

FOR IMMEDIATE RELEASE
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PRESS RELEASE

PUBLIC INFORMATION MEETING TO BE HELD REGARDING SETTLER'S HILL

Waste Management of Illinois, Inc. will hold a public information meeting on Thursday, September 14, 2006 to discuss the results of groundwater monitoring at Settler's Hill Landfill in Geneva. The meeting will be from 5:00 pm to 7:00 pm in the Auditorium, Bldg. "A", Kane County Government Center, Geneva, IL.

There are 20 groundwater monitoring wells at Settler's Hill that have been monitored for over 170 different chemical and biological parameters. Vinyl chloride has been detected at very low levels, just above the laboratory detection limit, in two of those groundwater wells. Landfill gas entered the groundwater monitoring well casings due to the high granular filter pack which extends approximately 30 feet above the groundwater table at these wells. The landfill gas is NOT getting into the groundwater, but the gas is entering the casing and the water is mixing with the gas in the casing. These detections of vinyl chloride are localized to the direct vicinity of the well, and both the County and Waste Management are confident that recent improvements to the gas collection system have addressed the issue.

Representatives from Waste Management and Kane County will be on hand to discuss this matter at the public meeting. A Fact Sheet and Drawings are attached for your convenience.

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Settler's Hill Landfill Groundwater Monitoring Program

Executive Summary

Settler's Hill Landfill, located in unincorporated Geneva Township currently has 20 groundwater monitoring wells surrounding the facility. Groundwater has been monitored at Settler's Hill since the facility opened in 1982. These wells are monitored quarterly, and each year the wells are tested for over 170 chemical and biological parameters.

Vinyl chloride has recently been detected at very low levels at or just above the laboratory detection limit in two groundwater wells. These test results ranged between no detection and four parts per billion. Testing laboratories' lowest measurable detection for vinyl chloride is typically two parts per billion. One part per billion can be compared to one second in thirty one and one-half years, or one inch in fifteen thousand seven hundred and eighty two miles.

There are generally four reasons why groundwater monitoring results change. First, some parameters naturally occur in groundwater and their concentrations also naturally change over time. Second, changes may be due to sources other than the landfill. Third, changes in parameters can occur from the landfill. Fourth, parameters which exist in landfill gas can sometimes be detected in groundwater and cause monitoring results to change.

In this instance, we know the last scenario above is what has occurred at Settler's Hill. The testing shows that trace amounts of landfill gas have entered into the groundwater monitoring well casings. This gas migration is due in part to the high granular filter pack which extends approximately thirty feet above the groundwater table at these wells (see attached exhibit). Because the well screen and filter pack are open to the surrounding formation high above the groundwater table the gas simply enters the well where it can mix with the water located at the base of the well. The mixing of trace amounts of landfill gas with the well water results in low level vinyl chloride detections in the water obtained from the well. It is important to note that the gas is not affecting groundwater outside the well but rather just in the well itself. This is known as an intra well gas effect. Therefore the resulting detections of vinyl chloride are localized to the direct vicinity of the well. The situation is remedied through changes in well construction and improvements to our gas collection system. These actions have been undertaken and we are confident we have remedied this occurrence.

Introduction

As buried landfill waste naturally breaks down or degrades, gases are generated. The primary gases generated are approximately 50% carbon dioxide and 50% methane. Settler's Hill landfill has a gas recovery system which collects this landfill gas and incinerates it, generating electricity. This electricity is purchased by the City of Geneva, and supplies approximately 10% of the power needs for the City. In addition to carbon dioxide and methane, there are trace organic constituents that also are present in landfill gas. One of these trace constituents is vinyl chloride. Vinyl chloride was detected at very low levels in two groundwater monitoring wells located inside the eastern property line (see attached photo of the facility). As previously stated, we believe the detection of vinyl chloride in the two landfill groundwater monitoring wells indicates that landfill gas is entering into the groundwater well casings. Per our discussions with the Illinois Environmental Protection Agency and based on experience, vinyl chloride detection is one of the most common groundwater monitoring problems at landfills. The solution in this case is two fold: first, improve the gas collection systems' operation and eliminate the gas migration; second, replace the existing wells with wells constructed to prevent the above mentioned intra-well gas effect.

What is Vinyl Chloride?

The Environmental Protection Agency defines vinyl chloride as "a colorless organic gas with a sweet odor. It is used in the manufacture of numerous products in building and construction, automotive industry, electrical wire insulation and cables, piping, industrial and household equipment, medical supplies, and is depended upon

heavily by the rubber, paper and glass industries... Small quantities of vinyl chloride can be released to food since it is used to make many food wrappings and containers.”

Other uses for vinyl chlorides include furniture and automotive upholstery, wall coverings, housewares, and automotive parts. At one time vinyl chloride was used as a coolant, as a propellant in spray cans and in some cosmetics.

Vinyl chloride is also one of the by-products of decomposition of other organic compounds. Vinyl chloride has also been found in cigarette smoke.

The Solution

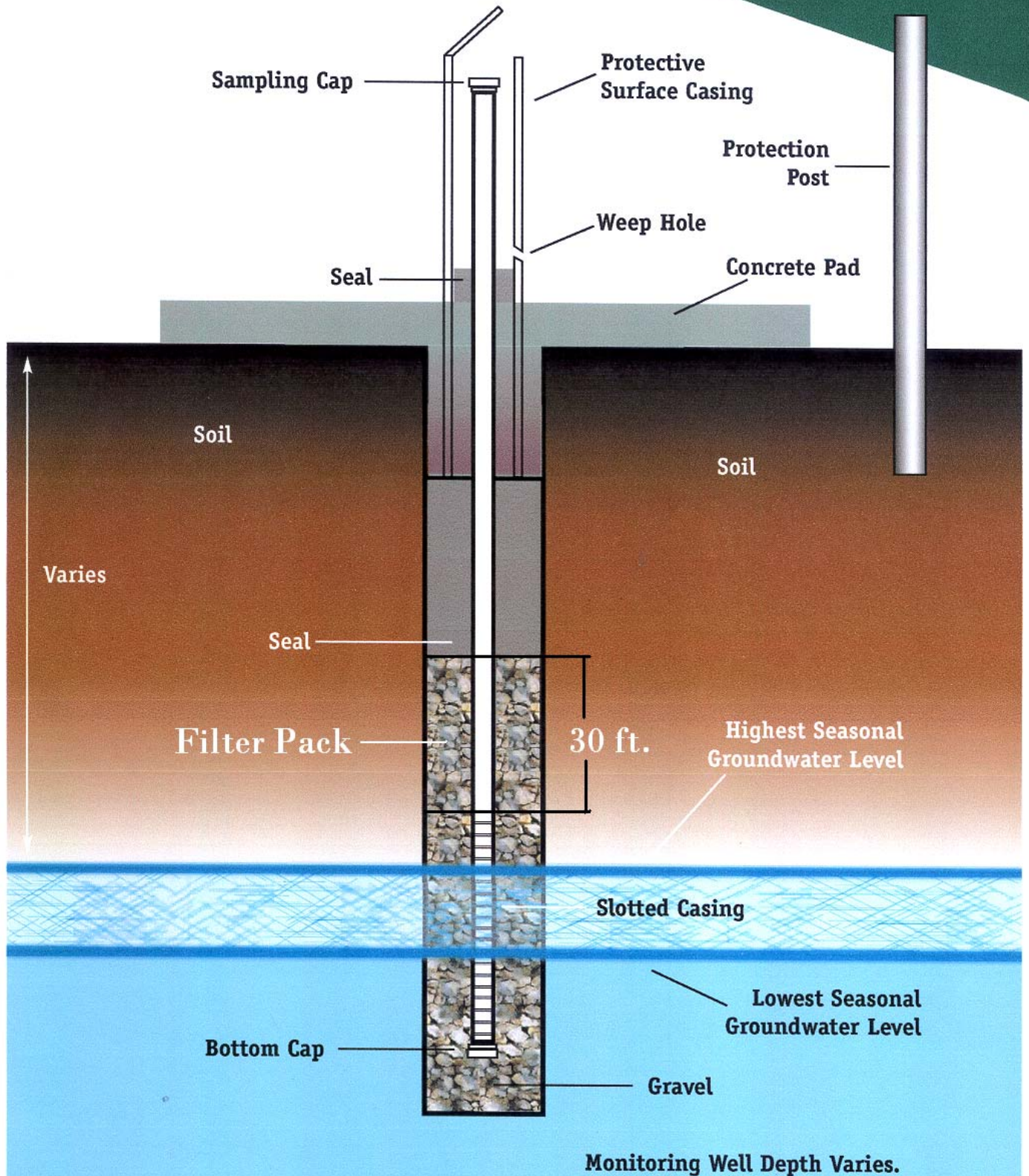
The solution to this occurrence is to increase the vacuum, or withdrawal of the landfill gas from the gas collection system. The gas collection system works like a vacuum. There are approximately 25 miles of gas collection piping and over 120 gas extraction wells installed throughout Settler’s Hill and Midway landfills. This piping system is used to collect the landfill gas generated and send it to the gas recovery plant and flares. The gas recovery plant burns the gas and generates electricity. In addition to generating electricity, the incineration of the landfill gas destroys the vinyl chloride. Since the groundwater monitoring detections of vinyl chloride, the vacuum in the vicinity of these wells has been increased, and our most recent groundwater monitoring results did not detect vinyl chloride in either well. Additional scheduled groundwater monitoring will demonstrate that the problem has been remedied.

In addition to increasing the vacuum withdrawal, additional gas recovery improvements have been completed. These improvements had been planned and scheduled prior to the groundwater detection. The installation of the gas recovery system is a “phased construction,” which means it progresses as the landfill receives more waste and becomes filled to permitted capacity. Gas recovery is much more efficient and effective when the system operates in a closed loop. Due to operational restrictions, the facility was not able to complete the desired gas recovery closed loop in the landfill area in the vicinity of these groundwater wells until June of this year. This loop has been completed for the entire facility and the gas collection efficiency has been improved.

Conclusion

Landfill gas has affected the groundwater monitoring results at Settler’s Hill. The gas recovery system at Settler’s Hill has been improved to rectify this occurrence. Additional scheduled groundwater monitoring will demonstrate that the problem has been remedied.

Typical Groundwater Monitoring Well





Fabyan Parkway

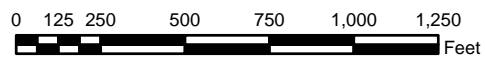
Kirk Road

G144

G146



Kansas County
Environmental
Management
Department



Settler's Hill Landfill Groundwater Monitoring Wells