). This section of the report shall also include the most recent report submitted to the Fox Canyon GMA.

3. Monthly Reports during the Initial Operations of the Temporary Use of the RSMP

- A. These reports shall include information collected during the first two months of utilizing the RSMP, including the samples collected at a new monitoring location on the Wood Road temporary piping as shown on Figure 6 connecting the RSMP to the PVCMD, so that the sample will reflect the comingled water from the RSMP and the AWPF.

B. These reports shall include, at a minimum, the following information:

- a. Startup procedures used to provide an adequate mixture of AWPf treated recycled water and brine in accordance with Order No. R4-2011-0079-A01.
- b. The average daily flow rate pumped into the RSMP from the AWPf and the total monthly volume.
- c. The weekly flow and total monthly volume transferred from the RSMP through each of four connection points to agricultural users. In addition, the weekly flow will be translated into an average daily flow rates for each weekly period.
- d. The date and time of sampling and analyses.
- e. All analytical results of samples collected during the first two months of the temporary use of the RSMP.
- f. Discussion of compliance, noncompliance, or violation of requirements.
- g. All corrective or preventive action(s) taken or planned with a schedule of implementation, if any.

C. For the purpose of reporting compliance with numerical limitations and supporting documentation, requirements noted in III.1.B, C and D also apply.

IV. MONITORING FOR SECONDARY TREATED EFFLUENT (INFLUENT TO AWPf)

1. The sampling station shall be established where representative samples of influent can be obtained. Samples may be obtained at a single station, provided that the station is representative of wastewater quality entering the AWPf. Should there be any change in the sampling station, the proposed station shall be approved by the Executive Officer prior to its use.
2. Influent Monitoring Program (Table M2)

Table M2 Influent Monitoring Program			
Constituent	Units	Type of Sample	Minimum Frequency of Analysis
Total influent	MGD	---	continuous
BOD ₅ 20°C	mg/L	24-hr composite	weekly
Suspended solids	mg/L	24-hr composite	weekly

V. RECYCLED WATER MONITORING

1. The sampling station shall be established where representative samples of recycled water can be obtained. For this recycling project, recycled water samples shall be obtained from the final effluent channel downstream. Should there be any change in the sampling point, the proposed station shall be approved by the Executive Officer prior to its use. The monitoring program for this sampling point is provided in Table M3.
2. Monitoring Program for Disinfected AWPf-Treated Recycled Water (Table M3)

Table M3 – AWPf-Treated Effluent Monitoring			
Constituent	Units	Type of Sample²	Minimum Frequency of Analysis
Effluent flow	MGD	--	Continuous
Turbidity ³	NTU	---	Continuous
Total coliform	MPN/100ml	Grab	Daily
pH	pH units	Grab	Daily
Settleable solids	mL/L	Grab	Daily
Suspended solids	mg/L	24-hr comp.	Weekly
BOD ₅ 20°C	mg/L	24-hr comp.	Weekly
Oil and grease	mg/L	Grab	Monthly
Total dissolved solids	mg/L	24-hr comp.	Monthly
Chloride	mg/L	24-hr comp.	Monthly
Boron	mg/L	24-hr comp.	Monthly
Sulfate	mg/L	24-hr comp.	Monthly
Nitrate-N	mg/L	24-hr comp.	Quarterly
Nitrite-N	mg/L	24-hr comp.	Quarterly
Nitrate-N + nitrite-N	mg/L	24-hr comp.	Quarterly
Inorganic ⁴ with primary MCL	mg/L	24-hr comp./Grab	Quarterly
Constituents/parameters ⁵ with secondary MCL	--	24-hr comp.	Quarterly
Regulated organic chemicals ⁶	µg/L	24-hr comp./Grab	Quarterly

² Grab sample is an 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. When an automatic composite sampler is not used, composite sampling shall be done as follows: If the duration of the discharge is equal to or less than 24 hours but greater than eight (8) hours, at least eight (8) flow-weighted samples shall be obtained during the discharge period and composited. For discharge duration of less than eight (8) hours, individual 'grab' sample may be substituted.

³ Turbidity shall be continuously monitored and recorded at a point after final filtration. The average value recorded each day, the amount of time that 0.2 NTU is exceeded, and the incident of exceeding 0.5 NTU, if any, shall be reported.

⁴ See Attachment A-1 for specific constituents to be monitored.

⁵ See Attachment A-5 for specific constituents to be monitored.

⁶ See Attachment A-3 for specific constituents to be monitored. Grab samples shall be used for analyses of volatile organics and cyanide; composite samples shall be used for others.

Table M3 – AWPf-Treated Effluent Monitoring			
Constituent	Units	Type of Sample²	Minimum Frequency of Analysis
Remaining priority pollutants ⁷	µg/L	24-hr comp./Grab	Quarterly
Disinfection byproduct ^{8, 9}	µg/L	24-hr comp./Grab	Quarterly
Radioactivity ¹⁰	pCi/L	24-hr comp.	Annually
Chemicals with NLs ^{11, 12}	µg/L	24-hr comp./Grab	Annually ^[11]
Endocrine disrupting chemicals ^{11, 13}	µg/L	24-hr comp.	Annually ^[11]
Pharmaceuticals and other chemicals ^{11, 14}	µg/L	24 –hr comp.	Annually ^[11]

3. During the use of the RSMP, a new monitoring location shall be established on the Wood Road temporary piping from the RSMP line to the PVCWD distribution system. The monitoring program for this sampling point downstream of the RSMP is provided in Table M4. If quarterly sampling of total nitrogen and constituents with either a primary or secondary MCL for a year does not identify concentrations above MCL or

⁷ See Attachment A-7 for specific constituents to be monitored. Grab samples shall be used for analyses of volatile organics and cyanide; composite samples shall be used for others.

⁸ See Attachment A-4 for specific constituents to be monitored. Grab samples shall be used for analyses of volatile organics and cyanide; composite samples shall be used for others.

⁹ There are no numeric limits for these constituents, no numeric limits are anticipated at this time, and analytical methods may not be widely available.

Monitoring for these constituents are viewed as a diligent way of assessing and verifying recycled water quality characteristics, which can be useful in addressing issues of public perception about the safety of recycled water. Further, should there be a positive finding, the Regional Board and the DDW can give the result due consideration as to whether it is of concern or not. Just what such consideration might entail would depend on the knowns and unknowns of these constituents, including its potential health effects at the given concentration, the source of the chemical, as well as possible means of better control to limit its presence, treatment strategies if necessary, and other appropriate actions.

¹⁰ See Attachment A-2 for specific constituents to be monitored.

¹¹ Prior to the commencement of delivering recycled water, at least one grab sample of recycled water shall be collected and analyzed. The results for the initial recycled water quality analysis shall be submitted to the Regional Board. After that, at least one grab sample of recycled water shall be collected and analyzed every year.

¹² See Attachment A-6 for specific constituents to be monitored. Grab samples shall be used for analyses of volatile organics and cyanide; composite samples shall be used for others.

¹³ Endocrine disrupting chemicals include ethinyl estradiol, 17-B estradiol, estrone, bisphenol A, nonylphenol and nonylphenol polyethoxylate, octylphenol and octylphenol polyethoxylate, and polybrominated diphenyl ethers. These chemicals need to be monitored only when the analytical methods for these chemicals are applicable and approved by the USEPA.

¹⁴ Pharmaceuticals and other chemicals include acetaminopen, amoxicillin, azithromycin, caffeine, carbamazepine, ciprofloxacin, ethylenediamine tetra-acetic acid (EDTA), gemfibrozil, ibuprofen, iodinated contrast media, lipitor, methadone, morphine, salicylic acid, and triclosan. These chemicals need to be monitored only when the analytical methods for these chemicals are applicable and approved by the USEPA.

Basin Plan limits, then the monitoring frequency for those constituents can be reduced to bi-annually.

Table M4 – AWPf-Treated Effluent Monitoring via RSMP			
Constituent	Units	Type of Sample¹⁵	Minimum Frequency of Analysis
Total dissolved solids	mg/L	24-hr comp.	Monthly
Chloride	mg/L	24-hr comp.	Monthly
Boron	mg/L	24-hr comp.	Monthly
Sulfate	mg/L	24-hr comp.	Monthly
Total nitrogen	mg/L	24-hr comp.	Monthly
Inorganic ⁴ with primary MCL	mg/L	24-hr comp/Grab	Quarterly
Constituents/parameters ⁵ with secondary MCL	mg/L	24-hr comp	Quarterly

VI. RECYCLED WATER USE MONITORING

The City shall submit a quarterly report, in a tabular form, on the list of users serviced during the quarter, the amount of recycled water delivered to each user, and the use of the recycled water. A summary of these data shall be included in the annual report.

VII. GENERAL MONITORING AND REPORTING REQUIREMENTS

1. The City shall summarize and arrange the monitoring data in tabular form to demonstrate compliance with requirements.
2. For every item where the requirements are not met, the City shall submit a statement of the actions undertaken or proposed which will bring the recycled water into full compliance with requirements at the earliest possible time, and submit a timetable for implementation of the corrective measures.
3. Monitoring reports shall be signed by either the principal Executive Officer or ranking elected official. A duly authorized representative of the aforementioned signatories may sign documents if:
 - a. The authorization is made in writing by the signatory;

¹⁵ Grab sample is an 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. The 24 hour composite sample for the Wood Road sample point is based on time increments. When an automatic composite sampler is not used, composite sampling shall be done as follows: If the duration of the discharge is equal to or less than 24 hours but greater than eight (8) hours, at least eight (8) flow-weighted samples shall be obtained during the discharge period and composited. For discharge duration of less than eight (8) hours, individual 'grab' sample may be substituted.

- b. The authorization specifies the representative as either an individual or position having responsibility for the overall operation of the regulated facility or activity; and
 - c. The written authorization is submitted to the Executive Officer of this Regional Board.
4. The monitoring report shall contain the following completed declaration:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments thereto; and that, based on my inquiry of the 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 fine and imprisonment."

Executed on the ___ day of _____ at _____

Signature

Title

5. The City shall retain records of all monitoring information, including all calibration and maintenance, monitoring instrumentation, and copies of all reports required by this Order, for a period of at least three (3) years from the date of sampling measurement, or report. This period may be extended by request of the Regional Board or the DDW at any time and shall be extended during the course of any unresolved litigation regarding the regulated activity.
6. Records of monitoring information shall include:
- a. The date, exact place, and time of sampling or measurements;
 - b. The individual(s) who performed the sampling or measurements;
 - c. The date(s) analyses were performed;
 - d. The individual(s) who performed the analysis;
 - e. The analytical techniques or methods used; and
 - f. The results of such analyses.

7. The City shall submit to the Regional Board, together with the first monitoring report required by this Order, a list of all chemicals and proprietary additives which could affect the quality of the recycled water, including quantities of each. Any subsequent changes in types and/or quantities shall be reported promptly.

An annual summary of the quantities of all chemicals, listed by both trade and chemical names, which are used in the treatment process shall be included in the annual report.

Ordered by:

Samuel Unger
Executive Officer

Date: July 9, 2015

/EERICKSON

Attachment A-1

Table 64431-A – Inorganic Chemicals*	
Chemical	Maximum Contaminant Levels (mg/L)
Aluminum	1
Antimony	0.006
Arsenic	0.05
Asbestos	7 MFL**
Barium	1
Beryllium	0.004
Cadmium	0.005
Chromium	0.05
Cyanide	0.15
Mercury	0.002
Nickel	0.1
Nitrate	45
Nitrate + Nitrite	10
Nitrite (as nitrogen)	1
Perchlorate	0.006
Selenium	0.05
Thallium	0.002
Fluoride	2

California Code of Regulation (CCR) Title 22, Section 64431

* Last update: March 9, 2008, or most current version.

**MFL = million fibers per liter; MCL for fibers exceeding 10µm in length.

Attachment A-2

Table 4 – Radioactivity*	
Chemical	Maximum Contaminant Levels (pCi/L)
Combined Radium-226 and Radium-228	5
Gross Alpha Particle Activity (Including Radium-226 but Excluding Radon and Uranium)	15
Tritium	20,000
Strontium-90	8
Gross Beta Particle Activity	50
Uranium	20

California Code of Regulation (CCR) Title 22, Section 64443

*Last update: March 9, 2008, or most current version.

Attachment A-3

Table 64444-A – Organic Chemicals*	
Chemical	Maximum Contaminant Levels (mg/L)
(a) Volatile Organic Chemicals	
Benzene	0.001
Carbon Tetrachloride (CTC)	0.0005
1,2-Dichlorobenzene	0.6
1,4-Dichlorobenzene	0.005
1,1-Dichloroethane	0.005
1,2-Dichloroethane (1,2-DCA)	0.0005
1,1-Dichloroethene (1,1-DCE)	0.006
Cis-1,2-Dichloroethylene	0.006
Trans-1,2-Dichloroethylene	0.01
Dichloromethane	0.005
1,2-Dichloropropane	0.005
1,3-Dichloropropene	0.0005
Ethylbenzene	0.3
Methyl-tert-butyl-ether (MTBE)	0.013
Monochlorobenzene	0.07
Styrene	0.1
1,1,2,2-Tetrachloroethane	0.001
Tetrachloroethylene (PCE)	0.005
Toluene	0.15
1,2,4-Trichlorobenzene	0.005
1,1,1-Trichloroethane	0.2
1,1,2-Trichloroethane	0.005
Trichloroethylene (TCE)	0.005
Trichlorofluoromethane	0.15
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.2
Vinyl Chloride	0.0005
Xylenes (m,p)	1.75**
(b) Non-Volatile synthetic Organic Chemicals	
Alachlor	0.002
Atrazine	0.001
Bentazon	0.018
Benzo(a)pyrene	0.0002
Carbofuran	0.018
Chlordane	0.0001
2,4-D	0.07
Dalapon	0.2
1,2-Dibromo-3-chloropropane (DBCP)	0.0002
Di(2-ethylhexyl)adipate	0.4

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Table 64444-A – Organic Chemicals*	
Chemical	Maximum Contaminant Levels (mg/L)
Di(2-ethylhexyl)phthalate	0.004
Dinoseb	0.007
Diquat	0.02
Endothall	0.1
Endrin	0.002
Ethylene Dibromide (EDB)	0.00005
Glyphosate	0.7
Heptachlor	0.00001
Heptachlor Epoxide	0.00001
Hexachlorobenzene	0.001
Hexachlorocyclopentadiene	0.05
Lindane	0.0002
Methoxychlor	0.03
Molinate	0.02
Oxamyl	0.05
Pentachlorophenol	0.001
Picloram	0.5
Polychlorinated Biphenyls	0.0005
Simazine	0.004
Thiobencarb	0.07
Toxaphene	0.003
2,3,7,8-TCDD (Dioxin)	3×10 ⁻⁸
2,4,5-TP (Silvex)	0.05

California Code of Regulation (CCR) Title 22, Section 64444

* Last update: March 9, 2008, or most current version.

**MCL is for either a single isomer or the sum of the isomers.

Attachment A-4

Table 64533-A – Primary MCLs for Disinfection Byproducts*	
Constituent	Maximum Contaminant Levels (mg/L)
Total Trihalomethanes (TTHM)	0.080
Bromodichloromethane	
Bromoform	
Chloroform	
Dibromochloromethane	
Haloacetic acid (five) (HAA5)	0.060
Monochloroacetic acid	
Dichloroacetic acid	
Trichloroacetic acid	
Monobromoacetic acid	
Dibromoacetic acid	
Bromate**	0.010
Chlorite***	1.0

California Code of Regulation (CCR) Title 22, Section 64533, Chapter 15.5

** Last update: March 9, 2008, or most current version.

** Bromate is listed for plants using ozone disinfection only.

**** Chlorite is listed for plants using chlorine dioxide only.

Attachment A-5

Table 64449-A – Secondary Maximum Contaminant Levels Consumer Acceptance Limits*	
Chemical	Units
Aluminum	0.2 mg/L
Copper	1.0 mg/L
Color	15 units
Foam Agents (MBAS)	0.5 mg/L
Iron	0.3 mg/L
Manganese	0.05 mg/L
Methyl-tert-butyl-ether (MTBE)	0.005 mg/L
Odor – Threshold	3 units
Silver	0.1 mg/L
Thiobencarb	0.001 mg/L
Turbidity	5 units
Zinc	5.0 mg/L

California Code of Regulation (CCR) Title 22, Section 64449

* Last update: June 12, 2008, or most current version.

Attachment A-6

Monitoring for Chemicals with Notification Levels*
Boron
n-Butylbenzene
sec-Butylbenzene
tert-Butylbenzene
Carbon disulfide
Chlorate
2-Chlorotoluene
4-Chlorotoluene
Dichlorodifluoromethane (Freon 12)
1,4-Dioxane
Ethylene glycol
Formaldehyde
HMX
Isopropylbenzene
Manganese
Methyl isobutyl ketone (MIBK)
Naphthalene
n-Nitrosodiethylamine (NDEA)
n-Nitrosodimethylamine (NDMA)
n-Nitrosodi-n-propylamine (NDPA)
Propachlor
n-Propylbenzene
RDX
Tertiary butyl alcohol (TBA)
1,2,3-Trichloropropane (1,2,3-TCP)
1,2,4-Trimethylbenzene
1,3,5-Trimethylbenzene
2,4,6-Trinitrotoluene (TNT)
Vanadium

* Last update: December 14, 2007, or most current version.

Attachment A-7

Monitoring for Remaining Priority Pollutants

Pesticides	Base/Neutral Extractibles	Di-n-butyl phthalate
Aldrin	Acenaphthene	Di-n-octyl phthalate
Dieldrin	Benzidine	Diethyl phthalate
4,4'-DDT	Hexachloroethane	Dimethyl phthalate
4,4'-DDE	Bis(2-chloroethyl)ether	Benzo(a)anthracene
4,4'-DDD	2-chloronaphthalene	Benzo(a)fluoranthene
Alpha-endosulfan	1,3-dichlorobenzene	Benzo(k)fluoranthene
Beta-endosulfan	3,3'-dichlorobenzidine	Chrysene
Endosulfan sulfate	2,4-dinitrotoluene	Acenaphthylene
Endrin aldehyde	2,6-dinitrotoluene	Anthracene
Alpha-BHC	1,2-diphenylhydrazine	1,12-benzoperylene
Beta-BHC	Fluoranthene	Fluorene
Delta-BHC	4-chlorophenyl phenyl ether	Phenanthrene
Acid Extractibles	4-bromophenyl phenyl ether	1,2,5,6-dibenzanthracene
2,4,6-trichlorophenol	Bis(2-chloroisopropyl)ether	Indeno(1,2,3-cd)pyrene
P-chloro-m-cresol	Bis(2-chloroethoxyl)methane	Pyrene
2-chlorophenol	Hexachlorobutadiene	Volatile Organics
2,4-dichlorophenol	Isophorone	Acrolein
2,4-dimethylphenol	Naphthalene	Acrylonitrile
2-nitrophenol	Nitrobenzene	Chlorobenzene
4-nitrophenol	N-nitrosodimethylamine	Chloroethane
2,4-dinitrophenol	N-nitrosodi-n-propylamine	1,1-dichloroethylene
4,6-dinitro-o-cresol	N-nitrosodiphenylamine	Methyl chloride
Phenol	Bis(2-ethylhexyl)phthalate	Methyl bromide
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