

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

ORDER NO. R4-2014-xxx

**AMENDMENT TO WASTE DISCHARGE AND WATER RECYCLING
REQUIREMENTS FOR THE
ALAMITOS BARRIER RECYCLED WATER PROJECT**

IN ORDER NO. R4-2005-0061 (as amended by WQ-2006-0001)

ISSUED TO

**Water Replenishment District of Southern California and
Los Angeles County Department of Public Works**

(File No. 93-076)

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

1. The Alamitos Gap Seawater Intrusion Barrier (Barrier) is designed to protect the Central Groundwater Basin and portions of the Orange County Groundwater Basin from seawater intrusion through the creation of a pressure ridge by injection of fresh water into the Barrier.
2. The Water Replenishment District of Southern California (WRD) owns and manages the Vander Lans Water Treatment Facility (Vander Lans WTF or Facility) in the City of Long Beach, and is the purveyor of recycled water produced by the Facility. Since 2005, the Facility has produced up to 3 million gallons per day (mgd) of high quality advanced-treated recycled water that is injected into the Barrier in combination with potable water pursuant to Regional Water Board Order No. R4-2005-0061, as amended by WQ-2006-0001, issued by the State Water Quality Control Board.
3. WRD and Los Angeles County DPW (collectively referred to as Project Sponsors) propose to produce up to 8 mgd of advanced treated recycled water for injection into the Barrier to replace the potable water currently used. The expansion of the Facility will include an advanced oxidation process (AOP), which augments the existing ultraviolet irradiation system with the addition of hydrogen peroxide for removal of organics and enhanced disinfection. Chemical stabilization will be optimized following AOP to prevent corrosion of the barrier distribution and injection facilities. Construction of the Vander Lans WTF expansion is underway and is scheduled for completion in August 2014.
4. On October 23, 2012, the Project Sponsors submitted a Report of Waste Discharge requesting amendment of the Waste Discharge Requirements and Water Recycling Requirements (WDRs/WRRs) to reflect the proposal to expand the Facility and increase the volume of recycled water injected into the Barrier. The Regional Water Board found the Report of Waste Discharge to be complete on November 6, 2012.

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5. On October 23, 2012, the Project Sponsors submitted an amended Title 22 Engineering Report for the expansion of the Facility to the Regional Water Board and CDPH. The Engineering Report was later revised in response to comments received from CDPH. A final version was submitted on March 29, 2013, for review by CDPH and the Regional Water Board, and was approved by CDPH on April 4, 2013. On June 26, 2013, CDPH held a public hearing to consider findings of fact regarding the planned Facility expansion and conditions to be imposed on the Project to ensure protection of public health. There were no objections voiced concerning the Project at the public hearing. CDPH submitted to the Regional Water Board the Findings of Fact and Conditions for the Project adopted by CDPH on July 12, 2013. The CDPH found that the Project will not degrade the quality of the water in the receiving aquifers as a source of domestic water supply provided that all of the conditions are met.
6. One of the CDPH conditions for the expansion is for WRD to conduct a test of the Facility's AOP system prior to startup of full-scale operations to demonstrate that it achieves specific performance requirements under full-scale operating conditions (e.g., 8 mgd). The schedule for the testing is April to August 2014. To ensure compliance with existing Order No. R4-2005-0061 and the associated Monitoring and Reporting Program (MRP) while conducting the required testing, the following modifications to the existing Order are needed:
 - a. increase the permitted flow to 8 mgd during the period of testing;
 - b. modify the recycled water pH limits during the testing period in response to chemical stabilization assessments; and
 - c. evaluate the new equipment and electrical and mechanical systems.

The quality of recycled water during testing is expected to meet all other water quality requirements set forth in the Order.

7. The source water for the test of the Facility's AOP system will be disinfected tertiary recycled water from the Long Beach WRP. The production of tertiary recycled water at the Long Beach WRP is regulated by WRR Order No. 97-07206 and WDR Order R4-2007-0047.
8. The Project Sponsors prepared an Initial Study for the proposed project to inject 100 percent recycled wastewater into the Alamitos Barrier, with WRD serving as the lead agency. Based on the Initial Study, WRD determined that the proposed project would not have a significant impact on the environment. On March 9, 2012, WRD issued a revised Notice of Intent to adopt a Negative Declaration for the proposed project. The Notice of Intent was posted on the WRD website and in the Long Beach Press Telegram, with mailings to interested parties, and circulation through the State Clearinghouse (#20120205) and the Los Angeles County Clerk's Office. The 30 day public review process ended on April 9, 2012. WRD received and responded to four comments, none of which necessitated changes in the Negative Declaration. The Negative Declaration was adopted by the WRD Board of Directors on April 20, 2012, and the project was approved by the WRD Board of Directors on May 4, 2012. The Negative Declaration was filed with the State Clearinghouse on May 7, 2012. No further comments or objections were received during the subsequent 30 days. An addendum to the Negative Declaration was approved by the WRD Board of Directors on May 14, 2013. The Project has completed the notification and review process required by CEQA.

The Regional Water Board is a responsible agency for purposes of CEQA. The Regional Water Board has considered the Initial Study, which did not identify significant environmental effects with respect to water quality due to expansion of the Facility, including the testing phase.

9. Any person aggrieved by this action may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the internet at: http://waterboards.ca.gov/public_notices/petitions/water_quality Or will be provided upon request.
10. The Regional Water Board has notified the Project Sponsors and interested agencies and persons of its intent to amend these water recycling requirements and waste discharge requirements, and has provided them with an opportunity to submit their written comments.
11. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the tentative Order amending the water recycling requirements and waste discharge requirements.

IT IS HEREBY ORDERED that Order No. R4-2005-0061, as amended by WQ-2006-0001, is hereby amended as follows:

1. On page 23 of Order No. R4-2005-0061, section III.7 is amended to read:

The pH of the product water for injection or recharge water shall be, at all times, within the range of 6.5 to 8.5 pH units, except during the AWTF expansion startup testing (per Section IV.6 of the accompanying Monitoring and Reporting Program) during which the pH of the product water shall be within the range of 6 to 9 pH units.

2. On page 25 of Order No. R4-2005-0061, section IV.1 is amended to read:

The total volume of recycled water recharged by injection shall not exceed 3.0 mgd based upon a monthly average (up to 3,360 acre-feet per year), except during the AWTF expansion startup testing period (per Section IV.6 of the accompanying Monitoring and Reporting Program) during which the total volume of recycled water recharged by injection shall not exceed 8 mgd based upon a monthly average.

3. On page T-17 of the Monitoring and Reporting Program for Order No. R4-2005-0061, subsection IV.6 is added to the Program, as follows:

6. Future AWTF Expansion Startup Testing

The AWTF was designed to accommodate future expansion to produce up to 8 mgd of advanced treated recycled water. Prior to the commissioning of the future expanded facility, WRD will conduct a series of startup tests from April to August 2014. The duration of the individual tests will vary from days to weeks, and the

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AWTF will operate between 3 to 8 mgd intermittently during the startup testing. The treatment level provided during the startup testing will consist of the treatment train required by this Order with the addition of hydrogen peroxide immediately upstream of UV to implement the advanced oxidation process as required by the California Department of Public Health (CDPH, formerly known as DHS)'s draft Groundwater Replenishment with Recycled Water Regulations (version dated June 26, 2013).

During the startup testing, the AWTF expansion team shall:

- A. Test all equipment signals, alarms, output devices, and communication devices to be certain that they are operating correctly; and
- B. Test all mechanical systems to verify that the facility can accept and satisfactorily treat recycled water at the new design capacity of 8 mgd.

Over the course of the startup testing, monitoring and reporting shall continue to be performed pursuant to the requirements of this MRP. The results of the startup testing shall be made available upon request of the Regional Water Board or CDPH.

4. Order No. R4-2005-0061, as amended by this Order, will expire on August 31, 2014.
5. All other requirements, limitations, and provisions of Order No. R4-2005-0061 not affected by the foregoing amendments remains in full force and effect.
6. This Order takes effect upon its adoption.

I, Samuel Unger, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the Regional Water Board, Los Angeles Region, on March 6, 2014.

Samuel Unger, P.E.
Executive Officer

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