



## St. Bernard Landfill Frequently Asked Questions

July 19, 2010



### 1. What is methane?

Methane is a gas produced by the decomposition of garbage, animal waste and similar organic materials. Methane is also commonly known as natural gas, the same gas many homes use for heating and cooking. If there is a proper combination of oxygen, methane and a source of ignition, this gas can ignite and burn.

### 2. Is methane coming out of old landfills unusual?

No. Landfills that contain decomposing garbage typically generate methane.

### 3. What has the City done to control methane from the Landfill?

The City has been working on this Landfill for over a decade. During that time, the City spent several hundred thousand dollars on capital improvements to the cap and installation of gas monitoring and collection systems. The City has spent approximately \$60,000 per year on operation, maintenance and monitoring of the Landfill. The City will continue to monitor the Landfill for many years to provide for the safety of our community.

### 4. When did the EPA get involved?

The City has been working with Ohio EPA to monitor and control gas migration at this Landfill over the past decade. Last year, the City and Ohio EPA collaborated on development of an Order which essentially represents a public agreement documenting that the City and Ohio EPA were addressing issues associated with the Landfill. U.S. EPA was also consulted at this time. Ohio EPA and U.S. EPA often collaborate on these matters, and the City is working with both of these agencies.

### 5. What does the Ohio EPA order require?

This Order requires the City to install monitoring probes off of the Landfill property if neighboring landowners give permission. These probes will be used to determine if landfill gas is migrating from the Landfill toward any homes, and measure the concentrations. If gas is detected at certain levels (generally above the LEL) the City will extend the existing gas collection system to remove these gases or reduce them to acceptable levels.

**6. What does “LEL” mean?**

Lower Explosive Limit. This is the amount of methane that must be present to support combustion. In normal or “ambient” air, this is 5% by volume. Methane will not ignite in ambient air if the concentration is less than 5%.

**7. Is Ohio EPA overreacting? This sounds like overkill to me.**

Ohio EPA is following Ohio law for methane at old landfills.

**8. How much will this Order cost to implement?**

We estimate the Order will cost in excess of \$200,000 to implement, plus the annual costs of operation, monitoring and maintenance of the system.

**9. Is the Landfill going to explode?**

No. While elevated methane concentrations have been measured at the Landfill, the impacted areas are very, very small. In addition, measured methane pressures are very low indicating little or no risk of fire or explosion.

**10. How is the City going to make sure the methane does not explode?**

To protect the community, the City has developed a “layered” approach. First, the City monitors gas concentrations each week to make sure that levels are maintained within acceptable limits. Second, if gas concentration rise above certain levels, the City is required to develop a plan (which is reviewed by Ohio EPA) to correct the problem. Finally, gas alarms were installed in those homes bordering on the Landfill. We have not had any alarm triggered by gas from the Landfill.

**11. Why doesn’t the City capture the landfill gas and use it for alternative energy?**

This Landfill does not generate enough gas to reuse it for energy.

**12. Why doesn’t the City just dig up the Landfill and move it somewhere else?**

EPA discourages moving landfills from one location to another. Plus the cost of removing this Landfill would cost many millions of dollars.

**13. I heard that dangerous chemicals are present in this area. Is that true?**

In some areas, chemicals are present which could be harmful if direct exposure occurs at relatively high levels. Fortunately, these chemicals have been found at very low levels which do not pose an unacceptable risk to those using the park or living nearby.

**14. Why can't the contaminated areas be dug up and removed?**

They can, but access to residential properties may be required. In some areas, materials that the City wants to remove are very close to or may even be located "over" the Landfill's property line. Removal would likely impact the rear yards of several residents. The City has asked permission to do this work, but several residents have refused access.

**15. Who from the City is monitoring the Landfill?**

The City has hired a reputable environmental engineering firm to work with Ohio EPA to monitor the Landfill. The City does not have these engineering capabilities.

**16. Does this Landfill contain hazardous wastes?**

We have found no evidence any hazardous wastes were buried in this Landfill.

**17. Some neighbors complain that their property values will go down due to this Landfill. Will the City pay for the decline in property values?**

This Landfill has been here for over 50 years. We have observed no indication that the Landfill has caused declining property values.

**18. Is the soccer field safe for my children?**

Yes, based on data collected to date. The levels of chemicals found in the air, water, and surface soils surrounding the Landfill are well within levels considered safe by the U.S. EPA and Ohio EPA for this type of activity. However, the City will be conducting additional testing on the soccer fields in the near future to provide additional information regarding the air and soil in this area.

**19. Are homes on Bank Avenue safe to live in?**

Yes. No methane gas was found under these homes, and chemicals found during recent testing by the U.S. EPA are below levels considered safe for daily residential exposures. The Agency for Toxic Substances and Disease Registry (ATSDR), an agency within the U.S. Department of Health and Human Services, and the Health Assessment Section of the Ohio Department of Health (HAS), recently evaluated U.S. EPA sampling results from several homes on Bank Avenue near the Landfill. On June 23, 2010, those agencies released the following conclusion on current health risks associated with the Landfill:

***“HAS concludes that the levels of methane and volatile organic compounds (VOCs) found in and under Bank Avenue homes at the Bank Avenue Landfill site are not expected to harm people’s health at this time. The reason for this is that methane gas and VOC levels are below levels of health concern.”***

Source: Health Consultation, Methane Gas & Vapor Intrusion Concerns Bank Avenue Landfill Site, St. Bernard, Hamilton County, Ohio, Prepared by Ohio Department of Health under a Cooperative Agreement with the U.S. Department of Health and Human Services, Agency for Toxic Substances and Disease Registry (ATSDR), June 23, 2010.

**20. I heard that nearby residents have been told to move. Is this true?**

No. Recently, a radio personality inaccurately reported that levels of various chemicals found near homes were 1,000 times higher than actual levels documented by the City and U.S. EPA. He then suggested the resident should move based on this information. Neither the City nor U.S. EPA or any other federal or state agencies have requested that any resident move.

**21. Why isn’t the City fixing this problem?**

They are. Since December 2000, the City has been investigating and monitoring conditions at the Landfill. An extensive network of monitors has been installed as well as a system which removes methane gas and other chemicals from the area adjacent to the Landfill. This system was originally installed in 2001. The City monitors conditions weekly, and operates the extraction system 365 days a year. In addition, design of a much larger gas removal system was submitted to Ohio EPA in October, 2009. The City is currently waiting on Ohio EPA’s approval of this design before starting construction.