

Integrity Municipal Services Successfully Cleans and Replaces Packing Media in Odor Control Scrubber at Regional Treatment Plant in Laguna Niguel, California

The Integrity Municipal Services (IMS) team has successfully replaced packing media for a LO/PRO® odor control scrubber at the Regional Treatment Plant in Laguna Niguel, California, which is operated by the South Orange County Wastewater Authority (SOCWA). SOCWA was formed in 2001 when the

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Bob Waters,
Chief plant operator

South East Regional Reclamation Authority (SERRA), Aliso Water Management Agency (AWMA), and South Orange County Reclamation

Authority (SOCRA) consolidated to meet the wastewater needs of more than 500,000 homes and businesses across South Orange County. SOCWA operates a system of four wastewater treatment plants and associated facilities to clean and safely dispose of South Orange County’s wastewater.

A total of three LO/PRO® odor control scrubbers supplied by Siemens Water Technologies (formerly USFilter / RJ Environmental) were installed at the Laguna Niguel Regional Treatment Plant in April, 1997. IMS personnel were involved in the design, manufacturing, and start-up of the systems during their installation and have been providing maintenance services for the odor control scrubbers at the various SOCWA wastewater treatment plants since 2008.

The scrubbers are designed to control hydrogen sulfide gas, H₂S, at the headworks, dewatering building and aeration basins of the plant. A fan draws hydrogen sulfide laden air into the scrubber where it is contacted with recirculated caustic and bleach. The chemical reaction removes the H₂S, however, it can also partially oxidize the gas, resulting in the formation of elemental sulfur. Over time this sulfur formation can plug the

packing media and system internals of the scrubber, resulting in decreased performance and the need to replace the media and clean the unit.

In May, 2011, IMS was contracted to replace the packing media of the headworks OCS-1 system. The media replacement process included: (1) providing a light acid wash of the unit prior to packing removal, (2) removing and disposing of the acidic solution and spoils, (3) removing and disposing of the old packing media, (4) cleaning and verifying the integrity of the unit housing and fiberglass walls, (5) cleaning the spray nozzles and other internal components, and finally, (6) installing the new packing media.

Bob Waters, Chief Plant Operator of Regional Treatment Plant, stated, “I.M.S. performed the shutdown, acid wash, packing media removal and replacement, and system startup in an efficient manner. The I.M.S. workers followed safe work practices during all phases of the job. I would not hesitate to use I.M.S. in the future for odor scrubber maintenance.”



OCS-1 LO/PRO® Scrubber

ORIGINAL PACKING MEDIA



REPLACEMENT PACKING



Pictured are photos of the LO/PRO® Odor Control System serviced by IMS. RJ Environmental is a subsidiary of Evoqua Water Technologies LLC. LO/PRO® is a trademark of Evoqua Water Technologies LLC.