Ohio EPA Southwest District Office
SFY 2011 Annual Report

Remedying and Investigating Landfills

District Solid Waste staff spent significant time during SFY'11 continuing to respond to the August 2009 subsurface reaction at the Rumpke Sanitary Landfill on Hughes Road in Colerain Township, Hamilton County, Ohio. Rumpke completed all activities identified within the March 18, 2010 response plan, including: 1) installation of a buttress to stabilize and prevent potential slope movement; 2) installation of a synthetic liner, referred to as an "odor control blanket" to minimize the release of gas from the affected area, and; 3) development of a monitoring system and an isolation break plan to ensure that the reaction will not spread to other areas of the landfill. The "odor control blanket" has been successful in significantly reducing the number of odor complaints as compared to the same time frame a year ago. Rumpke and the regulatory agencies continue to monitor the situation and will adjust the response plan as necessary to protect human health and the environment.

District Solid Waste staff continued to monitor the situation at the closed St. Bernard Landfill where the first phase of a landfill gas migration remediation project was completed in April 2011. Weekly monitoring has occasionally shown levels of methane gas above the lower explosive limit (LEL). If this trend continues, St. Bernard will be required to implement a plan to abate further methane migration. DMWM has also requested that SIFU conduct an investigation to determine if landfill waste extends beyond the boundaries of the landfill into residents that border the site. That investigation will begin in early SFY 2012.

In 2010, capping, grading, and seeding of the closed Schlichter Landfill (aka Old River Valley Place of Nature Foundation) was completed through the DMWM CLOSER Program. The 90+ acre site in Butler County ceased accepting waste in 2001 but was never properly closed. The Schlichter Landfill is located upgradient from the Southwest Regional Water District and presented a threat to both surface water and groundwater because it was properly closed. SWDO solid waste staff assisted by overseeing much of the day-to-day work and provided the contractor with valuable site –specific information. Groundwater monitoring wells are present and SWDO hopes to conduct limited sampling in the future.

Salt Pile Storage and Water Quality

In SFY 2011, District Drinking and Ground Water and Surface Water staff spent significant time addressing ground water and surface water impacts caused by operations at large road salt storage facilities. DDAGW and DSW were working with the Convey It, Inc. in Springfield to determine the facility's impact on the local ground water

resources when, in August of 2011 Ohio EPA was notified that a similar operation in the Village of Camden (Preble County) had impacted the public drinking water system. During a 2009 inspection of Rod Good Enterprises, the salt storage facility in the Village of Camden, district staff became aware of unpermitted class V injection wells that were being used to drain runoff at the site directly to the ground water. In August 2010 when Ohio EPA discovered salt contamination in the Village's water supply, we also discovered that Rod Good Enterprises had removed the injection wells at the site and replaced them with a combination horizontal injection well/discharge pipe that dumped brine generated by the facility into a tributary of Seven Mile Creek, approximately 200 feet from the public drinking water wells. Ohio EPA negotiated Finding and Orders with R Good Enterprises which required the company to prevent additional contamination of ground water and surface water and to delineate the extent of surface water and ground water contamination. We also issued Emergency Orders to the Village of Camden that required them to obtain a new safe, sustainable source of drinking water.

DDAGW continues to work very closely with the Village of Camden, and after exploring many potential water sources is hopeful that a suitable well field has been found. Rod Good Enterprises however, has not yet initiated the investigation they were to complete under the Consent Order. Convey It., Inc. has partially completed the investigation of salt contamination at their former Springfield facility. They have also relocated their salt storage operation to Franklin Yards, a newly developed site operated by Rod Good Enterprises located in the City of Franklin, Warren County. This site was improved to prevent impacts from salt storage operations by installing a clay liner under the salt storage area and installing a system to collect and store brine generated at the facility. In addition, due to its location over a prolific sole source aquifer and proximity to multiple public drinking water supplies, the companies agreed to install monitoring wells downgradient of the facility. All site improvements were completed, including the installation of monitoring wells, and Convey It moved their salt operations to the site. Unfortunately, R Good Enterprise has not yet developed nor sampled the monitoring wells. Ohio EPA is working with the City of Franklin, owners of the Franklin Yards property, to develop and sample the wells.

Studies completed on the Great Miami River watershed

A report summarizing the results of the 2008 upper Great Miami River watershed study was released in January 2011. The results concluded that 64% of the river miles were in full attainment of the aquatic life use designation, 26% of the river miles were in partial attainment and 10% of the river miles were in non-attainment of this use

designation. Impairment was most often observed in the western half of the basin, particularly in the Loramie Creek sub-watershed and other highly modified stream channels draining extensive agricultural landscapes. Other sources of aquatic life impairment include waste water treatment systems, impoundments, and toxic spill events. Bacteriological impairment was pervasive throughout the upper watershed impairing recreational use. The Primary Contact criterion for full body contact with the river was exceeded at 73% of sites tested. Suspected sources of contamination include agriculture, urban runoff, unsewered communities and on-site septic systems, sanitary sewer overflows and wildlife.

Preliminary results from the 2009 study of the middle Great Miami River watershed indicate significant improvement compared to the upper Great Miami River watershed. Of the river miles studied in the middle reach, 89.7% were in full attainment of the aquatic life use designation, 8.6% of them were in partial attainment and 1% was in non-attainment. Impairment was due to discharges from wastewater treatment plants (ammonia and nutrients), stream habitat instability, impounded lake discharge and natural causes.

Preliminary results from the 2010 study of the lower Great Miami River watershed show much improvement from previous surveys with 81% of the sites studied in full attainment of the aquatic life use attainment and 19 % in non-attainment. Causes of impairment include thermal discharges from power plants and nutrient enrichment.

Results from the studies of the Great Miami River watershed will be used to develop restoration goals and cleanup plans for those areas of the watershed not meeting the goals of the Clean Water Act. The cleanup plan, known as a total maximum daily load (TMDL) report will specify reductions in pollutions from various sources and recommendations of specific actions to achieve these reductions.

Fighting Mar-Flex Fire

SWDO/ER responded to a chemical fire at the Mar-Flex facility in Butler County that started early on the morning of January 25, 2011. The burning building contained drums of solvent-based asphalt waterproofing material and other chemicals. The components of concerns were xylene and polystyrene. The responding fire departments initially put water on the fire, however, following several explosions most of the facility was allowed to burn. Runoff of the asphalt waterproofing and other chemicals was observed downhill from the building and along the sides of the building. This facility is located over the Great Miami Buried Valley Aquifer—a major sole-source of drinking water for much of southwest Ohio. Once the fire was addressed, district office staff assisted the company in ensuring the remaining material was disposed of properly.

Ground water monitoring wells installed downgradient from the facility have demonstrated that contamination from the fire did not impact the aquifer.

Overseeing the Investigation and Cleanup of Contaminated Sites

Cleanup efforts associated with the May 2009 explosion and fire at the Veolia Permitted Hazardous Waste Facility were completed mid-year of 2010. During SFY'11 district personnel within DHWM spent a significant amount of time providing technical assistance to Veolia to ensure that construction of the newly designed hazardous waste tank and container storage areas is completed in accordance with the facility permit requirements and other applicable construction standards. Regulated operations currently conducted at the facility are limited to container storage activities until such time as construction of the newly designed tank systems and treatment processes are completed.

In March 2011, Director Nally issued a decision on the final remedy for addressing contamination at the former Hilton-Davis Chemicals site in Cincinnati. District personnel have been working with the responsible party on the remedy implementation plan to ensure that all components, once implemented, will be maintained and monitored to ensure that the public and environment are protected.

During 2010 and 2011, the Division of Environmental Response and Revitalization sampled 36 private wells in the Clark County village of Donnelsville. Sample results indicated levels of chlorinated solvents, primarily tetrachloroethylene (PCE), in 23 of the 36 private wells sampled. Nine of the 23 private wells contained PCE above the maximum contamination level of 5 ug/l. Since a municipal water supply is not available, residents, businesses, and community buildings all use private wells to supply their water. Ohio EPA, U.S. EPA and the Ohio Department of Health worked together to determine the extent of contamination and advise the community of potential health effects. As part of this multi-agency effort, U.S. EPA is currently installing indoor water treatment systems for 16 private wells.

The Remedial Investigation/Feasibility Study has been completed at Valleycrest Landfill (aka North Sanitary Landfill), the only State-lead NPL site in Ohio. Upon receipt of final payment of response costs from the respondents, the Director's Final Findings and Orders will be terminated. U.S. EPA will assume the lead for the Remedial Design/Remedial Action. The Proposed Plan for Valleycrest is expected in the fall.

With the completion of the cleanup, an additional 100 acres of the former DOE Mound weapons and research facility was offered to the Mound Development Corporation (MDC) for reuse. Approximately 283 of the 306 total acres have either been transferred or made available for transfer. The MDC continues to market the facility and currently has 15 businesses with approximately 325 employees.

At AK Steel, two major cleanup projects began. At SMU 39 (the location of 17 former oil and coal tar ponds), a system was installed to contain, collect, and treat dense non-aqueous phase liquids (DNAPL) and contaminated groundwater migrating from this area to the east towards Monroe Ditch. Monroe Ditch was relocated slightly to the east to allow room to install the containment system. In addition, work began on the removal of PCB contaminated sediments from Dick's Creek and Monroe Ditch. The entire project will require 3 to 4 years to complete. During this first year, the remediation and restoration of the upstream portion of Dicks Creek Reach 1 (including the floodplain) was completed. The remediation and restoration of Monroe Ditch was also completed. Between July 7 and December 10, 2010, approximately 25,089 tons of TSCA-regulated hazardous waste was transported to a permitted facility in Belleville, Michigan for disposal. Approximately 102,146 tons of non-TSCA waste was transported to the Rumpke Sanitary Landfill for disposal. The Army Corps of Engineers nationwide permit for the Year 2 and Year 3 work on Dick's Creek has been delayed due to the need to complete an archeological survey of the project area.

Reducing Sewer Overflows

SWDO/DSW staff have continued to work with Metropolitan Sewer District on projects to reduce the number of combined sewers and combined sewer overflows. Some of the projects will be incorporating green infrastructure to reduce the amount of storm water entering into the collection system. Another component of the project will entail the construction of a larger sanitary sewer tunnel to provide temporary storage after wet weather events.

The Springfield WWTP has installed a new pilot High Rate Treatment system. This treatment system is being considered for wastewater that is currently being bypassed during storm events. This project is being evaluated to determine if it will meet the needs of the city in treating their waste water and preventing untreated water from entering into waters of the state.

Providing Technical Assistance

Division of Surface Water assisted companies such as Hartz Mountain, and Whitewater processing with their waste water treatment projects. Ohio EPA worked with Hartz Mountain to install a temporary treatment system to meet their production timelines. The company was moving a portion of their production line from out of state to a location near the Clermont and Warren County border. They plan to connect to the public sanitary sewer within the next year. Whitewater Processing, a meat processing

company in Hamilton County, has recently completed a pilot study of a new treatment system for their production wastewater. The new system will be installed this coming year, and will replace a large lagoon system that currently holds the waste water.

The drinking water staff worked with the village of South Lebanon in Warren County to accelerate improvements to their water distribution system. After a main break in February, district staff provided assistance to the Village to address the cause and to ensure that the village water supply become operational as soon as possible. They also worked with Warren County and the City of Cincinnati to accelerate the transfer of responsibility for providing water to the Village so that the community would receive necessary supplies.

Protecting Natural Resources

Ohio EPA, along with U.S. DOE and U.S. FWS, began implementation of the $13.75M Fernald natural resource damages settlement by partnering with Three Valley Conservation Trust on the Paddys Run Conservation Project. The PRCP will use settlement funds to purchase conservation and agricultural easements within the Paddys Run watershed and over the Great Miami Aquifer to protect water quality in the stream and the underlying aquifer. Ohio EPA held two public meetings and began negotiations with the pilot project land owner for easements on an 800 acre farm. An application period for interested landowners will be open in August 2011.