



PREVENT. PROMOTE. PROTECT.

*Timothy I. Ingram
Health Commissioner*

*250 William Howard Taft Road, 2nd Floor
Cincinnati, OH 45219*

*Phone 513.946.7800
Fax 513.946.7890*

hamiltoncountyhealth.org

January 28, 2010

Mr. Todd Portune
Chair, Policy Committee
Hamilton County Solid Waste Management District
138 E. Court Street
Cincinnati, OH 45202

Re: Rumpke Sanitary Landfill

Dear Commissioner Portune:

At the January 21, 2010 meeting of the Hamilton County Solid Waste Management District Policy Committee, an update was provided on the sub-surface reaction at Rumpke Sanitary Landfill. As per your request, the following is a written report on the situation for you to share with the Hamilton County Commission.

Background:

Currently, there are approximately 200 landfill gas recovery wells on 275 acres of placed waste at the Colerain Township site. Methane is collected from the decomposing waste and processed into natural gas, suitable for sale in Duke Energy's gas lines. These wells are routinely monitored for gas composition. New in 2009, dewatering took place on water filled wells to allow for better collection of gas. As a possible result of the dewatering, a few gas wells in the northeast corner of the facility began showing elevated temperatures.

Rumpke sampled the affected wells and several surrounding wells for more detailed gas analysis. Some showed carbon monoxide (CO) in significant quantities (generally a product of incomplete combustion). On August 31, 2009, Rumpke reported the elevated temperatures and CO detection to the appropriate agencies and implemented their contingency plan.

The affected area was believed to be approximately 12 acres involving 2 gas wells on the northeast corner of the facility (phases 5 and 6). Since that time, the area of concern has grown to additional northern portions of the landfill (phases 4, 5, 6, and 7) involving 11 gas wells. Construction of these phases include two liners; a plastic liner over three feet of clay liner. The reaction is deep within the waste mass, rather than at the surface.

Initial Efforts:

- Reduced vacuum on gas wells in the affected area and placement of additional one foot of clay cover to starve the reaction of oxygen.
- Increased frequency of gas composition monitoring and well temperatures in the area.
- Installation of shallow gas collection trenches in areas where gas is under pressure to prevent surface emissions of gas and off-site odor.
- Repair and sealing of soil cover in areas with cracking or pressure, to prevent gas emissions and air infiltration.
- Settlement has been closely tracked. A grid of horizontal displacement pins have been installed to better monitor movement and slope stability.
- Regularly scheduled conference calls and site visits with the facility and regulators have been established to disseminate and analyze current data and site activities.

Efforts Forward:

Ohio EPA and US EPA representatives that have first hand experience with a fire at a Stark County landfill, Countywide, have been brought in. "Team Rumpke" has been formed to develop a working document to guide corrective actions at the site. This team is comprised of several OEPA, USEPA, Hamilton County Public Health (HCPH), Hamilton County Department of Environmental Services (HCDOES), Colerain Fire – representing Colerain Township, Rumpke and Montauk representatives. We have met on numerous occasions to discuss the technical issues at hand and reach consensus on how to proceed. A comprehensive action plan is being developed with an overarching goal of protecting human health and safety and preventing a nuisance by focusing on these 10 technical goals.

1. Ensure slope stability
2. Maintain the integrity of engineered components
3. Define the rate/extent of the incident
4. Control odors
5. Manage the gas, pressure, leachate, and condensate properly
6. Prepare for contingencies to reduce response time
7. Ensure health and safety of regulators and Rumpke employees
8. Prevent the incident from spreading
9. Return the affected area to normal conditions as quickly as possible
10. Ensure compliance with permits, authorizing actions, and other regulatory obligations (Note: all activities associated with this plan would apply to the goal of maintaining compliance).

Final touches are being put on this action plan with many of the activities supporting these goals already initiated.

Public Health Monitoring:

HCPH and HCDOES – Air Quality have a continued presence at the landfill. Several times per week air is monitored for pollutants of concern: particulate matter; organic compounds; methane; carbon monoxide; and hydrogen sulfide. US EPA has also performed extensive organic compound and hydrogen sulfide mapping of surrounding roadways on two occasions. Currently off-site results indicate values are below health based standards.

The 60 wells in this area and the gas collection trenches are routed to a utility flare where the gases are burned.

Conclusion:

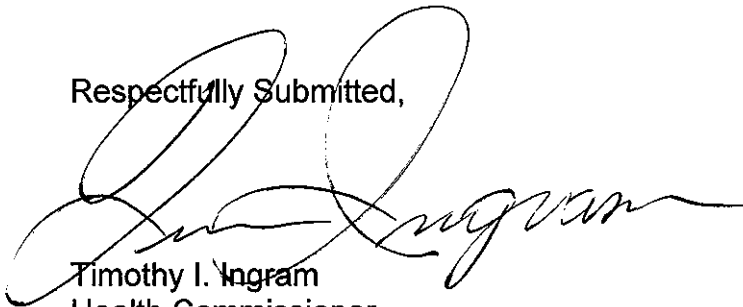
Currently, other than settling and areas with soil cracking or pressure, there is no surface manifestation – no flame, no smoke, no soot in the gas wells, no component failure and no exposed waste. There has been an increase in odor complaints and fugitive gas emissions from the affected area. All complaints continue to be investigated.

A comprehensive action plan to address odors and return operations to normal as quickly as possible is being finalized. The facility has been cooperative with regulators in formulating this plan.

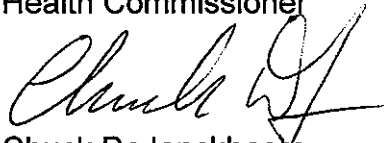
It has become clear through this process that underground reactions such as this are *challenging*. *Efforts to control the reaction seem appropriate, but experts agree, it will be some time before things return to normal.*

HCPH will continue to be engaged in the situation, ensuring the protection of public health and the environment.

Respectfully Submitted,



Timothy I. Ingram
Health Commissioner



Chuck DeJonckheere
Director of Waste Management

cc: Hamilton County Solid Waste Management District Policy Committee