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California Regional Water Quality Control Board San Diego Region



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July 21, 2010

Mr. Philip Dauben
Ramona Municipal Water District
105 Earlham Street
Ramona, CA 92065

In reply refer to:
255468:chenning

Dear Mr. Dauben:

**SUBJECT: TENTATIVE ADDENDUM NO. 1 TO ORDER NO. R9-2009-0005: AN
ADDENDUM TO INCORPORATE REQUIREMENTS FOR THE
DISCHARGE OF BRINE AND TO CLARIFY EXISTING
REQUIREMENTS**

The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) is scheduled to consider adoption of tentative Addendum No. 1 to Order No. R9-2009-0005 at its meeting on September 8, 2010. A copy of the tentative Addendum is available online at:

http://www.waterboards.ca.gov/sandiego/board_decisions/tentative_orders/.

The tentative Addendum, if adopted, will prescribe waste discharge requirements (WDRs) for the discharge of brine to evaporation ponds and clarify existing WDRs. The tentative Addendum will be considered for adoption by the San Diego Water Board at their scheduled meeting on Wednesday, September 8, 2010. The meeting will begin promptly at 9:00 AM and will be held at the following location:

California Regional Water Quality Control Board, San Diego Region
Regional Board Meeting Room
9174 Sky Park Court, Suite 100
San Diego, California 92123

If you wish to provide comments on the tentative Addendum, the final deadline for submittal of written comments is 5:00 p.m. on August 23, 2010. Per San Diego Water Board direction, written material submitted to the San Diego Water Board office after the submittal deadline date will not be provided to the San Diego Water Board members. Also, it is not likely that written material will be accepted by the San Diego Water Board members on the day of the meeting.

California Environmental Protection Agency

In the subject line of any response, please include the requested "in reply refer to:" information located in the heading of this letter. If you have any questions regarding the above, please contact Ms. Cathryn Henning at (858) 636-3161 or chenning@waterboards.ca.gov.

Sincerely,



JAMES G. SMITH
Assistant Executive Officer

JGS;jac:rwm:clh

Enclosures: Interested Parties Mailing List
Tentative Addendum No. 1 Order No. R9-2009-0005
Information Sheet

cc (w/out enclosure): Interested Parties

Interested Parties Mailing List

Mr. Cecil Rehr
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Mr. Sean Sterchi
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Mr. Chris Anderson
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Mr. Al Shami
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Mr. and Mrs. Witman
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Ramona, CA 92065

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

TENTATIVE ADDENDUM NO.1 TO ORDER NO. R9-2009-0005

**AN ADDENDUM TO INCORPORATE REQUIREMENTS FOR THE DISCHARGE OF
BRINE AND TO CLARIFY EXISTING REQUIREMENTS**

**RAMONA MUNICIPAL WATER DISTRICT
SAN VICENTE WASTEWATER TREATMENT PLANT
SAN DIEGO COUNTY**

The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) finds that:

Background

1. Order No. R9-2009-0005 prescribes waste discharge requirements to the Ramona Municipal Water District (Recycled Water Agency) for the treatment and disposal of 0.8 million gallons per day (mgd) of disinfected secondary recycled water at the San Vicente Wastewater Treatment Plant (SVWTP) for irrigation of groves, and disinfected tertiary recycled water for landscape irrigation.
2. The treatment processes at the SVWTP include a reverse osmosis (RO) system, which was installed in 2009 to lower concentrations of total dissolved solids (TDS) in tertiary recycled water.

Findings Pertaining to Proposed Brine Evaporation Pond

3. On November 18, 2009, the Recycled Water Agency submitted an incomplete Report of Waste Discharge (ROWD) for the disposal of RO concentrate (brine) to evaporation ponds at the SVWTP. The Recycled Water Agency submitted additional information on January 20, 2010 completing the ROWD.
4. The project as described in the ROWD includes the construction of a 2.3 acre evaporation pond that will receive approximately 16,000 gallons of brine daily from the SVWTP RO system. The pond will have a containment system consisting of a liner system, and a leachate collection and removal system as described in Finding No. 6 below.
5. The discharge of brine to the Recycled Water Agency's proposed evaporation pond qualifies for an exemption to the California Code of Regulations (CCR) Title 27 (pursuant to CCR Title 27, section 20090) because 1) this Order prescribes

- waste discharge requirements for the discharge, 2) the discharge complies with the *Water Quality Control Plan for the San Diego Basin (9)*, and 3) the discharge does not need to be managed as a hazardous waste. The requirements for class II surface impoundments contained in CCR Title 27 are, in part, applicable to the Recycled Water Agency's proposed evaporation pond to ensure the construction and maintenance of the evaporation pond will not impact ground and surface waters.
6. As a containment structure, the construction of a liner system, and a leachate collection and removal system (LCRS) is reasonable and appropriate for the protection of water quality.
 - a. **LINER SYSTEM.** The ROWD proposes the following design for the evaporation pond liner system at the SWWTP:
 - i. Minimum 4-inch thick gunite layer (primary layer), with finish surface
 - ii. Minimum 4-inch thick sand layer (drainage layer)
 - iii. 20-mil high-density polyethylene geomembrane (containment layer)
 - b. **LEACHATE COLLECTION AND RECOVERY SYSTEM.** The drainage layer, containment layer, and observation ports function as the LCRS. The LCRS is designed to effectively convey all leachate to the observation ports for detection, collection, and removal of leaked waste constituents at the earliest practicable time.
 7. The Recycled Water Agency proposes to maintain six inches of freeboard in the evaporation pond. This minimum freeboard is reasonable and appropriate for the protection of water quality because 1) each section of the pond is designed to gravity flow to the downgradient section, 2) the pond is required to be operated and maintained in accordance with a water balance plan, and 3) the Recycled Water Agency will utilize a submersible pump to serve as a fail safe mechanism to prevent overflow from the pond. In addition, the Recycled Water Agency has viable alternative methods of disposal for the brine.

Findings Pertaining to Modifications to Existing Requirements

8. The monitoring frequency for heavy metals established in Monitoring and Reporting Program No. R9-2009-0005 should be amended to specify more frequent monitoring of heavy metals if test results from the routine monitoring indicate the metal concentrations in the discharge could pose a threat to receiving water quality. Subsequently, annual average discharge specifications for heavy metals need to be replaced with instantaneous maximum discharge specifications due to the potential immediate threat heavy metals pose.

9. The wording in Section C, Effluent Monitoring of Monitoring and Reporting Program No. R9-2009-0005 should be amended to identify the criteria for determining compliance with the Discharge Specifications.
10. The requirement for potable water supply data in Section E, Potable Supply Water of Monitoring and Reporting Program No. R9-2009-0005 should be amended to specify frequency of reporting potable water supply data.
11. The reporting frequency for bacteriological results should be amended to comply with the CCR Title 22 section 60329, which requires monthly reporting of operating records including all analyses specified in the reclamation criteria; records of operational problems, plant and equipment breakdowns, and diversions to emergency storage or disposal; and all corrective or preventive action taken.

California Environmental Quality Act

12. Adoption of portions of this addendum pertaining to revisions to Order No. R9-2009-0005 constitutes the permitting of an existing facility and as such is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, section 21000 et seq.) in accordance with CCR Title 14, section 15301. The Ramona Municipal Water District approved a mitigated negative declaration on October 27, 2009 for the construction of evaporation ponds in accordance with the California Environmental Quality Act.

Findings Pertaining to Public Participation

13. The San Diego Water Board has notified the Recycled Water Agency and all known interested persons of the intent to prescribe an addendum to Order No. R9-2009-0005.
14. The San Diego Water Board in a public meeting has heard and considered all comments pertaining to Addendum No. 1 to Order No. R9-2009-0005.

IT IS HEREBY ORDERED THAT:

- I. Order No. R9-2009-0005 is modified as follows:
 - A. Section H, Evaporation Pond Facility and Design Specifications, is added to Order No. R9-2009-0005. Section H states:

1. **Disposal Location.** Unless otherwise authorized by the San Diego Water Board, the discharge of brine shall either 1) be confined to the evaporation pond, which is underlain by the liner system prescribed by Evaporation Pond Facility and Design Specification H.7, or 2) be stored in the Recycled Water Agency's previous brine storage pond for daily removal to a waste management unit authorized to accept brine.

2. **Groundwater Separation.** The Recycled Water Agency shall maintain at least five feet of vertical separation between the groundwater and waste material at all times.

3. **Operation and Maintenance.** The Recycled Water Agency shall implement the following measures to ensure proper operation and maintenance of the evaporation pond:
 - a. Discharge only brine to the evaporation pond.
 - b. Maintain a minimum of six inches of freeboard in each section of the evaporation pond at all times.
 - c. Update the Operations Manual for the SWWTP to account for the requirements contained in this addendum. The Operations Manual shall contain a water balance plan for the evaporation pond that provides operation levels and waste input quantities permitted each month based on anticipated precipitation, past precipitation, and evaporation.
 - d. Inspect the evaporation pond at least once daily and maintain logs onsite.
 - e. Remove solids buildup sufficiently by **October 31st** of each year to provide adequate storage capacity prior to the anticipated rainy season.

4. **Precipitation and Drainage Control Specifications.** The Recycled Water Agency shall implement the following measures to control surface drainage in the vicinity of the evaporation pond:
 - a. Implement any necessary erosion control measures, and complete any necessary construction, maintenance, or repairs of precipitation and drainage control facilities annually, prior to the anticipated rainy season but no later than **October 31**. This specification shall not preclude the Recycled Water Agency from

- performing maintenance and repairs necessitated by changing site conditions at any time.
- b. Divert surface drainage upgradient of the evaporation from the pond via the precipitation and drainage control facilities.
 - c. Construct and maintain precipitation and drainage controls to effectively divert sheet flow runoff laterally, or via the shortest distance, into the drainage and collection facilities.
 - d. Prevent the accumulation of surface water (*i.e.*, ponding) or groundwater to cause or contribute to adverse impacts upon the integrity or performance of the evaporation pond's foundation; liner system; or the structures which control leachate, surface water drainage, or erosion.
 - e. Contain all precipitation not diverted by covers or drainage control systems within the evaporation pond.
5. **Leachate Collection and Removal Specifications.** The Recycled Water Agency shall implement the following measures to properly construct and manage the LCRS:
- a. Perform annual testing of the LCRS to demonstrate proper operation of the LCRS. The demonstration must include evidence that the LCRS functions without clogging and discussion of how the results compare with earlier tests made under comparable conditions.
 - b. Return all leachate accumulated in the observation ports to either a non-leaking section of the evaporation pond, to the headworks of the treatment plant, or to an offsite liquid waste management facility.
 - c. Keep the depth of fluid in any observation port at the minimum depth necessary to ensure efficient pump operation in order to prevent the buildup of hydraulic head on the liner.
6. **Construction Specifications.** The Recycled Water Agency shall implement the following measures to construct the evaporation pond:
- a. All diversion and drainage facilities shall be designed, constructed, and maintained to take into account the design capacity of the drainage systems of downstream and adjacent

properties by providing for the gradual release of retained water downstream in a manner that does not exceed the expected peak flow rate at the point of discharge as if the evaporation pond were not constructed.

- b. Use materials for construction of the liner that have appropriate physical and chemical properties to ensure containment of discharged wastes over the operating life of the evaporation pond.
 - c. Design and construct the evaporation pond, including the foundation, final slopes, and containment systems, to withstand the maximum credible earthquake (MCE) without damage to the foundation, waste containment structures, or to the structures which control leachate, surface drainage, or erosion.
 - d. Design, construct, and maintain all containment structures so they are capable of containing wastes, waste constituents, and degradation products of wastes so as to prevent degradation of waters of the state, as a result of discharging waste into the evaporation pond.
 - e. Design and construct the evaporation pond with a foundation or base capable of providing support for the structures and capable of withstanding hydraulic pressure gradients to prevent failure or settlement, compression, or uplift, and all effects of ground motions resulting from the MCE as certified by either a licensed civil engineer or a certified engineering geologist.
7. **Liner Specifications.** The Recycled Water Agency shall implement the following measures to properly construct and manage the liner:
- a. Design and construct the cutoff walls and grout curtains to provide a hydraulic conductivity of at least 1×10^{-6} centimeters per second.
 - b. Roll the subgrade (compacted fill material) to a smooth and level surface. The surface of the subgrade shall be free of stones greater than 0.5-inch in diameter, organics, and other deleterious material.
 - c. Use the components identified in Finding 6.a for the evaporation pond and install the gunite layer in a manner that ensures complete long-term coverage. The gunite layer shall provide complete coverage on the surface of the underlying liner system component.

- d. Cover all natural geologic materials that are likely to be in contact with waste (including leachate) with the required liner system.
8. **Certification Report.** The evaporation pond shall be completely constructed and operable prior to the initiation of the discharge. A report from the design engineer certifying the adequacy of each component of the evaporation pond shall be submitted by the Recycled Water Agency prior to commencement of the discharge. The design engineer shall affix his or her signature and engineering license number to the certification report. Prior to initiation of the discharge, the following requirements shall be met:
- a. The certification report is received by the San Diego Water Board,
 - b. An adequately revised Operation Manual, required under Evaporation Pond Facility and Design Specification H.3.c, is received by the San Diego Water Board.
 - b. The San Diego Water Board has been notified of the completion of facilities by the Recycled Water Agency,
 - c. An inspection of the facilities has been made by the San Diego Water Board, and
 - d. The San Diego Water Board notifies the Recycled Water Agency by letter that discharge can be initiated.
- B. Table 3, *Discharge Specifications Based on Groundwater Water Quality Objectives* of Section B. 3 of Order No. R9-2009-0005 is replaced with the following table:

Table 3. Effluent Discharge Specifications

Constituent	Units	Discharge Specification	
		Instantaneous Maximum	Annual Average ^a
TDS	mg/L	-	550
Chloride	mg/L	-	145
Sulfate	mg/L	-	140
MBAS	mg/L	-	0.9
Color	Color Units	-	13
Percent Sodium	%	-	55
Iron	mg/L	-	0.3
Fluoride	mg/L	-	0.9
Manganese	mg/L	-	0.06
Boron	mg/L	-	0.7
Aluminum	mg/L	1.0	-
Arsenic	mg/L	0.010	-
Antimony	mg/L	0.006	-
Asbestos	million fibers per liter	7	-
Barium	mg/L	1.0	-
Beryllium	mg/L	0.004	-
Cadmium	mg/L	0.0005	-
Cyanide	mg/L	0.2	-
Mercury	mg/L	0.002	-
Nickel	mg/L	0.1	-
Perchlorate	mg/L	0.006	-
Selenium	mg/L	0.05	-
Thallium	mg/L	0.002	-

a. Compliance with the discharge specifications shall be determined by the amount and quality of the multiple streams that are blended together to produce secondary and tertiary treated recycled water. Equations and sampling points are identified in Monitoring and Reporting Program No. R9-2009-0005. Annual averages shall be calculated once per calendar year in the annual reports.

II. Monitoring and Reporting Program No. R9-2009-0005 is modified as follows:

A. Section J, *Evaporation Pond Monitoring Requirements* is added to Monitoring and Reporting Program No. R9-2009-0005. Section J states:

1. **Reporting Requirements.** Evaporation pond reporting shall consist of the following reports required to be submitted to the San Diego Water Board:

- a. Quarterly Reports. The quarterly reports shall be submitted in accordance with Section I, Reporting Schedule and contain the following information:
 - (1) Monthly records of the volume of brine discharged to each section and the total volume of brine discharged to the pond.
 - (2) A summary of observations of the pond. The Recycled Water Agency shall observe each pond daily, determine each section's freeboard, and enter observations into a permanent log. The log shall be made available to the San Diego Water Board upon request.
 - (3) A map of all monitoring points.
 - (4) LCRS observations and monitoring results.
 - b. Annual Reports. The annual reports shall be submitted in accordance with Section I, Reporting Schedule and contain the following information:
 - (1) Documentation of measures taken to comply with Evaporation Pond Facility and Design Specification 4.a regarding surface and drainage controls.
 - (2) Results of the annual LCRS testing to comply with Evaporation Pond Facility and Design Specification 5.a.
 - (3) Data graphs for each monitoring point monitored.
2. **LCRS Monitoring.** Monitoring of the LCRS shall consist of the following components:
- a. The presence and level of any liquid in each LCRS observation port and any volume of liquid pumped from the LCRS back to the pond shall be monitored and recorded each week. The Recycled Water Agency shall evaluate any amount of liquid in the observation port and any amount pumped to the pond from the LCRS to determine if the liquid is condensate or if the liquid indicates leakage from the primary layer of the liner system. The Recycled Water Agency shall conduct weekly analyses of the liquid in the LCRS and the pond for specific conductance, measured in micromhos/centimeter.
 - b. The observation ports above the HDPE containment liner shall be monitored for significant increases in specific conductance levels in

the LCRS sump liquid and for significant increases in volume of liquid pumped from the LCRS. If either the Recycled Water Agency or the San Diego Water Board determines that there is significant physical evidence of leakage through the primary layer of the liner system and into the LCRS observation port, the Recycled Water Agency shall perform the following steps:

- i. Pump out all liquid from the LCRS observation port.
 - ii. Inspect the LCRS observation port daily for a period of seven consecutive days for evidence of additional liquid. If no additional liquid has accumulated in the LCRS sump within the seven-day period, the Recycled Water Agency can return to the weekly inspection program.
 - iii. If liquid has accumulated in the LCRS sump within the seven day period, then the Recycled Water Agency shall immediately notify the San Diego Water Board of this fact and shall submit a corrective action proposal and an implementation schedule within thirty days.
 - iv. The Recycled Water Agency shall take corrective action according to the schedule in the corrective action proposal.
- c. The observation ports below the HDPE containment liner shall be monitored for significant increases in specific conductance levels in the LCRS sump liquid. A significant increase in specific conductance of the LCRS sump liquid indicates the final containment layer of the brine pond has been compromised. The Recycled Water Agency shall, therefore, immediately notify the San Diego Water Board of this fact and shall submit a corrective action proposal and an implementation schedule within thirty days. The Recycled Water Agency shall take corrective action according to the schedule in the corrective action proposal.

B. Section C, Effluent Monitoring, of Monitoring and Reporting Program No R9-2009-0005 is replaced with the following text:

1. Monitoring and Reporting for Flow Rate and Determining Compliance with Prohibition A.4.
 - a. Secondary and tertiary flow rates shall be monitored continuously and reported quarterly. Flow may be calculated based on continuous flow measurements at locations within the SWWTP.

- b. Compliance with Prohibition A.4 of Order No. R9-2009-0005 shall be determined by comparing the arithmetic mean of daily flow rates during any thirty-day period with the 0.08 million gallons per day (mgd) prohibition.

2. Monitoring, Reporting, and Determining Compliance with California Code of Regulations Tertiary Recycled Water Standards.

- a. Samples of tertiary recycled water discharged from the SWWTP shall be collected at a point downstream of the disinfection process and prior to any dilution in accordance with the following table:

Table 1. Tertiary Recycled Water Monitoring and Reporting

Constituent	Units ^a	Type of Sample	Sampling Frequency ^b	Reporting Frequency ^b
Turbidity ^c	NTU	Continuous	Continuous	Monthly
Chlorine Contact Time (CT) ^d	mg-min/L	Calculated	Continuous	Monthly
Total Chlorine Residual ^e	mg/L	Continuous	Continuous	Monthly
Total Coliform Bacteria ^f	MPN/100mL	Grab	Daily	Monthly

- a. NTU=nephelometric turbidity units; mg-min/L=milligram minutes per liter; mg/L=milligrams per liter; MPN/100mL=most probable number per one hundred milliliters.
- b. Daily is defined as a 24-hour period. Monthly is defined as a calendar month.
- c. Turbidity analyses shall be monitored continuously using a continuous monitoring and recording turbidimeter. Compliance with the daily average operating filter effluent turbidity limit of 2 NTU shall be determined using the levels of recorded turbidity levels at a minimum of four-hour intervals over a 24-hour period. Compliance with the turbidity standard of not exceeding 5 NTU more than 5 percent of the time over a 24-hour period shall be determined using the levels of recorded turbidity taken at intervals of no more than 1.2 hours over a 24-hour period. Should the continuous turbidimeter and/or recorder fail, grab sampling at a minimum frequency of 1.2 hours may be substituted for a period of up to 24 hours. Monthly, the Recycled Water Agency shall report results of four-hour turbidity readings, average effluent turbidity (24 hours), 95 percentile effluent turbidity (24 hours), and daily maximum turbidity readings. Continuous turbidity monitoring must also be provided prior to filtration to ensure adequate process control and to automatically actuate coagulant feed when the turbidity of the secondarily treated effluent is greater than 10 NTU.
- d. Calculated CT (chlorine concentration multiplied by modal contact time) values shall be determined and recorded continuously. The daily minimum CT value shall be reported monthly. The Recycled Water Agency shall report monthly the date, value, time, and duration when the CT value falls below 450 mg-min/L, and/or the modal contact time falls below 90 minutes.
- e. Chlorine concentrations shall be recorded by a continuous recording meter at a location in the pipeline where the effluent has experienced 90 minutes or more of modal contact time at maximum flow. Minimum daily chlorine residual shall be reported monthly.
- f. A representative sample of recycled water for total coliform bacteria shall be collected within 24 hours of plant start-up (and at a time when wastewater characteristics are most demanding on the treatment facilities and disinfection procedures).

- b. Compliance with Discharge Specification B.1.a of Order No. R9-2009-0005 shall be determined by, 1) comparing the arithmetic median bacteriological results of any seven-day period with the 2.2 MPN per 100mL discharge specification; 2) ensuring no more than one sample in any thirty-day period exceeds the 23 MPN per

100mL discharge specification; and 3) ensuring no sample exceeds the 240 MPN per 100mL discharge specification.

- c. Compliance with Discharge Specification B.1.b of Order No. R9-2009-0005 shall be determined by comparing the minimum reported CT value and modal contact time with the 450 mg-min/L and 90 minutes discharge specifications, respectively.
 - d. Compliance with Discharge Specification B.1.c of Order No. R9-2009-0005 shall be determined by 1) comparing the daily average turbidity to the 2 NTU discharge specification, and 2) checking that if effluent turbidity exceeds 2 NTU, then the effluent turbidity never exceeded 10 NTU and did not exceed 5 NTU for more than fifteen minutes.
3. Monitoring, Reporting, and Determining Compliance with California Code of Regulations Secondary Recycled Water Standards.
- a. Samples of secondary recycled water discharged from the SWWTP shall be collected at a point downstream of the disinfection process and prior to any dilution in accordance with the following table:

Table 2. Secondary Recycled Water Monitoring and Reporting

Constituent	Units	Type of Sample	Sampling Frequency ^a	Reporting Frequency ^a
Total Coliform Bacteria ^b	MPN/100mL	Grab	Daily	Monthly

- a. Daily is defined as a 24-hour period. Monthly is defined as a calendar month.
 - b. A representative sample of recycled water for total coliform bacteria shall be collected within 24-hours of plant start-up (and at a time when wastewater characteristics are most demanding on the treatment facilities and disinfection procedures).
- b. Compliance with Discharge Specification B.2 of Order No. R9-2009-0005 will be determined by 1) comparing the arithmetic median bacteriological results of any seven-day period with the 2.2 MPN per 100mL discharge specification, and 2) ensuring that no more than one sample in any thirty-day period exceeds the 23 MPN per 100mL discharge specification.
4. Monitoring, Reporting, and Determining Compliance with Secondary Treatment Standards
- a. A sample of either secondary or tertiary treated recycled water discharged from the SWWTP shall be collected at a point downstream of the secondary treatment processes and prior to discharge to the storage ponds in accordance with the following table:

Table 3. Secondary Treatment Monitoring and Reporting

Constituent	Units	Type of Sample	Sampling Frequency ^{a,b}	Reporting Frequency ^{a,b}
pH	pH Units	Grab	Weekly	Quarterly
Biochemical Oxygen Demand (BOD ₅ @20°C)	mg/L	Composite	Weekly	Quarterly
Volatile Suspended Solids	mg/L	Composite	Weekly	Quarterly
Total Suspended Solids	mg/L	Composite	Weekly	Quarterly

a. The Recycled Water Agency shall increase the sampling frequency from weekly to daily for any noted constituent that exceeds the limit specified by Discharge Specifications B.3 of Order No. R9-2009-0005. The increased frequency of monitoring shall continue until the Recycled Water Agency achieves compliance with the limitations for three consecutive periods. After compliance is achieved, the Recycled Water Agency shall resume sampling at the specified frequency.

b. Weekly is defined as a calendar week (Sunday through Saturday). Quarterly is defined as a period of three consecutive calendar months beginning on January 1, April 1, July 1, or October 1.

b. Compliance with Discharge Specification B.3.a of Order No. R9-2009-0005 shall be determined by 1) calculating the arithmetic mean of all samples collected during a period of seven consecutive days with their respective seven-day average discharge specification, 2) calculating the arithmetic mean of all samples collected during any calendar month with their respective thirty-day average discharge specification, and 3) ensuring that pH is maintained between 6.0 and 9.0 pH units at all times.

5. Monitoring, Reporting, and Determining Compliance with Discharge Specifications based on Water Quality Objectives.

a. Samples of both secondary and tertiary recycled water discharged from the SVWTP shall be collected at a point downstream of the disinfection process and prior to any dilution in accordance with the following criteria:

Table 4. Recycled Water Monitoring and Reporting

Constituent	Units	Type of Sample	Sampling Frequency ^{a,b}	Reporting Frequency ^{a,b}
Total Dissolved Solids	mg/L	Composite	Quarterly	Quarterly
Methylene Blue Active Substances	mg/L	Composite	Quarterly	Quarterly
Color	Color Units	Composite	Quarterly	Quarterly
Percent Sodium	%	Composite	Quarterly	Quarterly
Nitrate (as NO ₃ ⁻)	mg/L	Composite	Quarterly	Quarterly
Chloride	mg/L	Composite	Quarterly	Quarterly
Sulfate	mg/L	Composite	Quarterly	Quarterly
Fluoride	mg/L	Composite	Quarterly	Quarterly
Iron	mg/L	Composite	Quarterly	Quarterly
Manganese	mg/L	Composite	Quarterly	Quarterly
Boron	mg/L	Composite	Quarterly	Quarterly

- a. The Recycled Water Agency shall increase the sampling frequency from quarterly to monthly for any noted constituent that exceeds the limit specified by Discharge Specifications B.3 of Order No. R9-2009-0005. The increased frequency of monitoring shall continue until the Recycled Water Agency achieves compliance with the limitations for three consecutive periods. After compliance is achieved, the Recycled Water Agency shall resume sampling at the specified frequency.
- b. Quarterly is defined as a period of three consecutive calendar months beginning on January 1, April 1, July 1, or October 1.

- b. Compliance with Discharge Specification B.3 of Order No. R9-2009-0005 shall be determined by calculating the twelve month average of reported quarterly blended recycled water qualities during the previous calendar year. Blended recycled water quality shall be calculated and reported by the Recycled Water Agency based on the amount and quality of secondary recycled water and the amount and quality of tertiary recycled water using the following equations:

$$Q_F = Q_S + Q_T \text{ and } C_F = \frac{C_S * Q_S + C_T * Q_T}{Q_F}$$

- 'Q' is the total flow rate of the quarter,
 'C' is the average concentration of all samples collected during the quarter,
 's' is the flow/concentration of secondary recycled water,
 'T' is the flow/concentration of tertiary recycled water, and
 'F' is the flow/concentration of the overall effluent.

6. Monitoring, Reporting, and Determining Compliance with Discharge Specifications based on Maximum Contaminant Levels.

- a. Samples of tertiary recycled water discharged from the SWWTP shall be collected at a point downstream of the disinfection process and prior to any dilution in accordance with the following criteria:

Table 5. CCR Title 22 Metals Monitoring and Reporting

Constituent	Units	Type of Sample	Sampling Frequency ^{a,b}	Reporting Frequency ^{a,b}
Aluminum	mg/L	Composite	Once every five years	Once every five years
Arsenic	mg/L	Composite	Once every five years	Once every five years
Antimony	mg/L	Composite	Once every five years	Once every five years
Asbestos	million fibers per liter	Composite	Once every five years	Once every five years
Barium	mg/L	Composite	Once every five years	Once every five years
Beryllium	mg/L	Composite	Once every five years	Once every five years
Cadmium	mg/L	Composite	Once every five years	Once every five years
Cyanide	mg/L	Composite	Once every five years	Once every five years
Mercury	mg/L	Composite	Once every five years	Once every five years
Nickel	mg/L	Composite	Once every five years	Once every five years
Perchlorate	mg/L	Composite	Once every five years	Once every five years
Selenium	mg/L	Composite	Once every five years	Once every five years
Thallium	mg/L	Composite	Once every five years	Once every five years

- a. The Recycled Water Agency shall increase the sampling frequency from once every 5 years to monthly for any noted constituent that exceeds the limit specified by Discharge Specifications B.3 of Order No. R9-2009-0005. The increased frequency of monitoring shall continue until the Recycled Water Agency achieves compliance with the limitations for three consecutive months. After compliance is achieved, the Recycled Water Agency shall resume sampling at the specified frequency.
- b. Once every five years is defined as a period of five calendar years beginning in 2010.
- b. Compliance with Discharge Specification B.3 of Order No. R9-2009-0005 shall be determined by comparing the reported values of each constituent to their respective instantaneous maximum discharge specification.
7. The Recycled Water Agency shall review the monitoring results for compliance with Order No. R9-2009-0005 and submit a statement of compliance as part of the Monitoring and Reporting Program No. R9-

2009-0005. The statement of compliance shall identify and report all violations of Discharge Specifications B.1 through B.5 of Order No. R9-2009-0005.

- C. Section E, Potable Supply Water, of Monitoring and Reporting Program No. R9-2009-0005 is replaced with the following text:

Annually, the Recycled Water Agency shall submit a summary of water quality data provided by the San Diego County Water Authority for the potable water supplied to the San Diego Country Estates.

- D. Table 3 of Section I, Report Schedule, of Monitoring and Reporting Program No. R9-2009-0005 is renumbered to Table 6 and is replaced with the following table:

Table 6. Reporting Schedule

Reporting Frequency	Report Period	Report Due
Monthly	January, February, March, April, May, June, July, August, September, October, November, December	By the 30 th of the following month
Quarterly	January – March April – June July – September October – December	April 30 th July 30 th October 30 th January 30 th
Annual	January-December	January 30 th
Every 5 Years	January-December	January 30 th

I, David W. Gibson, Executive Officer, do hereby certify the forgoing is a full, true, and correct copy of the Addendum No. 1 to Order No. R9-2009-0005 issued on September 8, 2010.

[TENTATIVE]

DAVID W. GIBSON, Executive Officer
California Regional Water Quality Control Board, San Diego Region