

## DRAFT

California Regional Water Quality Control Board  
Santa Ana Region

Cleanup and Abatement Order No. R8-2009-0010  
Superceding and Replacing Cleanup and Abatement Orders  
No. R8-2003-0013 and R8-2004-0072  
For  
County of San Bernardino, Solid Waste Management Division  
Mid-Valley Sanitary Landfill Property

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Regional Board), finds that:

1. The County of San Bernardino (hereinafter County) currently owns property in Sections 28 and 29, Township 1 North, Range 5 West, San Bernardino Base and Meridian, in the County of San Bernardino, State of California.
2. The County operates the Mid-Valley Sanitary Landfill (MVSL) on the property noted above. This property overlies the Rialto Groundwater Management Zone, as described in the Regional Board's Water Quality Control Plan.
3. The beneficial uses of the Rialto Groundwater Management Zone include:
  - A. Municipal and domestic supply,
  - B. Agricultural supply,
  - C. Industrial service supply, and
  - D. Industrial process supply.
4. The MVSL is a municipal solid waste disposal facility that has been operated by the County since 1958. Landfilling of waste has been conducted in phases, with each phase consisting of waste being applied on a different portion of the property. Early phases of the landfill (Units 1 and 2) were constructed on native soil without a clay or synthetic liner, or a leachate collection system. The most recent phase of the landfill (Unit 3) began operation in 2002. This phase has a double composite liner and a leachate collection and removal system, and similar components will be installed in future phases (Units 4 and 5).
5. The MVSL property now consists of about 448 acres, of which about 222 acres are currently used for waste disposal activities. Ultimately, waste disposal activities will be expanded to include about 408 acres of the property, all within Section 29.
6. A sand and gravel business, operated by Robertson's Ready Mix (RRM), utilizes a portion of the property in accordance with a formal agreement between the County and RRM. Soil is being stockpiled on another portion of the property for

processing by the RRM operation prior to use of that portion of the property for landfilling.

7. The County purchased the northeast area of the MVSL property (Unit 5) from certain of the Schulz Parties<sup>1</sup> in the 1990s. This property contained storage bunkers that were known to have housed explosives, chemicals, propellant, oxidizers, and fireworks. These bunkers were constructed, and were initially used, by the military in the mid-1940s. The bunkers were used subsequently by aerospace, hazardous waste and fireworks companies. Perchlorate salts, TCE and other chemicals were handled and stored in and/or around these bunkers. The County's operations contractor demolished the bunkers in 1998-1999. A portion of this area is currently utilized by RRM.
8. Perchlorate salts are highly soluble and dissociate in water to form perchlorate ions. The California Department of Public Health has established a drinking water Maximum Contaminant Level (MCL) for perchlorate of 6 parts per billion (ppb). Water purveyors are required to test for TCE, which has both a federal and state MCL of 5 ppb. TCE has been detected in monitoring wells upgradient of City of Rialto Well No. 3.
9. Several municipal water supply wells in the Rialto-Colton Basin have been affected by perchlorate and TCE.
10. Perchlorate was initially detected at high concentrations (approximately 750 ppb) in the Rialto-Colton Basin in 1997 in West Valley Water District Well No. 22. The County subsequently tested all of the MVSL detection monitoring system wells for perchlorate. In 1997, of the 23 MVSL monitoring wells tested, the County found low concentrations of perchlorate (less than 5 ppb) in only one well, with the balance of the wells being non-detect for perchlorate. These results indicated that perchlorate had not been discharged from historic or active waste disposal areas (Units 1, 2 and 3) at the MVSL. In 2001, the concentration of perchlorate in one of the detection monitoring system wells increased significantly to 250 ppb. As a result, the County increased its monitoring for perchlorate in the existing monitoring wells. In addition, the County assessed possible perchlorate sources on its property, including collecting and analyzing soil samples and process water samples from the sand and gravel operation on the northeast area of the County's property. The County found that a source of the perchlorate found in groundwater immediately adjacent to, and downgradient

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<sup>1</sup> The Schulz Parties comprise the following persons and entities: Edward Stout, Edward Stout As The Trustee Of The Stout-Rodriguez Trust, Elizabeth Rodriguez, John Callagy As Trustee Of The Frederiksen Children's Trust Under Trust Agreement Dated February 20, 1985, John Callagy As Trustee Of The E.F. Schulz Trust, Linda Frederiksen, Linda Frederiksen As Trustee Of The Walter M. Pointon Trust Dated 11/19/91, Linda Frederiksen As Trustee Of The Michelle Ann Pointon Trust Under Trust Agreement Dated February 15, 1985, Linda Frederiksen As Trustee Of The E.F. Schulz Trust, John Callagy, Mary Mitchell, Jeanine Elzie Stephen Callagy, Michelle Ann Pointon, Anthony Rodriguez, Edward F. Schulz, The Estate Of Edward F. Schulz, and the Schulz Family Trust.

of, the County's property may be from the northeast area of its property – the property that the County purchased in the 1990s.

11. On September 26, 2002, the Executive Officer issued an Investigation Order to the County. This Order directed the County to further define the lateral and vertical extent of perchlorate in soil and groundwater under and near land owned by the County in the vicinity of the MVSL.
12. In response to this Investigation Order, on November 15, 2002, the County submitted a work plan to further define the lateral and vertical extent of perchlorate in soil and groundwater under and near land owned by the County in the vicinity of the MVSL.
13. On January 17, 2003, the Regional Board adopted Cleanup and Abatement Order No. R8-2003-0013 for the County. This Order directed the County to implement the November 15, 2002 work plan and other work plans deemed necessary by the Executive Officer for further definition of the lateral and vertical extent of perchlorate in soil and groundwater in the vicinity of the MVSL. Upon delineation of the vertical and lateral extent of the release, this order also required the County to submit a Remedial Action Plan to cleanup or abate the effects of the perchlorate that is discharging, has been discharged, or threatens to be discharged from the County's property.
14. Since August 2002, the County has installed 27 monitoring wells in the vicinity and downgradient of the County property. The analytical results of groundwater samples obtained from these monitoring wells showed that perchlorate was not present in the monitoring wells located upgradient of the County's property, but was present in concentrations as high as 1,000 ppb in a monitoring well downgradient of this area.
15. Investigations by others have revealed the existence of perchlorate in soil in the vadose zone on property directly downgradient of the property owned by the County (known as the Stonehurst Site), which is known to have been the site of operations that used or stored perchlorate.
16. The presence of perchlorate in groundwater at and upgradient of Rialto Well No. 3 affects the beneficial use of Well No. 3 as a municipal drinking water supply. Rialto Well No. 3 has historically represented about 15% of the City of Rialto's demand and is an important facility in the City of Rialto's water system. In a letter dated July 6, 2004, the Executive Officer directed the County to submit an acceptable water supply contingency plan for Rialto Well No. 3.
17. Water Code section 13304(f) requires replacement water to be provided that meets all applicable federal, state and local drinking water standards and that has comparative quality to that pumped by the public water system or private well owner prior to the discharge of waste.

18. The County submitted a conceptual plan on July 26, 2004, and proposed to begin providing replacement water to the City of Rialto by September 14, 2005. On September 17, 2004, the Regional Board revised Cleanup and Abatement Order No. R8-2003-0013 for the County and required the County to provide replacement water to the City of Rialto to replace the water historically extracted from Rialto Well No. 3 (Order No. R8-2004-0072).
19. In January 2005, the County submitted its "Revised Draft Interim Remedial Investigation/Feasibility Study" and its "Revised Draft Interim Remedial Action Plan for Mitigation of Perchlorate and Volatile Organic Compound (VOC) Impacts to Groundwater". The Remedial Investigation, among other things, sufficiently defined the lateral and vertical extent of the perchlorate plume that was alleged to be emanating from and near the County's property, and the Remedial Action Plan proposed an Interim Remedial Action to address the groundwater contamination that was the subject of the order. The Regional Board and the County held public hearings regarding the Interim Remedial Investigation/Feasibility Study and the Interim Remedial Action Plan. On February 25, 2005, the Executive Officer approved these documents.
20. The County entered into a replacement water agreement with the City of Rialto and the Rialto Utility Authority (collectively "Rialto"), which is entitled "Water Replacement Order Implementation Agreement and Water Rights Lease By and Among The City of Rialto and Rialto Utility Authority On the One Hand and the County of San Bernardino on the Other Hand," with an effective date of April 1, 2005 (the "Implementation Agreement"). As more fully set forth in and pursuant to the Implementation Agreement, the County provides replacement water to Rialto in a quantity and quality that satisfies Water Code section 13304(f).
21. In their settlement agreement (which is subject to certain conditions subsequent), Rialto, the City of Colton and the County recognized that over time it may be appropriate to modify the treatment approach or standards for the water being provided, or to be provided, to Rialto and Colton, based on the development of new information, improved treatment approaches and cost effectiveness, among other things. In the event the County, Rialto or any other interested party requests that the Regional Board amend this Order, the Regional Board may consider all relevant information, including but not limited to changes in technology, changes in treatment standards for replacement water, future reporting information, and the outcome of any negotiations between Rialto and the County and any dispute resolution between those public entities with respect to the treatment standard and/or treatment approaches for replacement water, to ensure any amendments of this Order comply with Water Code section 13304(f) and all other applicable provisions of law.
22. On June 2, 2006, the County began treating water produced at City of Rialto Well No. 3 using ion-exchange perchlorate removal technologies.

23. In March 2007, the County submitted its “Hydrogeologic Model of Perchlorate Transport Conditions in the Northern Rialto-Colton Basin” and the “Phase 2 Plume Containment System Design, Perchlorate GWTS at Rialto Well No. 3”. The Regional Board provided a public comment period for the model and design report. On February 20, 2008, the Executive Officer approved the Phase 2 remedial design. The construction of upgrades to the extraction and treatment system for containment of perchlorate impacts below and downgradient of the County property is now essentially complete.
24. On April 24, 2009, the County entered into a settlement agreement with the Regional Board regarding perchlorate impacts to groundwater in the Rialto-Colton Basin.
25. Based on the results of the soil and groundwater investigations conducted by the County, it is evident that a groundwater plume of perchlorate exists below and downgradient of Unit 5 (also known as the MVSL Expansion Area) (the Western Plume area). The available data indicate that Unit 5 is a source area for the Western Plume.
26. Based on the results of the soil and groundwater investigations conducted by the County and others, it is evident that perchlorate is also being discharged to groundwater from property currently identified as the 160-Acre Parcel east of the property owned by the County (the Eastern Plume area).
27. California Water Code Section 13304 provides that a person who has caused or permitted, or is causing or permitting, waste, i.e., perchlorate and TCE, to be discharged or deposited where it is, or probably will be, discharged into waters of the state, and has created, or threatens to create, a condition of pollution or nuisance can be required to cleanup and abate such discharge. (The term “waste” as used here is defined at Water Code § 13050(d).)
28. The County disputes that it is a “discharger” within the meaning of the Porter-Cologne Act, a responsible party under CERCLA, or is otherwise liable for the contamination in the Rialto-Colton Basin; however, the County has entered into a settlement agreement with the Regional Board pursuant to which the County has agreed to implement substantial response actions subject to the oversight of the Regional Board. The Regional Board finds that, by implementing a response action pursuant to the Regional Board settlement and this Order, the County is incurring at least its reasonably allocable share of liability in the Rialto-Colton Basin, and that the County should not be responsible for implementing any response action to address contamination at or from the Eastern Plume area or to implement any response action to address source control on properties downgradient of its property.

29. California Water Code Section 13304 allows the Regional Board to recover reasonable expenses for overseeing cleanup and abatement activities. It is the Regional Board's intent to recover such costs from the County for regulatory oversight work conducted in accordance with this order.
30. This enforcement action is being taken by a regulatory agency to enforce a water quality law. Such action is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.), in accordance with Section 15321, Article 19, Division 3, Title 14, California Code of Regulations.
31. This Order requires the County to implement a response action in a manner consistent with (a) CERCLA and the National Oil and Hazardous Substance Pollution Contingency Plan, Title 42 U.S.C. section 9605 and Code of Federal Regulations, Title 40, Part 300 ("NCP") and (b) the Porter-Cologne Water Quality Control Act.

Pursuant to Sections 13304 and 13267 of the California Water Code, and the Administrative Settlement Agreement between the County and the Regional Board, the County shall clean up and abate the effects of the discharge and perform investigation and monitoring as follows:

1. Implement the remedial action plan submitted by the County and approved by the Executive Officer on February 25, 2005, and the Phase 2 Containment System Design Report approved by the Executive Officer on February 20, 2008.
2. Take all actions necessary to provide replacement water to the City of Rialto in accordance with Water Code section 13304(f) for Rialto Well No. 3. The requirements of this paragraph 2 are subject to limitations on the water rights of Rialto and physical limitations associated with operating the pump in Rialto Well No. 3 under low water conditions (except to the extent these low water conditions result from the pumping required solely for containment). Pursuant to the treatment technology required to be used by the County in the remedial action plan approved by the Executive Officer in paragraph 1 above, and pursuant to the Implementation Agreement, the County currently treats replacement water to a level of non-detect for perchlorate. Since "non-detect" is a laboratory-specific determination, for the purpose of this Order, non-detect is defined as the water quality treatment design standard equivalent to the standards by which Rialto's perchlorate treatment systems are designed. The level of treatment satisfies Water Code section 13304(f).
3. Monitor perchlorate and VOC concentrations in groundwater in the vicinity of the County's property in accordance with a Monitoring and Reporting Program (M&RP) as approved by the Executive Officer.

4. This order supercedes and replaces Cleanup and Abatement Orders No. R8-2003-0013 and R8-2004-0072.

I, Gerard J. Thibeault, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on \_\_\_\_\_, 2009.

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Gerard J. Thibeault  
Executive Officer

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