City Mitigates Odor Problem and Establishes Odor Complaint Hotline.

The City of Albany has taken a systemic approach to determine the cause and eliminate odors at the landfill. This approach was taken due to the number of potential odor sources at the landfill site. Potential odor sources included: incoming wastes, emissions from the leachate collection system, emissions from combustion of landfill gas at the flare unit, emissions for the internal combustion engines at the site and landfill gas generated by older waste within the landfill mass.

An investigation was performed to determine the odors generated by each potential source and the impact of these odors off the landfill site. To determine the impact of the incoming wastes, an assessment of filling and daily cover operations was performed. The assessment revealed that the deposition of the incoming waste in the landfill had little impact on off site odors, however, placement of additional daily cover at the end of each workday was determined to be required to reduce odors generated in the area of the recently placed waste. The use of additional daily cover has resulted in a reduction of odors off site that may have been contributed to by incoming placed waste.

An investigation of the leachate collection system included an odor survey along the collection system piping alignment and manholes to determine any sources of odors that may migrate off site. The survey revealed that although several points of the system may generate odors, they are likely not having an impact off site, however, these points have been sealed or connected to the landfill gas collection system.

Emissions from the combustion of the landfill gas at the flare system and internal combustion engines was evaluated to determine if the exhaust from the combustion of the landfill gas was attributing to odors detected off site. The evaluation included analysis of the landfill gas before combustion, review of the combustion efficiency and analysis of the exhaust. The evaluation determined that exhaust from the flare system and internal combustion engines have a slight odor associated with them, however, this odor is generally dissipated before having an impact off site. Investigation of remedial alternatives to reduce exhaust odors generated through combustion are currently be evaluated.

Based on the overall investigations conducted, the largest source of off site odors was determined to be from fugitive emissions of landfill gas generated by older waste in the landfill mass. Scans performed over the landfill surface indicated that landfill gas was escaping through the soil cover and migrating off site. In addition, efficiently calculations of the landfill gas collection system indicated that landfill gas was not completely collected and escaping through the landfill soil cover. To mitigate the fugitive emissions migrating off the landfill site, and not negatively impact the quality of the gas being utilized to produce energy, an interim cap system was constructed over the landfill slopes and areas with gas escaping to capture and collect the landfill gas prior to migrating off site. The interim cap consisted of a shallow gas collection system and impermeable plastic membrane and associated drainage features. The City has also

installed additional collection points within the waste mass to collect more landfill gas. These measures have increased the collection system efficiency.

To keep the surrounding community informed about operations and the investigations performed, the City hosted Odor Control Update Meetings on April 3, 2007 and July 11, 2007. These meetings were attended by local municipal representatives, residents immediately impacted by the landfill odors and representatives of the NYSDEC. In addition, to assist with determining the probable source of odors from the landfill, the City established an Odor Complaint Hotline at 453-8288. The hotline allowed for the community surrounding the landfill to call in odor complaints at the time of detection so the City could immediately investigate the source of the odor.

Since completion of the investigation and remedial actions summarized above, odors detected off the landfill property have been significantly reduced and the number of odor complaints regarding the landfill has declined as well.