STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

DRAFT MONITORING AND REPORTING PROGRAM NO. R3-2014-0050

FOR THE

CAMBRIA COMMUNITY SERVICES DISTRICT
EMERGENCY WATER TREATMENT FACILITY
RECYCLED WATER RE-INJECTION PROJECT

ISSUED TO

Cambria Community Services District

The Cambria Community Services District (CCSD) shall implement this Monitoring and Reporting Program (MRP) on the effective date of Order No. R3-2014-0050.

I. SUBMITTAL OF REPORTS

1. The CCSD shall submit the required reports outlined in the following paragraphs to the State Water Resources Control Board (State Water Board)'s Geotracker database (in Electronic Data Format[1]) and to the Division of Drinking Water (DDW), Drinking Water Field Operations, by the dates indicated.

   a. Startup 30 day report:

   The Discharger must evaluate and field validate the operating assumptions for the AWTP (quality of: water supply, membrane filter backwash discharge, membrane filtrate discharge, reverse osmosis product water re-injection, and lagoon condition) and compare the pre-project assumptions to documented operating data. The Discharger must submit a report detailing differences between documented operating values and assumed concentrations/conditions. The report must be submitted within 10 days following the first 30 days of AWTP operation.

   b. Monthly Reports:

   Consistent with section III.REPORTING REQUIREMENTS, monthly reports for monitoring and reporting requirements included in the Operations Maintence and Monitoring Plan shall be received by the 15th day of each month following the first monthly monitoring period.

   c. Quarterly Monitoring: Quarterly Monitoring Reports shall be received by the 15th day of the second month following the end of each quarterly monitoring period according to Table M-1.

Table M-1: Quarterly Report Periods and Due Dates

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

The contents of the Geotracker Quarterly Monitoring Report shall include a

[1] For help with EDF go to http://www.waterboards.ca.gov/ust/electronic_submittal/

one-page summary of operational concerns that addresses changes in reporting conditions, including influent, recycled water, and groundwater monitoring results, since the last report.

d. Annual Summary: The Annual Summary Report shall be received by April 15 of each year. This Annual Summary Report shall contain a discussion of the previous calendar year's analytical results, as well as graphical and tabular summaries of the monitoring analytical data.

   Public water systems and owners of small water systems and other active production wells having downgradient sources potentially affected by the CCSD groundwater injection project or within 10 years groundwater travel time from the CCSD groundwater injection project shall be notified by direct mail and/or electronic mail of the availability of the annual report.

e. Operation Plan: Prior to startup of the Cambria Advanced Water Treatment Plant (AWTP), the CCSD shall submit an Operations Maintence and Monitoring Plan (OMMP) to DDW and the Regional Water Board for approval. After six months of operation of the Plant, the OMMP shall be updated as necessary and submitted to the Regional Water Board and the DDW for review and approval.

   i. The OMMP covers critical operational parameters to include routine testing procedures for the microfiltration (MF), reverse osmosis (RO), and ultraviolet (UV)/advanced oxidation process (AOP) systems, optimization of the UV dose for disinfection and AOP for reduction of light-sensitive contaminants, and all treatment processes, maintenance and calibration schedules for all monitoring equipment, process alarm set points, and response procedures for all alarms in each treatment process of the Cambria AWTP, including criteria for diverting recycled water if water quality requirements are not met, start-up, emergency response and contingency plans. During the first year of operation of the Cambria AWTP, all treatment processes shall be operated in a manner to provide optimal reduction of microbial, regulated and nonregulated contaminants. Based on this experience and anytime operational changes are made, the OMMP shall be updated.

   ii. The OMMP includes staffing levels with applicable certification levels for Facility operations personnel. Significant changes in the operation of any of the treatment processes shall be reported to the DDW and Regional Water Board. Significant changes in the approved OMMP must be approved by the DDW and the Regional Water Board prior to instituting changes. The CCSD is responsible for ensuring that the OMMP is, at all times, representative of the current operations, maintenance, and monitoring of the Cambria AWTP.

f. Five-Year Engineering Report: CCSD shall update the 2013 Title 22 Engineering Report and submit the updated report to the State Water Board's Geotracker and the DDW five years after the startup of the Cambria AWTP,

and every five years thereafter.

2. All reports to the State Water Board's Geotracker shall reference the Order No. R3-2014-0050. Compliance monitoring reports shall be submitted separately from other technical reports.

3. All reports shall be submitted as a pdf file and uploaded electronically to the State Water Board's Geotracker and provided via email to the DDW (if the file exceeds 10 MB, either a CD containing the file shall be mailed to DDW, or a link for downloading an electronic copy of the file shall be provided). Upon request the data shall be provided in excel format

4. By the reporting due dates specified in Table M-1, groundwater data shall be uploaded electronically to the State Water Board's Geotracker in an electronic deliverable format specified by the State Water Board[2]. Upon request the data shall be provided in excel format.

II. MONITORING REQUIREMENTS

1. CCSD shall monitor the flow and quality of the following according to the manner and frequency specified in this MRP:

    a. Influent to the Cambria AWTP;

    b. Recycled water from Cambria AWTP after the injection point for sodium hypochlorite and calcium chloride and before injection into the San Simeon Valley (3-35) groundwater basin;

    c. If potable water is used, blend of recycled water and diluent water;

    d. Receiving groundwater (monitoring wells specified in Table M-15); and,

    e. For production well SS3, nearest to the CCSD groundwater injection project, the CCSD shall review and evaluate the publicly available Title 22 monitoring data.

2. Monitoring reports shall include, but not limited to, the following:

    a. Analytical results;

    b. Location of each sampling station where representative samples are obtained, including a map, at a scale of 1 inch equals 1,200 feet or less, that clearly identifies the locations of all injection wells, monitoring wells, and production wells;

    c. Analytical test methods used and the corresponding minimum reporting levels

[2] http://www.waterboards.ca.gov/ust/electronic_submittal/

(MRLs);

d. Name(s) of the laboratory, which conducted the analyses;

e. Copy of laboratory certifications by the DDW's Environmental Laboratory Accreditation Program (ELAP);

f. Quality assurance and control information, including documentation of chain of custody; and,

g. Maximum contaminant level (MCL), notification level, response level, DDW Condition or Recycled Water Discharge Limit.

3. Though not required to be submitted in the monitoring reports unless specifically requested by the Regional Water Board or the DDW, the CCSD shall have in place written sampling protocols. For groundwater monitoring, the sampling protocols shall outline the methods and procedures used for measuring water levels; purging wells; collecting samples; decontaminating equipment; containing, preserving, and shipping samples, and maintaining appropriate documentation. Also, the sampling protocols shall include the procedures for handling, storing, testing, and disposing of purge and decontamination waters generated from the sampling events.

4. Where multiple EPA approved methods are available, drinking water (500 series) or wastewater (600 series) may be used as appropriate.

5. The samples shall be analyzed using analytical methods described in 40 Code of Federal Regulations (CFR) Part 141, or where no methods are specified for a given pollutant, by methods approved by the DDW, Regional Water Board and/or State Water Board. The CCSD shall select the analytical methods that provide Minimum Reporting Levels (MRLs) lower than the limits prescribed in this Order or as low as possible that will provide reliable data.

6. The CCSD shall instruct its laboratories to establish calibration standards so that the MRLs (or its equivalent if there is a different treatment of samples relative to calibration standards) are the lowest calibration standard. At no time shall analytical data derived from extrapolation beyond the lowest point of the calibration curve be used, except as stated in section III.1.B of this MRP.

7. Upon request by the CCSD, the Regional Water Board, in consultation with the DDW and the State Water Board Quality Assurance Program, may establish MRLs, in any of the following situations:

   a. When the pollutant has no established method under 40 CFR 141;

   b. When the method under 40 CFR 141 for the pollutant has an MRL higher than the limit specified in this Order; or,

   c. When the CCSD agrees to use a test method that is more sensitive than those specified in 40 CFR Part 141.

8. For regulated constituents, the laboratory conducting the analyses shall be certified by ELAP or approved by the DDW, Regional Water Board, or State Water Board, for a particular pollutant or parameter.

9. Samples shall be analyzed within allowable holding time limits as specified in 40 CFR Part 141. All Quality Assurance/Quality Control (QA/QC) analyses shall be run on the same dates that samples are actually analyzed. The CCSD shall retain the QA/QC documentation in its files for three years and make available for inspection and/or submit them when requested by the Regional Water Board or the DDW. Proper chain of custody procedures shall be followed, and a copy of this documentation shall be submitted with the quarterly report.

10. For all bacterial analyses, sample dilutions shall 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.

11. Quarterly monitoring for recycled water and groundwater shall be performed during the months of February, May, August, and November. Semiannual monitoring for recycled water shall be performed during the months of February and August. Semiannual monitoring for groundwater shall be performed during the months of May and November. Should there be instances when monitoring can not be done during these specified months, the CCSD shall conduct the monitoring as soon as it can and state in the monitoring report the reason monitoring could not be conducted during the specified month. Results of quarterly analyses shall be reported in the quarterly monitoring report following the analysis.

12. For unregulated chemical analyses, the CCSD shall select methods according to the following approach:

    a. Use the drinking water methods or waste water method sufficient to evaluate all water quality objectives and protect all beneficial uses;

    b. Use DDW-recommended methods for unregulated chemicals, if available;

    c. If there is no DDW-recommended drinking water method for a chemical, and more than a single United States Environmental Protection Agency (USEPA)-approved method is available, use the most sensitive of the USEPA-approved methods;

    d. If there is no USEPA-approved method for a chemical, and more than one method is available from the scientific literature and commercial laboratory, after consultation with DDW, use the most sensitive method;

    e. If no approved method is available for a specific chemical, the Project Sponsors' laboratory may develop or use its own methods and should provide the analytical methods to DDW for review. Those methods may be used until DDW-recommended or USEPA-approved methods are available.

f. For constituents of emerging concern (CECs) subject to the State Water Board Recycled Water Policy as amended January 22, 2013, analytical methods for laboratory analysis of CECs shall be selected to achieve the reporting limits (RLs) presented in Table 1 of Attachment A of the Recycled Water Policy. The analytical methods shall be based on methods published by the USEPA, methods certified by the DDW, or peer review reviewed and published methods that have been reviewed by DDW, including those published by voluntary consensus standards bodies such as the Standards Methods Committee and the American Society for Testing and Materials International. Any modifications to the published or certified methods shall be reviewed by DDW and subsequently submitted to the Regional Water Board in an updated quality assurance project plan.

III. REPORTING REQUIREMENTS

1. Monthly Reports
   The following monitoring and reporting requirements must be included in the OMMP and reported to the DDW and the RWQCB monthly.

   - Effluent Monitoring - To demonstrate the log reduction credit given to the CCSD Wastewater Treatment Plant (WWTP) and facilities up to the influent of the AWTP, the WWTP effluent shall be monitored continuously for turbidity and daily for coliform concentrations. The CCSD will report monthly to the DDW and RWQCB the daily WWTP effluent coliform analysis, the daily WWTP effluent average turbidity, daily WWTP effluent maximum turbidity and the percent of time the WWTP effluent turbidity is greater than 5 NTU.
   - Influent Monitoring - The CCSD will monitor and report the AWTP influent for turbidity continuously, Total Organic Carbon (TOC) weekly, and total coliform weekly. If a sample of the influent to the AWTP is positive for total coliform, the sample shall be analyzed for E.coli. Turbidity measurements shall be recorded every 15 minutes and the daily average and daily maximum shall be reported.
   - The micro filtration membrane (MF) effluent will be monitored for turbidity continuously. The daily average and maximum turbidity reading and the percent of time that the turbidity is greater than 0.2 NTU needs to be reported.
   - Membrane integrity testing (MIT) shall be performed on the MF membrane unit a minimum of once every 24 hours of operation.
     - The log removal value (LRV) for Cryptosporidium shall be calculated and the value reported after the completion of each MIT.
     - The MIT shall have a resolution that is responsive to an integrity breach on the order of 3 µm or less.
     - Calculations of the LRV shall be based on a pressure decay rate (PDR) value with an ending pressure that provides a resolution of 3 microns or less.
     - The MIT shall have a sensitivity to verify a LRV equal to or greater than 4.0.

- The Reverse Osmosis (RO) system will not be credited pathogen reduction at this facility; however, minimal monitoring will be required to ensure the integrity of the system. CCSD needs to monitor the effluent of each RO unit (Stage 1 and 2) and the third stage RO unit (Stage 3) continuously for conductivity. The CCSD will report the average and maximum conductivity from the effluent of each unit daily. The RO effluent will be monitored for TOC weekly and reported in the monthly report.
- The UV/peroxide system shall be operated as has been designed to meet the groundwater recharge regulations, providing a minimum 0.5-log reduction of 1,4-dioxane. The UV system is a Trojan UVPhOx 72AL75, which was pilot-tested at the City of San Diego IPR Demonstration Facility at a 1.0 mgd flow rate. Based upon this testing, power level shall be 13 kW or greater; and UV intensity shall be 21 mW/cm^2 or higher.
- The UV system must be operated with online monitoring and built-in automatic reliability features that must trigger automatic diversion of effluent to waste by the following critical alarm setpoints.
  - UV intensity below 21 mW/cm^2
  - Power level below 13 kW
  - ballast failure
  - multiple lamp failure and
  - complete UV reactor failure
- On-line monitoring of UV intensity, flow, UVT, and power must be provided at all times. Flow meters UV intensity sensors, and UVT monitors must be properly calibrated to ensure proper disinfection. At least monthly, all duty UV intensity sensors must be checked for calibration against a reference UV intensity sensor. The UVT meter must be inspected and checked against a reference bench-top unit weekly to document accuracy.
- The monitoring and reliability features, including automatic shutdown capability, shall be demonstrated to DDW during a plant inspection prior to final approval.
- Chlorine will be added to the effluent stream of the RO along with caustic soda and calcium chloride. A free chlorine residual shall be provided from the AWTP to the injection well. The log reduction of virus and Giardia will be calculated and reported daily. The CCSD will monitor the free chlorine residual continuously and report the daily average and minimum concentration. The CCSD will monitor and report the minimum water temperature and the maximum pH of the water daily. Also, the CCSD will report the minimum contact time from the AWTP to the injection well daily.
- Based on the calculation of log reduction achieved daily by the entire treatment facility, from the WWTP to the public water supply wells, the CCSD will report a "Yes" or "No" for each day as to whether the necessary log reductions (12-logs virus, 10-logs for Giardia and Cryptosporidium) have been achieved. An overall log reduction calculation will be provided only for those days when a portion of the treatment facility does not achieve the credits listed in Table 5-1 of the ER.
- CCSD shall sample the monitoring well for general mineral/physicals, inorganics, radioactivity (gross alpha and uranium) and volatile organic chemicals. CCSD shall take these samples monthly for the first year of

operation. CCSD may request, from the Division, a reduction in this monitoring after the first year.

2. Quarterly Reports

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

i. The volume of:
- Influent water pumped from well 9P7.
- Membrane filtrate (MF) backwash discharged into the CCSD percolation ponds.
- MF product water discharged into San Simeon Creek.
- Reverse osmosis (RO) recycled water injected into the San Simeon Valley (3-35) groundwater basin.
- RO brine wastewater discharged into Title 27 brine impoundment.

If no water was pumped, the report shall so state.

ii. The date and time of sampling and analyses.

iii. All analytical results of samples collected during the monitoring period of the:
- Influent,
- MF backwash,
- MF product water,
- RO recycled water, and
- Groundwater.

iv. Records of any operational problems, plant upset and equipment breakdowns or malfunctions, and any diversion(s) of off-specification recycled water and the location(s) of final disposal.

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

vi. All corrective or preventive action(s) taken or planned with schedule of implementation, if any.

vii. Certification by the CCSD that no groundwater for drinking purposes has been pumped from wells within the boundary representing the greatest of the horizontal and vertical distances reflecting two months.

viii. A summary of operational concerns describing changes in reporting conditions, including influent, MF backwash, MF filtrate, RO recycled water, and groundwater monitoring results, since the last report.

b. Monitoring results associated with the evaluation of pathogenic microorganism removal as described in the Order.

c. For the purpose of reporting compliance with numerical limitations, analytical data shall be reported using the following reporting protocols:

   i. Sample results greater than or equal to the MRL must be reported "as measured" by the laboratory (i.e., the measured chemical concentration in the sample); or

   ii. Sample results less than the MRL, but greater than or equal to the laboratory's Minimum Detection Limit (MDL), shall be reported as "Detected, but Not Quantified", "DNQ". The laboratory shall write the estimated chemical concentration of the sample next to "DNQ"; or

   iii. Sample results less than the laboratory's MDL shall be reported as "Not-Detected", or ND.

d. If the CCSD samples and performs analysis 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 recycled water, receiving water, etc., limitations.

e. The Regional Water Board or DDW may request supporting documentation, such as daily logs of operations.

3. Annual Summary Reports shall include, at a minimum, the following information:

   a. Tabular and graphical summaries of the monitoring data obtained during the previous calendar year;

   b. A summary of compliance status with all monitoring requirements during the previous calendar year;

   c. For any non-compliance during the previous calendar year, a description of:

      i. the date, duration, and nature of the violation;

      ii. a summary of any corrective actions and/or suspensions of surface application of recycled water resulting from a violation; and

      iii. if uncorrected, a schedule for and summary of all remedial actions;

   d. Any detections of monitored chemicals or contaminants, and any observed trends in the monitoring wells;

   e. Information pertaining to the vertical and horizontal migration of the recharge water plume;

   f. Title 22 drinking water quality data for the nearest domestic water supply well SS3;

g. A description of any changes in the operation of any unit processes or facilities;

h. The estimated quantity and quality of the recycled water to be utilized for the next calendar year;

i. A list of the analytical methods used for each test and associated laboratory quality assurance/quality control procedures shall be included. The report shall identify the laboratories used by the CCSD to monitor compliance with this Order, their status of certification, and provide a summary of proficiency test;

j. A list of current operating personnel, their responsibilities, and their corresponding grade of certification;

k. The Annual Report shall be prepared by a properly qualified engineer registered and licensed in California and experienced in the field of wastewater or water treatment; and

l. A summary on monitoring reports, reporting and trend analysis, to describe the changes in water quality and contrast them to background measurements for all constituents exceeding MCLs or where concentration trends increase after the addition of recycled water. Specifically describe studies or investigations made to identify the source, fate and transport path of constituents which exceed the MCL at the monitoring wells.

4. The existing OMMP shall be updated to accurately reflect the operations of the Cambria AWTP, the date the plan was last reviewed, and whether the plan is valid and current.

5. Five-Year Engineering Report: Five years after the startup of the Cambria AWTP and every five years thereafter, the CCSD shall update the engineering report to address any project changes and submit the report to the Regional Water Board and the DDW. The Five-Year Engineering Report Update shall include, but not be limited to:

   a. A description of any inconsistencies between previous groundwater model predictions and the observed and/or measured values. For this requirement, the CCSD shall summarize the groundwater flow and transport including the injection and extraction operations for the CCSD groundwater injection project during the previous five calendar years. This summary shall also use the most current data for the evaluation of the transport of recycled water; such evaluations shall include, at a minimum, the following information:

      i. Total quantity of RO recycled water injected into San Simeon Valley (3-35) groundwater aquifer;

      ii. Estimates of the rate and path of flow of the injected water within the aquifer;

iii. Projections of the arrival time of the recycled water at all monitoring and extraction wells and the percent of recycled water at each location.

iv. Clear presentation on any assumptions and/or calculations used for determining the rates of flow and for projecting arrival times and dilution levels;

v. A discussion of the underground retention time of recycled water, a numerical model, or other methods used to determine the recycled water contribution to each aquifer;

vi. A revised flow and transport model to match actual flow patterns observed within the aquifer if the flow paths have significantly changed; and,

vii. Revised estimates, if applicable, on hydrogeologic conditions including the retention time and the amount of the recycled water in the aquifers and at the production well field at the end of that calendar year. The revised estimates shall be based upon actual data collected during that year on recharge rates (including recycled water and native water), hydrostatic head values, groundwater production rates, basin storage changes, and any other data needed to revise the estimates of the retention time and the amount of the recycled water in the aquifers and at the production well field. Significant differences, and the reasons for such differences, between the estimates presented in the 2014 Engineering Report and subsequently revised estimates, shall be clearly presented. Additionally, the CCSD shall use the most recently available data to predict the retention time of recycled water in the subsurface.

b. Evaluation of the ability of CCSD to comply with all regulations and provisions over the following five years.

c. The Five-Year Engineering Report shall be prepared by a properly qualified engineer registered and licensed in California and experienced in the field of wastewater or water treatment.

IV. MONITORING PROGRAMS

1. Influent Monitoring

a. Monitoring is required to determine compliance with water quality conditions and standards and assess Cambria AWTP performance.

b. The influent sampling station is located before water from well 9P7 enters the MF treatment system of the Cambria AWTP. Influent samples shall be obtained on the same day that MF backwash water, MF product water, and RO recycled water samples are obtained. The date and time of sampling shall be reported with the analytical values determined. Table M-2 constitutes the influent monitoring program.

Table M-2: Influent Monitoring			
Constituents	**Units**	**Type of Sample**	**Minimum Frequency of Analysis**
Ammonia-N	mg/L	grab	Weekly
BOD5	mg/L	24-hour composite	Weekly
Boron	mg/L	grab	Weekly
Chloride	mg/L	24-hour composite	Weekly
Nitrate-N	mg/L	grab	Weekly
Nitrite-N	mg/L	grab	Weekly
Nitrate plus Nitrite	mg/L	grab	Weekly
pH	pH units	Metered	Continuous
Sodium	mg/L	24-hour composite	Weekly
Sulfate	mg/L	grab	Weekly
Total Suspended Solids	mg/L	24-hour composite	Weekly
Total coliform	MPN/100 ml	Grab	Weekly
Total Dissolve Solids	mg/L	24-hour composite	Weekly
Total flow	mgd	Metered	Continuous[3]
Total Kjeldahl nitrogen-N	mg/L	grab	Weekly
Total nitrogen[4]	mg/L	grab	Weekly
Total Organic Carbon (TOC)	mg/L	24-hour composite	Weekly
Turbidity	NTU	Metered	Continuous[5]

2. Membrane Filtrate (MF) and MF Backwash Discharge Monitoring

   a. Membrane filtrate discharge water monitoring is required to:

      i. Determine compliance with the Permit conditions;

      ii. Identify operational problems and aid in improving facility performance; and,

      iii. Provide information on membrane filtrate water characteristics and flows for use in interpreting water quality and biological data.

   Samples shall be collected from the AWTP prior to the injection of any chemicals. Should the need for a change in the sampling station(s) arise in the future, the CCSD shall seek approval of the proposed station by the Executive Officer prior to

[3] For those pollutants that are continuously monitored, the CCSD shall report the monthly minimum and maximum, and daily average values.
[4] Total Nitrogen includes nitrate-N, nitrite-N, ammonia-N, and organic-N.
[5] For those pollutants that are continuously monitored, the CCSD shall report the monthly minimum and maximum, and daily average values.

use.

b. Table M-3a shall constitute the membrane filtrate water monitoring program.

Table M-3a: Membrane Filtrate Discharge Monitoring

Constituents	Units	Type of Sample	Minimum Frequency of Analysis
Ammonia-N	mg/L	grab	Weekly
BOD5	mg/L	24-hour composite	Weekly
Boron	mg/L	grab	Weekly
Chloride	mg/L	24-hour composite	Weekly
Nitrate-N	mg/L	grab	Weekly
Nitrite-N	mg/L	grab	Weekly
Nitrate plus Nitrite	mg/L	grab	Weekly
pH	pH units	Metered	Continuous
Sodium	mg/L	24-hour composite	Weekly
Sulfate	mg/L	grab	Weekly
Total coliform	MPN/100 ml	Grab	Daily
Total Dissolve Solids	mg/L	24-hour composite	Weekly
Total flow	mgd	Metered	Continuous[6]
Total Kjeldahl nitrogen-N	mg/L	grab	Weekly
Total nitrogen[7]	mg/L	grab	Weekly
TOC	mg/L	grab	Weekly
Total Suspended Solids	mg/L	24-hour composite	Weekly
Turbidity	NTU	Metered	Continuous

c. Membrane filtrate backwash discharge water monitoring is required to:

iv. Determine compliance with the Permit conditions;

v. Identify operational problems and aid in improving facility performance; and,

vi. Provide information on membrane filtrate water characteristics and flows for use in interpreting water quality and biological data.

Samples shall be collected from the AWTP prior to the injection of any chemicals. Should the need for a change in the sampling station(s) arise in the future, the CCSD shall seek approval of the proposed station by the Executive Officer prior to use.

[6] For those constituents that are continuously monitored, the CCSD shall report the monthly minimum and maximum, and daily average values.
[7] Total Nitrogen includes nitrate-N, nitrite-N, ammonia-N, and organic-N.

d. Table M-3b shall constitute the membrane filtrate backwash water monitoring program.

Table M-3b: Membrane Filtrate Backwash Discharge Monitoring

Constituents	Units	Type of Sample	Minimum Frequency of Analysis
Ammonia-N	mg/L	grab	Weekly
BOD5	mg/L	24-hour composite	Weekly
Boron	mg/L	grab	Weekly
Chloride	mg/L	24-hour composite	Weekly
Nitrate-N	mg/L	grab	Weekly
Nitrite-N	mg/L	grab	Weekly
Nitrate plus Nitrite	mg/L	grab	Weekly
pH	pH units	Metered	Continuous
Sodium	mg/L	24-hour composite	Weekly
Sulfate	mg/L	grab	Weekly
Total coliform	MPN/100 ml	Grab	Daily
Total Dissolve Solids	mg/L	24-hour composite	Weekly
Total flow	mgd	Metered	Continuous[8]
Total Kjeldahl nitrogen-N	mg/L	grab	Weekly
Total nitrogen[9]	mg/L	grab	Weekly
TOC	mg/L	grab	Weekly
Total Suspended Solids	mg/L	24-hour composite	Weekly
Turbidity	NTU	24-hour composite	Weekly

3. Recycled Water (Advanced Treatment Product Water) Discharge Limit Monitoring

e. Highly treated recycled water monitoring is required to:

vii. Determine compliance with the Permit conditions;

viii. Identify operational problems and aid in improving facility performance; and,

ix. Provide information on recycled water characteristics and flows for use in interpreting water quality and biological data.

Samples shall be collected from the channel downstream of the sodium hydroxide,

[8] For those constituents that are continuously monitored, the CCSD shall report the monthly minimum and maximum, and daily average values.
[9] Total Nitrogen includes nitrate-N, nitrite-N, ammonia-N, and organic-N.

calcium chloride, and sodium hypochlorite injection point, with the exception of constituents specified in Tables M-13 and M-14. Should the need for a change in the sampling station(s) arise in the future, the CCSD shall seek approval of the proposed station by the Executive Officer prior to use.

f. Table M-4 shall constitute the recycled water monitoring program.

Table M-4: Recycled Water Discharge Limits Monitoring

Constituent/Parameters	Units	Type of Sample	Minimum Frequency of Analysis[10]	Reference Table Number
Conductivity[11]	mmho/cm	Metered	Continuous	M-4
Free chlorine residual	mg/L	Metered	Continuous	M-4
Total recycled water flow	mgd	Metered	Continuous	M-4
pH	pH units	Metered	Continuous	M-4
Total coliform	MPN/ 100 ml	Grab	Daily	M-4
Total Organic Carbon (TOC)	mg/L	grab	Weekly	M-4
Turbidity	NTU	Metered	Continuous	M-4
Total nitrogen	mg/L	Grab	Twice per week at least 3 days apart[12]	M-4
Ammonia-N	mg/L	Grab	Weekly	M-4
Nitrate-N	mg/L	Grab	Weekly	M-4
Nitrite-N	mg/L	Grab	Weekly	M-4
Nitrate plus Nitrite	mg/L	Grab	Weekly	M-4
Total Kjeldahl nitrogen-N	mg/L	Grab	Weekly	M-4
Water temperature	C°	Metered	Continuous	M-4
Inorganics[13] with primary MCLs	µg/L	Grab	Quarterly	M-5
Constituents/parameters with secondary MCL	various	Grab	Quarterly	M-6
Radioactivity	pCi/L	Grab	Quarterly	M-7
Regulated organic chemicals	µg/L	24-hour composite	Quarterly	M-8
Disinfection byproducts	µg/L	24-hour composite	Quarterly	M-9

[10] For those constituents that are continuously monitored, the Project Sponsors shall report the daily minimum, maximum, and average values.
[11] Monitor the effluent of each RO unit (Stage 1 and 2) and the third stage RO unit (Stage 3). Report the average and maximum conductivity from the effluent of each unit daily.
[12] If no problem is detected, analysis of nitrogen can be reduced to weekly after 12 months of data collection.
[13] For specific constituents to be monitored and their monitoring frequency, refer to Tables M-3 through M-18.

General physical	various	Grab	Quarterly	M-10
General minerals	µg/L	Grab	Quarterly	M-10
Constituents with Notification Levels	µg/L	Grab	Varies	M-11
Remaining priority pollutants	µg/L	Grab	Annually	M-12
Constituents of Emerging Concern (CECs)	ng/L	Grab	Varies	M-13
Surrogates	Varies	Varies	Varies	M-14

Table M-5: Inorganics with Primary MCLs

Constituents		
Aluminum	Cadmium	Nitrate (as nitrogen)
Antimony	Chromium (Total)	Nitrite (as nitrogen)
	Chromium VI	
Arsenic	Cyanide	Nitrate + Nitrite
Asbestos	Fluoride	Perchlorate
Barium	Mercury	Selenium
Beryllium	Nickel	Thallium

Table M-6: Constituents/parameters with Secondary MCLs

Constituents		
Aluminum	Manganese	Thiobencarb
Chloride	Methyl-tert-butyl-ether (MTBE)	Total Dissolved Solids
Color	Odor – Threshold	Turbidity
Copper	Silver	Zinc
Foam Agents (MBAS)	Specific Conductance	
Iron	Sulfate	

Table M-7: Radioactivity

Constituents		
Gross Alpha Particle Activity (Including Radium-226 but Excluding Radon and Uranium)	Combined Radium-226 and Radium-228	Tritium
Gross Beta Particle Activity	Strontium-90	Uranium

Table M-8: Regulated Organics		
Constituents		
(a) Volatile Organic Chemicals	1,1,1-Trichloroethane	Endothal
Benzene	1,1,2-Trichloroethane	Endrin
Carbon Tetrachloride (CTC)	Trichloroethylene (TCE)	Ethylene Dibromide (EDB)
1,2-Dichlorobenzene	Trichlorofluoromethane	Glyphosate
1,4-Dichlorobenzene	1,1,2-Trichloro-1,2,2-Trifluoroethane	Heptachlor
1,1-Dichloroethane	Vinyl Chloride	Heptachlor Epoxide
1,2-Dichloroethane (1,2-DCA)	Xylenes (m,p)	Hexachlorobenzene
1,1-Dichloroethene (1,1-DCE)	**(b) Non-Volatile synthetic Organic Constituents**	Hexachlorocyclopentadiene
Cis-1,2-Dichloroethylene	Alachlor	Lindane
Trans-1,2-Dichloroethylene	Atrazine	Methoxychlor
Dichloromethane	Bentazon	Molinate
1,2-Dichloropropane	Benzo(a)pyrene	Oxamyl
1,3-Dichloropropene	Carbofuran	Pentachlorophenol
Ethylbenzene	Chlordane	Picloram
Methyl-tert-butyl-ether (MTBE)	Dalapon	Polychlorinated Biphenyls
Monochlorobenzene	1,2-Dibromo-3-chloropropane (DBCP)	Simazine
Styrene	2,4-Dichlorophenoxyacetic acid (2,4-D)	Thiobencarb
1,1,2,2-Tetrachloroethane	Di(2-ethylhexyl)adipate	Toxaphene
Tetrachloroethylene (PCE)	Di(2-ethylhexyl)phthalate	2,3,7,8-TCDD (Dioxin)
Toluene	Dinoseb	2,4,5-TP (Silvex)
1,2,4-Trichlorobenzene	Diquat	

Table M-9: Disinfection Byproducts		
Constituents		
Total Trihalomethanes (TTHM)	Haloacetic Acid (five) (HAA5)	Bromate
Bromodichloromethane	Monochloroacetic acid	Chlorite
Bromoform	Dichloroacetic acid	
Chloroform	Trichloroacetic acid	

Dibromochloromethane	Monobromoacetic acid	
	Dibromoacetic acid	

Table M-10: General Physical and General Minerals		
Constituents		
Asbestos	Potassium	Foaming Agents
Calcium	Sodium	Odor
Chloride	Sulfate	Specific Conductance
Copper	Zinc	Total Dissolved Solids
Iron	Color	Total Hardness
Manganese	Corrosivity	

Table M-11: Constituents with Notification Levels

Constituents	Units	Type of Sample	Minimum Frequency of Analysis
Boron	µg/L	Grab	Quarterly
n-Butylbenzene	µg/L	Grab	Annually
sec-Butylbenzene	µg/L	Grab	Annually
tert-Butylbenzene	µg/L	Grab	Annually
Carbon disulfide	µg/L	Grab	Quarterly
Chlorate	µg/L	Grab	Quarterly
2-Chlorotoluene	µg/L	Grab	Annually
4-Chlorotoluene	µg/L	Grab	Annually
Diazinon	µg/L	Grab	Annually
Dichlorodifluoromethane (Freon 12)	µg/L	Grab	Annually
1,4-Dioxane	µg/L	Grab	Quarterly
Ethylene glycol	µg/L	Grab	Annually
Formaldehyde	µg/L	Grab	Annually
HMX	µg/L	Grab	Annually
Isopropylbenzene	µg/L	Grab	Annually
Manganese	µg/L	Grab	Quarterly
Methyl isobutyl ketone (MIBK)	µg/L	Grab	Annually
Naphthalene	µg/L	Grab	Annually
n-Nitrosodiethyamine (NDEA)	µg/L	Grab	Annually
n-Nitrosodimethylamine (NDMA)	µg/L	Grab	Quarterly
n-Nitrosodi-n-propylamine (NDPA)	µg/L	Grab	Annually
Propachlor	µg/L	Grab	Annually
n-Propylbenzene	µg/L	Grab	Annually

Table M-11: Constituents with Notification Levels			
Constituents	**Units**	**Type of Sample**	**Minimum Frequency of Analysis**
RDX	µg/L	Grab	Annually
Tertiary butyl alcohol (TBA)	µg/L	Grab	Quarterly
1,2,3-Trichloropropane (1,2,3-TCP)	µg/L	Grab	Annually
1,2,4-Trimethylbenzene	µg/L	Grab	Annually
1,3,5-Trimethylbenzene	µg/L	Grab	Annually
2,4,6-Trinitrotoluene (TNT)	µg/L	Grab	Annually
Vanadium	µg/L	Grab	Annually

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

Table M-12: Remaining Priority Pollutants		
Constituents		
Phenol	Bis(2-ethylhexyl)phthalate	Methyl bromide
	Butyl benzyl phthalate	2-chloroethyl vinyl ether

Table M-13: Constituents of Emerging Concern

Constituent	Relevance/ Indicator Type	Type of Sample	Minimum Frequency of Analysis	Reporting Limit (µg/L)	Monitoring Locations[14]	
					Prior to RO	Following treatment prior to well injection
17β-estradiol	Health	grab	Annually	0.001		X
Caffeine	Health & Performance	grab	Annually	0.05	X	X
NDMA	Health & Performance	grab	Quarterly	0.002	X	X
Triclosan	Health	grab	Annually	0.05		X
DEET	Performance	grab	Annually	0.05	X	X
Sucralose	Performance	grab	Quarterly	0.1	X	X

Table M-14: Surrogates				
Constituent	Type of Sample	Minimum Frequency	Monitoring Locations	
			Prior to RO Treatment	Following Treatment prior to Well Injection
Electrical Conductivity	Online	Continuous[15]	X	X

[14] The January 22, 2013 Recycled Water Policy Attachment A makes a distinction between health-based and performance-based CEC indicators for purposes of monitoring locations. For subsurface applications, the health-based CECs are 17β-estradiol, caffeine, NDMA, and triclosan, with monitoring required for final recycled water only. The health-based and performance-based CECs are caffeine, NDMA, DEET, and sucralose, with monitoring required prior to Reverse Osmosis and post- treatment prior to release to the aquifer. Caffeine and NDMA serve both as health-based and performance based indicators

[15] Since monitoring will be continuous using online analyzers, monthly averages for each monitoring location shall be reported in the quarterly compliance monitoring reports.

Table M-14: Surrogates				
Constituent	**Type of Sample**	**Minimum Frequency**	**Monitoring Locations**	
			Prior to RO Treatment	**Following Treatment prior to Well Injection**
Total Organic Carbon (TOC)	24-hour composite	Weekly	X	X

g. Consistent with the January 22, 2013 amended Recycled Water Policy, the CCSD may request the removal of specific CECs from the monitoring program if supported by the data.

i. Analytical methods for CECs shall be selected to achieve the reporting limits presented in Table M-12 in accordance with the Recycled Water Policy. The analytical methods shall be based on methods published by the USEPA, methods certified by DDW, or peer reviewed and published methods that have been reviewed by DDW. Any modifications to the published or certified methods shall be reviewed and approved by the Regional Water Board and DDW.

ii. For performance indicator CECs and surrogates, removal percentages shall be reported in addition to the measured concentrations.

[1] The removal percentage shall be calculated based on the following formula:

Removal Percentage = $([X_{in} – X_{out}]/X_{in})*100$
X_{in} = Concentration in recycled water prior to a treatment process
X_{out} = Concentration in recycled water after a treatment process

[2] The removal percentages for the surrogates shall be determined based on the daily averages for electrical conductivity and weekly values for TOC and included in the quarterly compliance monitoring reports.

[3] The removal percentages for the performance indicator CECs shall be included in the Annual Summary Report.

h. Evaluation of Pathogenic Microorganism Removal

For the purposes of evaluating the performance of the following treatment facilities/units with regards to pathogenic microorganism removal, the CCSD shall include the results of the monitoring specified below in its monthly compliance monitoring reports:

i. For the purpose of demonstrating that the necessary log reductions are achieved at the AWTP, CCSD shall report the daily average and maximum turbidity, percent of time more than 5 nephelometric turbidity units (NTU), and daily coliform results associated with the WRP(s);

ii. Advanced Oxidation Process (AOP) - (UV and hydrogen peroxide at Cambria AWTP): For each day of operation, CCSD shall report the calculated daily peroxide dose (based on the peroxide pump speed and bulk feed concentration), percent reduction based on daily average of chloramine (via total residual chlorine) measured upstream and downstream of AOP, and the applied UV power shall be reported. For UV, CCSD shall report the UV system dose (expressed as greater than a certain threshold such as 300 milli-joules/cm^2), UV transmittance (daily minimum, maximum, and average), UV intensity for each reactor (daily minimum, maximum, and average) and the total UV power applied; and

iii. Based on the calculation of log reduction achieved each day by the entire treatment system, CCSD shall report the value and "Yes" or "No" for each day as to whether the necessary log reductions (i.e. 10-logs for *Giardia*, 10-logs for *Cryptosporidium*, and 12-logs for virus) have been attained. An overall log reduction calculation shall be provided only for those days when a portion of the treatment system does not achieve the credits proposed in Table 5-1 of the engineering report.

4. Treatment Conditions

If a sample of the advanced treated recycled water is greater than 10 ng/L for NDMA, within 72 hours of knowledge of the result, the CCSD shall collect another sample as confirmation. The CCSD shall notify DDW and the Regional Water Board within 48 hours of knowledge of the exceedance and, if directed by DDW or the Regional Water Board, suspend injection of the advanced treated recycled water.

5. Groundwater Monitoring

The CCSD shall monitor the quality of groundwater to assess any impact(s) from the recharge of recycled water. Representative samples of groundwater shall be collected from the San Simeon Creek alluvial aquifer, from wells RIW-1, MIW-1, SS1, SS2, SS3, 9P7, and 16D1. Table M-16 sets forth the minimum constituents and parameters for monitoring groundwater quality in CCSD monitoring wells.

The CCSD shall implement the following groundwater monitoring program as described in Tables M-15, M-16, M-17, and M-18. Some constituents may be eligible for reduced monitoring due to the consistent historic lack of detection, upon approval by the Executive Officer.

If any of the monitoring results indicate that an MCL has been exceeded or coliforms are present in the monitoring wells at the CCSD groundwater injection project as a result of the use of the recycled water, the CCSD shall notify the DDW and Regional Water Board within 72 hours of receiving the results and make note

of any positive finding in the next monitoring report submitted to the Regional Water Board.

Upon an exceedance of 10 ng/L for NDMA in monitoring samples in groundwater wells RIW-1, MIW-1, SS1, SS2, SS3, 9P7, or 16D1 and within 30 days, the CCSD shall notify DDW and the Regional Water Board and begin monthly sampling of groundwater for NDMA from the well with the exceedance. Groundwater sampling may return to the frequency stated in this MRP if the average of three consecutive monthly samples is 10 ng/L or below.

Upon the approval of the Salt and Nutrient Management Plan, the Executive Officer may require additional confirmation monitoring to confirm the water quality changes predicted by the model and documented in the first annual report.

Table M-15 Groundwater Monitoring Wells

Well No.	Depth (feet)	Perforated Interval (feet below ground surface)	Well Use
RIW-1	100	50 – 95	Injection
MIW-1	95	45 – 95	Monitoring
SS1	110*	30 -105	Water Supply
SS2	80*	30 – 75	Water Supply
SS3	110*	30 -105	Water Supply
9P7	ND**	ND	Influent Supply
16D1	ND	ND	Monitoring

*Estimated depths, **ND = no data

Table M-16: Groundwater Monitoring

Constituents/Parameters	Units	Type of Sample	Minimum Frequency of Analysis	Reference Table Number
Water level elevation[16]	feet	---	Quarterly	M-16
Chlorine residual	mg/L	Grab	Quarterly	M-16
Chloride	mg/L	Grab	Quarterly	M-16
Nitrate-N	mg/L	Grab	Quarterly	M-16
Nitrite-N	mg/L	Grab	Quarterly	M-16
Nitrate plus Nitrite	mg/L	Grab	Quarterly	M-16
pH	pH units	Grab	Quarterly	M-16
Sodium	mg/L	Grab	Quarterly	M-16

[16] Water level elevations shall be measured to the nearest 0.01 feet, and referenced to mean sea level.

Table M-16: Groundwater Monitoring				
Constituents/Parameters	**Units**	**Type of Sample**	**Minimum Frequency of Analysis**	**Reference Table Number**
Sulfate	mg/L	Grab	Quarterly	M-16
TOC	mg/L	Grab	Quarterly	M-16
Total coliform	MPN/100ml	Grab	Quarterly	M-16
BOD_5 20°C	mg/L	Grab	Semiannually	M-16
Oil and grease	mg/L	Grab	Quarterly	M-16
Total nitrogen	mg/L	Grab	Quarterly	M-16
Total Suspended Solids	mg/L	Grab	Semiannually	M-16
Turbidity	NTU	Grab	Quarterly	M-16
Inorganics with primary MCLs	µg/L	Grab	Monthly	M-17
Constituents/parameters with secondary MCLs	---	Grab	Quarterly	M-17
Fluoride	µg/L	Grab	Quarterly	M-17
Radioactivity	pci/L	Grab	Monthly	M-17
Regulated organics	µg/L	Grab	Semiannually	M-17
Disinfection byproducts (DBPs)	µg/L	Grab	Quarterly	M-17
General physical		Grab	Monthly	M-17
General minerals	µg/L	Grab	Monthly	M-17
Chemicals with NLs	µg/L	Grab	Quarterly or Annually	M-17
N-Nitrosopyrrolidine	µg/L	Grab	Annually	M-17
Remaining priority pollutants	µg/L	Grab	Annually	M-17

Table M-17: Monitoring Frequency							
Constituent	**RIW-1**	**MIW-1**	**SS1**	**SS2**	**SS3**	**9P7**	**16D1**
Total Suspended Solids (TSS)	Qtrly	Qtrly	Qtrly	Qtrly	Qtrly	Qtrly	Qtrly
Turbidity	Qtrly	Qtrly	Qtrly	Qtrly	Qtrly	Qtrly	Qtrly
Radioactivity							
Gross Alpha Particle Activity (including Radium-226 but excluding radon and uranium)	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
Gross Beta Particle Activity	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
Radium-226	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
Radium-226 & Radium-228 (Combined)	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
Radium-228	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
Strontium-90	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
Tritium	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

Table M-17: Monitoring Frequency							
Uranium	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
Organic Chemicals							
(a) Volatile Organic Chemicals							
1,1,1-Trichloroethane	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
1,1,2,2-Tetrachloroethane	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
1,1,2-Trichloro-1,2,2-Trifluoroethane	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
1,1,2-Trichloroethane	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
1,1-Dichloroethane	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
1,1-Dichloroethene (1,1 DCE)	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
1,2,4-Trichlorobenzene	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
1,2-Dichlorobenzene	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
1,2-Dichloroethane (1,2 DCA)	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
1,2-Dichloropropane	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
1,3-Dichloropropene	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
1,4-Dichlorobenzene	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
Benzene	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
Carbon Tetrachloride (CTC)	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
cis-1,2-Dichloroethylene	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
Dichloromethane	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
Ethylbenzene	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
Methyl-tert-butyl-ether (MTBE)	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
Monochlorobenzene	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
Styrene	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
Tetrachloroethylene (PCE)	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
Toluene	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
trans-1,2-Dichloroethylene	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
Trichloroethylene (TCE)	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
Trichlorofluoro-methane	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
Vinyl Chloride	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
Xylenes (m, p)	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
(b) non-volatile synthetic organic chemical							
1,2-Dibromo-3-Chloropropane (DBCP)	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
2,3,7,8-TCDD (Dioxin)	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
2,4,5-TP (Silvex)	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual

Table M-17: Monitoring Frequency							
2,4-Dichlorophenoxyacetic acid (2,4-D)	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Alachlor	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Atrazine	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Bentazon	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Benzo (a) pyrene	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Carbofuran	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Chlordane	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Dalapon	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Di (2-ethylhexyl) adipate	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Di (2-ethylhexyl) phthalate	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Annual
Dinoseb	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Diquat	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Endothal	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Endrin	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Ethylene Dibromide (EDB)	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Glyphosate	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Heptachlor	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Heptachlor Epoxide	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Hexachlorobenzene	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Hexachlorocyclo-pentadiene	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Lindane (Gamma BHC)	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Methoxychlor	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Molinate	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Oxamyl	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
PCB 1016	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual

Table M-17: Monitoring Frequency							
PCB 1221	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
PCB 1232	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
PCB 1242	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
PCB 1248	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
PCB 1254	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
PCB 1260	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Pentachlorophenol	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Annual
Picloram	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Simazine	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Thiobencarb	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Toxaphene	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Disinfection Byproducts							
Bromate	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Bromodichloro-methane	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Bromoform	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Chlorite	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Chloroform	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Dibromoacetic Acid	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Dibromochloro-methane	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Dichloroacetic Acid	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Haloacetic Acid (Five) (HAA5)	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Monobromoacetic Acid	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Monochloroacetic Acid	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Total Trihalomethanes	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Trichloroacetic Acid	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual

Table M-17: Monitoring Frequency							
Chemicals with Notification Levels							
1,2,3-Trichloropropane (1,2,3 TCP)	Annual	Annual	Annual	Annual	Annual	Annual	Annual
1,2,4-Trimethylbenzene	Annual	Annual	Annual	Annual	Annual	Annual	Annual
1,3,5-Trimethylbenzene	Annual	Annual	Annual	Annual	Annual	Annual	Annual
1,4-Dioxane	Annual	Annual	Annual	Annual	Annual	Annual	Annual
2-Chlorotoluene	Annual	Annual	Annual	Annual	Annual	Annual	Annual
2,4,6-Trinitrotoluene (TNT)	Annual	Annual	Annual	Annual	Annual	Annual	Annual
4-Chlorotoluene	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Boron	Qtrly	Qtrly	Qtrly	Qtrly	Qtrly	Qtrly	Qtrly
Carbon Disulfide	Annual	Annual	Annual	Annual	Annual	Semi Annual	Annual
Chlorate	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Diazinon	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Dichlorodifluoro-methane (Freon 12)	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Ethylene Glycol	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Formaldehyde	Annual	Annual	Annual	Annual	Annual	Annual	Annual
HMX	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Isopropylbenzene	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Manganese	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual	Semi Annual
Methyl-isobutyl-keytone (MIBK)	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Naphthalene	Annual	Annual	Annual	Annual	Annual	Annual	Annual
n-Butylbenzene	Annual	Annual	Annual	Annual	Annual	Annual	Annual
n-Nitrosodiethyl-amine (NDEA)	Annual	Annual	Annual	Annual	Annual	Annual	Annual
n-Nitrosodimethylamine (NDMA)	Qtrly	Qtrly	Qtrly	Qtrly	Qtrly	Qtrly	Qtrly
n-Nitrosodi-n-propylamine (NDPA)	Annual	Annual	Annual	Annual	Annual	Annual	Annual
n-Propylbenzene	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Propachlor	Annual	Annual	Annual	Annual	Annual	Annual	Annual
RDX	Annual	Annual	Annual	Annual	Annual	Annual	Annual
sec-Butlybenzene	Annual	Annual	Annual	Annual	Annual	Annual	Annual
tert-Butylbenzene	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Tertiary-butyl-alcohol (TBA)	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Vanadium	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Remaining Priority Pollutants							
Pesticides							
4,4,4'-DDD	Annual	Annual	Annual	Annual	Annual	Annual	Annual

Table M-17: Monitoring Frequency							
4,4,4'-DDE	Annual	Annual	Annual	Annual	Annual	Annual	Annual
4,4,4-DDT	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Aldrin	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Alpha BHC	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Alpha Endosulfan	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Beta BHC	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Beta Endosulfan	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Chromium III	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Chromium VI	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Delta BHC	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Dieldrin	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Endosulfan Sulfate	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Endrin Aldehyde	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Acid Extractables							
2,4,6-Trichlorophenol	Annual	Annual	Annual	Annual	Annual	Annual	Annual
2,4-Dichlorophenol	Annual	Annual	Annual	Annual	Annual	Annual	Annual
2,4-Dimethylphenol	Annual	Annual	Annual	Annual	Annual	Annual	Annual
2,4-Dinitrophenol	Annual	Annual	Annual	Annual	Annual	Annual	Annual
2-Chlorophenol	Annual	Annual	Annual	Annual	Annual	Annual	Annual
2-Nitrophenol	Annual	Annual	Annual	Annual	Annual	Annual	Annual
4,6-Dinitro-o-Cresol (2-Methly-4,6-Dinitrophenol)	Annual	Annual	Annual	Annual	Annual	Annual	Annual
4-Nitrophenol	Annual	Annual	Annual	Annual	Annual	Annual	Annual
p-Chloro-m-Cresol (3-Methyl-4-Chlorophenol)	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Phenol	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Base/Neutral Extractables							
1,12-Benzoperylene ((Benzo(g,h,i)-perylene))	Annual	Annual	Annual	Annual	Annual	Annual	Annual
1,2,5,6-Dibenzanthracene ((Dibenzo(a,h) anthracene))	Annual	Annual	Annual	Annual	Annual	Annual	Annual
1,2-Diphenylhydrazine	Annual	Annual	Annual	Annual	Annual	Annual	Annual
1,3-Dichlorobenzene	Annual	Annual	Annual	Annual	Annual	Annual	Annual
2,4-Dinitrotoluene	Annual	Annual	Annual	Annual	Annual	Annual	Annual
2,6-Dinitrotoluene	Annual	Annual	Annual	Annual	Annual	Annual	Annual
2-Chloronaphthalene	Annual	Annual	Annual	Annual	Annual	Annual	Annual
3,3'-Dichlorobenzidine	Annual	Annual	Annual	Annual	Annual	Annual	Annual
4-Bromophenyl phenyl ether	Annual	Annual	Annual	Annual	Annual	Annual	Annual
4-Chlorophenyl phenyl ether	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Acenaphthene	Annual	Annual	Annual	Annual	Annual	Annual	Annual

Table M-17: Monitoring Frequency							
Acenaphthylene	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Anthracene	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Benzidine	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Benzo(a)anthracene	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Benzo(b)fluoranthene	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Benzo(k)fluoranthene	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Bis(2-chloroethoxyl)-methane	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Bis(2-chloroethyl)ether	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Bis(2-chloroisopropyl)ether	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Butyl benzyl phthalate	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Chrysene	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Di(2-ethylhexyl) phthlate	Annual	Annual	Annual	Annual	Annual	Annual	Semi-annual
Dimethyl phthalate	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Di-n-butyl phthalate	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Di-n-octyl phthalate	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Fluoranthene	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Fluorene	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Hexachlorobutadiene	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Hexachloroethane	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Indeno(1,2,3-cd) pyrene	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Isophorone	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Nitrobenzene	Annual	Annual	Annual	Annual	Annual	Annual	Annual
n-Nitrosodi-n-propylamine	Annual	Annual	Annual	Annual	Annual	Annual	Annual
n-Nitrosodiphenylamine	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Phenanthrene	Annual	Annual	Annual	Annual	Annual	Annual	Semi-Annual
Pyrene	Annual	Annual	Annual	Annual	Annual	Annual	Annual
Volatile Organics							
1,1-Dichloroethylene	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
2-Chloroethyl vinyl ether	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
Acrolein	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
Acrylonitrile	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
Chlorobenzene	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
Chloroethane	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
Methyl bromide	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
Methyl chloride	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

Table M-18: General Physical and General Minerals		
Constituents		
Asbestos	Potassium	Foaming Agents
Calcium	Sodium	Odor
Chloride	Sulfate	Specific Conductance
Copper	Zinc	Total Dissolved Solids
Iron	Color	Total Hardness
Manganese	Corrosivity	

V. CERTIFICATION STATEMENT

Each report shall contain the following declaration[17]:

"I certify under penalty of law that this document, including all attachments and supplemental information, was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated 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 a find and imprisonment.

Executed on the _____day of _____at _____

_____ (Signature)

_____ (Title)"

VI. OTHER MONITORING REQUIREMENTS

"§60320.201. Advanced Treatment Criteria."

(i) Each month a project sponsor shall collect samples (grab or composite) representative of the effluent of the advanced treatment process and have the samples analyzed for contaminants having MCLs and notification levels (NLs). After 12 consecutive months with no results exceeding an MCL or NL, a project sponsor may apply for a reduced monitoring frequency. The reduced monitoring frequency shall be no less than quarterly. Monitoring conducted pursuant to this subsection may be used in lieu of the monitoring (for the same contaminants) required pursuant to sections 60320.212 and 60320.220. The first sample of the effluent needs to be collected in the first five days of operation of the AWTP.

[17] The CCSD shall submit written documentation identifying the responsible party who certifies the perjury document.

The list of parameters and monitoring frequencies may be adjusted by the Executive Officer if the CCSD makes a request and the Executive Officer determines that the modification is adequately supported by statistical trends of monitoring data submitted.

VII. CERTIFICATION

Ordered by _____
Executive Officer

Date _____