ENVIROGEN TECHNOLOGIES

A Lifecycle Performance Company
A member of The Amplio Group

Clark County Water Reclamation District, Nevada

Removing H_2S and Achieving Effective Odor Control

Facility Type:	Municipal Wastewater Treatment (100 million GPD)
Problem:	High levels of H_2S and RSCs causing odor and other problems
Solution:	Biofiltration + Activated Carbon with operating services
Results:	99.4% H_2S removal/90% odor removal

The Challenge

The Clark County Water Reclamation District (CCWRD) services unincorporated areas of Clark County within the Las Vegas Valley as well as the communities of Blue Diamond, Indian Springs, Laughlin, Overton and Searchlight. Its Las Vegas wastewater treatment facilities are the largest in Nevada, processing more than 100 million gallons of wastewater per day.

When faced with high levels of hydrogen sulfide (H_2S), reduced sulfur compounds (RSCs) and other odor-causing compounds from the air at the plant's headworks, the CCWRD sought a single-source solution.

The Envirogen Solution

Envirogen Technologies Inc. (Envirogen) designed, built in place and started up three biofiltration bays and two activated carbon adsorption units in November 2009. The installation removes the odor-causing compounds by utilizing a combination of biological filtration and activated carbon for polishing.

Designed to handle a normal air flow of 7,700 cubic feet per minute (CFM) and inlet H_2S concentrations up to 10 parts per million by volume (ppmv), the installation is treating 10,000 CFM of air, achieving 99.44% H_2S removal (<0.05 ppm at outlet) as well as 90% odor removal (<100 dilutions to threshold), performing well above design conditions.

The installation includes blowers, ducting, dampers, biofilters and carbon polishing vessels (including media). Envirogen also provides all maintenance and sampling to assure optimum system performance for a 24-month period under the terms of the services contract.

Envirogen's biofiltration technology is an innovative, versatile alternative for achieving H_2S and odor treatment goals at significantly lower lifecycle costs than common chemical treatment options. It has been gaining widespread acceptance as a 'green' choice for odor control at municipal wastewater operations.

The Clark County installation and operating services program illustrates the potential of more sustainable, lower-cost odor treatment options. Reliable performance, along with a significant reduction in operating costs, make this an excellent approach for municipal wastewater operations to efficiently meet their long-term sulfide and odor treatment objectives.