

Alpha Ridge Landfill Gas to Energy Project

January 25, 2012

Thank you for attending the informational meeting on the Alpha Ridge Landfill Gas to Energy project. We hope that the meeting answered some of your questions about the project and landfill operations in general. County staff and experts heard your concerns and have developed a plan for moving forward. In particular, we have committed to expending a large sum of money to test the existing landfill gas flare stack and the proposed engine. These tests go beyond all regulatory requirements and guidelines at the federal or state level.

Please recall that tests of gas-flares and gas-engines at some 13 other landfills across the country have shown that emissions of compounds such as dioxins, furans, and volatile organic compounds (VOCs) occur only at extremely low rates, such that they do not harm air quality or people's health. The evidence indicates that the proposed engine for the Alpha Ridge Landfill is an environmentally sound project.

Testing of the gas flare at Alpha Ridge was completed on January 17th and 19th. (Due to the high winds on January 18th the second and third tests were postponed until January 19th.) Experts tested the flare three separate times for dioxins, furans, and VOCs; and the gas coming from the landfill going to the flare was also tested for VOCs and mercury. The lab analysis should be completed in approximately 45 days. After the lab analysis has been completed, a report should be completed by the end of March. This report will contain details about the sampling and analytical methods, the results, and an evaluation of the results in terms of impacts to local air quality and public health.

An emission test for dioxins, furans, and VOCs from the proposed generator will be completed within the startup period. An additional test will be completed 6 months later. These measured stack data will be compared to the emissions rates used in the air quality modeling performed by Laura Green and Steve Zemba of Cambridge Environmental Inc. to determine whether the modeling analysis conservatively evaluated the potential health risk. Every three years, the generator emissions will be retested for combustion parameters based on the permit requirements. This testing will determine whether the engine is performing as specified and combustion and destruction of VOCs is still occurring efficiently.

Continuous emission testing was requested. The County researched and asked the consultants to research the feasibility of this option. Continuous emission testing is not being pursued due to the insignificant level of emissions and the high cost of continuous monitoring equipment. We expect to confirm the assumption of safe emissions based on the landfill gas flare stack and influent tests in January and the testing of the generator emissions as described above.

A filter was requested. The gas does not need to be pre-treated with a filter before it is combusted in the engine. The combustion in the engine destroys the methane, odor, and VOC contaminants in the landfill gas. After combustion, the emissions contain only small quantities of particles and combustion gases, as in the exhaust of any motor, such that a filter is not appropriate. Facilities that emit large quantities of exhaust gases, such as foundries, waste-to-energy plants, and various chemical manufacturing plants, are often equipped with a series of filters termed “baghouses,” but such equipment is not designed for small engines such as the one proposed at the landfill. The stack testing will be evaluated to confirm that filters are not needed to ensure safe emissions levels.

Soil tests were requested. Two different requests were made for soil testing. One was for testing of soil near the flare for dioxins and furans. All the available data indicate that landfill gas flares do not release significant quantities of dioxins or furans. The combustion-gas tests to which we have committed will provide additional data along these lines, whereas soil testing would not be informative, and would instead only reflect “background” concentrations from automobile exhaust, wood stoves, long-range transport from forest fires, and other sources.

The other request was to test the soil on the west side of the landfill for VOCs. Although an older portion of the Landfill has resulted in contamination of groundwater by VOCs, this groundwater is being cleaned up. The groundwater impacts are more than 15 feet underground and groundwater is not used in any way for drinking, irrigating gardens, or otherwise. Accordingly, there is no mechanism by which proximity to the Landfill would adversely affect surface soil in neighboring yards or gardens.

Our webpage (<http://www.howardcountymd.gov/LFGTE.htm>) is continuing to be updated, and we will continue to provide reports as they are finalized. Thank you again for your interest.