



## Compliance and Enforcement Division

### INCIDENT REPORT

**Valero Refinery (Site #B2626)  
3400 E 2<sup>nd</sup> Street  
Benicia, California  
May 15, 2009**

On May 15, 2009 at approximately 2:30 AM, a seal failed on a tank at the Valero Oil Refinery in Benicia, California. The tank in question (#1791) stores slop oil and wastewater from the oil refining processes at Valero. District staff received a report from refinery operators that a small amount of oil was observed on the roof of Tank #1791. Refinery operations removed Tank #1791 from service and diverted the wastewater streams to another storage tank #2051.

At approximately 7:00 AM, District inspection staff received notification from the Benicia Fire Department that they had responded to two medical emergencies at the Union Pacific Railroad office they believe were related to the storage tank problem at the refinery. Two Union Pacific employees were treated on-scene and transported to a nearby hospital. The fire department established an Incident Command Center (ICC) outside the refinery on Industrial Road in Benicia.

District inspection staff arrived at the ICC at 9:35 am to investigate this situation. The Solano County Hazmat team also responded to this incident. Tank #2051 was later discovered by operators to be venting to atmosphere through a pressure relief valve and District staff observed multiple hydrocarbon leaks around inspection hatches. District staff collected two ambient air samples for laboratory analysis. District staff has determined that the light hydrocarbons passing through Tank #2051 downstream to the wastewater treatment plant completely saturated two activated carbon beds that abate the wastewater plant allowing hydrocarbon emissions to atmosphere.

District staff will continue to investigate this incident to determine if there were any violations of air quality regulations. This report will be updated as new information becomes available.

#### UPDATE - May 16, 2009

District staff conducted follow-up investigation on Saturday, May 16th. Tank #2051 was identified as the main odor source on May 15th. This was due to a pressure/vacuum valve that was found to be venting prematurely. District staff found several other fugitive leaks on hatch covers on May 15th, which were repaired that day.

District staff conducted a follow-up inspection at Tank #2051 and identified two additional fugitive leaks on one of the hatch covers. Otherwise, the wastewater system appeared to be functioning properly and in compliance. There were no odors detected off site.

After Valero took Tank #1791 out of service, the wastewater stream containing a significant amount of light hydrocarbons was diverted down to their wastewater plant. Valero was not aware at the time that there were significant amounts of light hydrocarbon contained in this particular wastewater stream. A small separation vessel located at Valero's Alkylation Unit was the source of this light hydrocarbon material. The vessel is regulated by an automated level controller. Valero found that the level controller was out of calibration and the current level setting was too low. Valero has now recalibrated and reset the level in this vessel.

The light hydrocarbons eventually worked its way through Tank # 2051, which normally skims off the solids materials collected by the separator. All of these wastewater sources are abated by a carbon adsorption system, which was overwhelmed by the light hydrocarbons. Valero has been changing out the carbon vessel, every 12-hours as a precautionary measure, to abate the hydrocarbons that are still working their way out of the system.

District staff will continue to follow up on Valero's internal investigation of this incident, to determine what measures should be put in place to prevent a re-occurrence of this type of event.