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

ORDER NO. R4-2008-0083

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.

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 California Department of Public Health, Drinking Water Field Operations, Santa Barbara District Office (CDPH). The reports shall be received at the Regional Board and the CDPH 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 CDPH by the quarter following startup.

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

   B. **Annual Summary Report** shall be received at the Regional Board and the CDPH by March 1 of each year. The first Annual Summary Report under this program shall cover the monitoring periods from January 2012 to December 2012.

2. All monitoring and annual summary reports must be addressed to the Regional Board, Attention: Information Technology Unit. Reference the reports to Compliance File No. CI-9456 to facilitate routing to the appropriate staff and file.

3. The monitoring data shall be submitted to the Regional Board and to the CDPH on hard copy, and on either a 3 1/2" computer diskette or a CD-ROM disk. The Regional

Board and the CDPH may request electronic submittal of data contained in a CD-ROM disk or other appropriate electronic medium at any time. The submittal data must be IBM compatible, preferably using Microsoft Excel software.

4. The Regional Board and the State Water Resources Control Board (State Board) are developing a database compliance monitoring management system that may require the City to submit the monitoring reports electronically, when it becomes operational. The draft regulations state: "Analytical results for chemicals shall be reported directly to the Department, as follows:

   Analytical results of all analyses completed in a calendar month shall be reported to the Department no later than the 15th day following the end of the second month of the designated monitoring period.

II. MONITORING REQUIREMENTS

1. Whenever possible, 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 California Health Services Environmental Laboratory Accreditation Program (ELAP[1]) every year or when the City changes their contract laboratory.

   C. Analytical test methods used for recycled water and the corresponding detection limits for reporting purposes (DLRs) unregulated and regulated chemicals. Please see the CDPH's website at http://www.cdph.ca.gov/certlic/drinkingwater/Pages/UCMR.aspx and http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chemicalcontaminants.aspx for unregulated and regulated chemicals, respectively.

   D. Quality assurance and control measures.

[1] ELAP is a part of the CDPH.

3. 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 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 (note this is not always feasible). Every effort should be made to analyze Chemicals with NLs in Attachment A-6 using the least DLR possible.

4. 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.

5. 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 May14, 1999, or subsequent revision);

   B. When the method under 40 CFR 136 for the pollutant has a RDL 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.

6. 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.

7. 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 CDPH 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.

b. The date and time of sampling and analyses.

c. All analytical results of samples collected during the monitoring period of the secondary-treated influent and AWPF-treated recycled water.

d. UV dose calculations, lamp intensity readings, and UV transmittance.

e. Records of any operational problems, plant upset and equipment breakdowns or malfunctions, and any discharge(s) of the AWPF-treated recycled water.

f. Discussion of compliance, noncompliance, or violation of requirements.

g. 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.

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
$BOD_5 20^oC$	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 station, the proposed station shall be approved by the Executive Officer prior to its use.

2. Monitoring Program for Disinfected AWPF-Treated Recycled Water (Table M3)

Table M3 – AWPF-Treated Effluent Monitoring

Constituent	Units	Type of Sample[2]	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
$BOD_5 20^oC$	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
MBAS	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

[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. Sampling frequency of MBAS is monthly.

Table M3 – AWPF-Treated Effluent Monitoring			
Constituent	**Units**	**Type of Sample[2]**	**Minimum Frequency of Analysis**
Regulated organic chemicals[6]	µg/L	24-hr comp./Grab	Quarterly
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]

VI. RECYCLED WATER USE MONITORING

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.

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 CDPH 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. These chemicals need to be monitored during August.

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. These chemicals need to be monitored during August.

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;

   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 CDPH 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;

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:

Tracy J. Egoscue
Executive Officer

Date: October 2, 2008

/DTSAI