



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

Re: Henry County
Henry County Landfill
Ground Water, Notice of Violation

December 19, 2012

Henry County Board of Commissioners
1853 Oakwood Avenue
Napoleon, Ohio 43545

Dear Board of Commissioners:

The Ohio Environmental Protection Agency (Ohio EPA), Northwest District Office (NWDO), reviewed, "Third Quarter 2012 Hydraulic Monitoring Report; Henry County Landfill" (report) dated October 26, 2012 from Mannik & Smith Group, Inc., on behalf of the Henry County Landfill (facility). The report provides the hydraulic monitoring report as required by the owner/operator's corrective measures plan. This data was collected September 11, 2012. The quarterly hydraulic monitoring program is required by the approved corrective measure plan to assess the effectiveness of the HDPE barrier wall and dewatering wells which were installed at the facility in 2004. This corrective measure was installed with the hope of remediating ground water contamination in shallow sand deposits in the northeastern portion of the facility.

The facility is presently operating under the correct ground water monitoring phases, the well system is adequate, and the owner/operator should continue to monitor under the current program. Following are the Ohio EPA comments.

COMMENTS

VIOLATION

1. **The owner/operator, is in violation of OAC Rule 3745-27-10 (F)(1), which requires that the owner/operator implement a corrective measures program capable of attaining the concentration levels in the plan, capable of controlling the source of the release, and capable of eliminating further releases. The owner/operator needs to ensure and document, for all future events, that the requirements of this rule are being met considering dewatering well DW-2 did not appear to be operated properly to maintain ground water level below the "Maximum Elevation for Pump On". The owner/operator should also inspect the three dewatering wells and make any repairs or adjustments which are necessary to ensure that maximum pump-on and pump-off levels are maintained. Results of this inspection and repair work should be forwarded to Ohio EPA.**

Table 4.0 in Volume I of the March 2003 corrective measures plan (revised through May 25, 2007) provides the "Maximum Elevation for Pump On" for dewatering well DW-2. This level is 664' (feet). A review of the Hydraulic Monitoring Field Data Sheet in the current submittal indicates the ground water level measured on September 11, 2012 in dewatering well DW-2 was 666.00' (feet). This measured water level was two (2) feet above the maximum pump-on level. If the pump was working properly, it should have turned on and lowered the level to 658.3' (feet) before it turned off and the water level again began to rise.

Historically, the data indicated the pumps appeared to not be working properly and could not meet the requirements of OAC Rule 3745-27-10 (F)(1) to control the source of the release and eliminate further releases. This might be, at least in part, currently true. On the second page of the submittal the owner/operator indicates that no water was removed from the dewatering system in July 2012, 11,000 gallons in August 2012, and 14,960 gallons were removed in September 2012. This is considerably less than was removed in 2011 when 80,000 gallons were removed from the dewatering system in July 2011 and 35,000 gallons were removed from the dewatering system in September 2011. It is unknown if the decrease was due to the pump(s) not working properly or other problems. None-the-less, it is necessary that the water levels in the dewatering system not exceed the pump-on levels as discussed in the approved corrective measures plan.

Ohio EPA requests an explanation of why the DW-2 exceedance occurred and what was done, or will be done, to remedy the problem. In addition, any repairs to the ground water monitoring network need to be documented in the annual operations report. Following is a table indicating the water levels collected June 22, 2011, September 30, 2011, December 28, 2011, March 23, 2012, June 14, 2012, and the current water levels collected September 11, 2012, and the required maximum pump on levels. It should be noted that the levels for all three dewatering wells met levels requirements in the previous event conducted June 14, 2012.

WELL	06/22/11	09/30/11	12/28/11	03/23/12	06/14/12	09/11/12	MAX. PUMP ON LEVEL
DW-1	666.01'	668.96'	664.42'	666.44'	665.18'	666.03'	666.40'
DW-2	661.06'	671.97'	661.08'	662.97'	659.63'	666.00'	664.00'
DW-3	666.08'	671.98'	663.41'	662.81'	659.11'	662.41'	664.00'

MORE INFORMATION NEEDED TO DETERMINE COMPLIANCE

2. **Compliance with OAC Rule 3745-27-10 (F)(1), which requires that the owner/operator implement a corrective measures program capable of attaining the concentration levels in the plan, capable of controlling the source of the release, and capable of eliminating further releases, cannot be determined at this time. In order for Ohio EPA to determine compliance with OAC Rule 3745-27-10 (F)(1), the owner/operator needs to document how the requirements of this rule are being met considering a potential lack of hydraulic control. If the owner/operator cannot provide evidence that the corrective measures plan requirements are being met then in accordance with the corrective measures plan the need for additional corrective measures and/or additional monitoring of the ground water chemistry of the site needs to be determined and implemented.**

In the second paragraph of section 3.3.2.2 of Volume II of the March 2003 corrective measures plan (revised through May 25, 2007) the owner/operator states, "Specifically, elevation data will be collected from existing groundwater monitoring wells and piezometers, the dewatering wells, manholes associated with the perimeter leachate collection trench, and South Turkey Foot Creek, to demonstrate that the direction of groundwater movement inside of the barrier wall is toward the dewatering wells and perimeter leachate collection trench. Additionally, data will be collected to demonstrate that the hydraulic head inside of the wall is lower than outside of the wall."

In the second paragraph of section 3.3.3 of Volume II of the March 2003 corrective measures plan (revised through May 25, 2007) the owner/operator states, "In addition to the above, Henry County and the Ohio EPA will evaluate the effectiveness of the barrier wall and dewatering system to determine if they are effectively operating as a hydraulic control."

A review of figure 5.0 in the corrective measures plan indicates that wells P-1 and DW-1 are located on the west end of and inside the wall; and well MW-7A is also located on the west end of the wall, but generally outside the line of the wall. This map also indicates that wells P-2 and DW-3 are located on the east end of and inside the wall; and well MW-6 is also located on the east end of, but outside the wall. Dewatering well DW-2 has no nearby counterpart outside the wall. If the requirement that the "hydraulic head inside of the wall is lower than outside of the wall" is to be maintained, wells located inside the wall, including the dewatering wells (DW-1 and DW-3), need to display water levels which are lower than in wells located outside the wall.

Table 1.0 of the submittal provides ground water elevation data which indicates that this requirement is not being met on the west end and east end of the wall. Following is a table which shows the water levels collected September 11, 2012 for west wells DW-1, P-1, and MW-7A; for east wells DW-3, P-2, MW-34, MW-33, and MW-6; and for central wells DW-2, MW-16, MW-32, and MW-33. Well MW-33 is included as both an east well and a central well since it is about equidistant from dewatering wells DW-2, located in the center of the wall, and DW-3, located near the east end of the wall. The dewatering wells' designations include the letters "DW".

West End of Wall	DW-1 (inside)	P-1 (inside)			MW-7A (outside)
	666.03	672.87			661.98
East End of Wall	DW-3 (inside)	P-2 (inside)	MW-34 (inside)	MW-33 (inside)	MW-6 (outside)
	662.41	664.52	665.40	662.50	664.12
Center of Wall	DW-2 (inside)	MW-16 (inside)	MW-32 (inside)	MW-33 (inside)	
	666.00	662.62	662.71	662.50	

From this table it can be seen that the wells outside the wall on both the west end of the wall (wells DW-1 and P-1) and the east end of the wall (wells P-2, MW-34, and MW-33) display considerably lower ground water elevations than the wells in the same area inside the wall including one of the dewatering wells. In addition, while there are no wells nearby on the outside of the central portion of the wall, the monitoring wells display lower ground water elevations than the dewatering well. The water levels in the dewatering wells should be lower than any wells in the area since they are depressing the water table at that well by pumping. This data indicates that the plan requirement that the water in this well inside the wall be lower than that outside is not being met.

Also, Figure 2.0 of the submittal, a time/series plot which shows "Groundwater Elevations Upgradient of the Cutoff Wall Prior to and Post Corrective Measures Installation Activities", appears to indicate that since about 2006, many of the wells located inside the wall appear to be displaying slight increasing trends in water levels. These trends are especially true when water levels associated with flooding events are ignored. The apparent slight upward trends include both monitoring wells and the three dewatering wells. The trend in well P-1 appears to display an increasing trend which is statistically significant. Wells MW-6 and MW-16 appear to display slight decreasing trends.

Also of interest are the elevations displayed in the wells near the center of the wall. The dewatering well near the center of the wall, DW-2, displays a greater water elevation than the nearby monitoring wells even though the dewatering wells should display the lowest levels since they are the point of extraction. (Well DW-2 displayed a water level which exceeded the pump-on elevation; See comment number one above). An analysis of the data from all of the wells suggests a review of field measurement practices, including the surveyed elevations of the tops of all of the wells near the wall, might be appropriate. It is understood, also, that a significant increase in water levels occurred in the streams in the area within a few prior to measuring the site's wells.

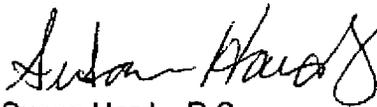
The owner/operator must immediately take the necessary measures to return to compliance with Ohio's environmental laws. Within 14 days of receipt of this letter, the owner/operator is requested to provide documentation to this office including the steps that will be taken to abate the violations cited above. Documentation of steps taken to return to compliance include written correspondence, updated policies, and photographs, as appropriate, and may be submitted via the postal service or electronically to Susan.Hardy@epa.ohio.gov.

If you have any questions please feel free to contact Randy Skrzyniecki at the Ohio EPA Northwest District Office (419-373-3149).

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Any written correspondence should be sent to the attention of Sue Hardy, Division of Materials and Waste Management, Ohio EPA Northwest District Office, 347 North Dunbridge Road, Bowling Green, Ohio 43402.

Sincerely,



Susan Hardy, R.S.
Environmental Specialist
Division of Materials and Waste Management

/cg

pc: Mike Imbrock, Henry County Landfill
Eric VanHeyde, The Mannik & Smith Group, Inc.
File: DMWM/SW, Henry County, Henry County Landfill, Ground Water
i.d.: 5-11982

ec: Mike Reiser, DMWM, NWDO
Abdul Smiley, DMWM, NWDO
Curtis DeLong, DMWM, NWDO
Randy Skrzyniecki, DDAGW, NWDO
Tim Fishbaugh, DDAGW, NWDO
Lindsay Taliaferro III, DDAGW, CO

Please be advised that the violations cited above will continue until violations have been properly abated. Failure to comply with Chapter 3734 of the Ohio Revised Code and rules promulgated thereunder may result in a civil penalty of up to \$10,000 per day for each violation. It is imperative that you return to compliance. If circumstances delay the abatement of violations, the owner/operator is requested to submit written correspondence of the steps that will be taken by date certain to attain compliance.