

**INVER GROVE HEIGHTS
ENVIRONMENTAL ADVISORY COMMISSION MEETING MINUTES
Thursday, January 23, 2020
8150 Barbara Avenue
7:00 P.M.**

1. CALL TO ORDER

The Environmental Advisory Commission of Inver Grove Heights met in regular session on Thursday, January 23, 2020, in the City Council Chambers. Chair Trenzeluk called the meeting to order at 7:00 p.m.

2. ROLL CALL

Present: Chair Ted Trenzeluk, Commissioners; Sarah Brass, Katherine Teiken, Patricia Todd, Lauren DeGidio, Matt Mills, and Nichole Boehmke
Absent: Commissioners; Robert Heidenreich and Aditya Jayam (Excused)

3. PRESENTATIONS

A. Gas Migration Status at Pine Bend Landfill

Mr. Aaron Janice, Engineering Manager for Pine Bend Landfill, presented an update on Pine Bend Landfill's (2495 117th St) status of gas migration, as required by the April 9, 2018 City of Inver Grove Heights Resolution No. 18-69, Condition 14.

Mr. Janice reviewed a list of Pine Bend Landfill staff and presented an aerial of the landfill's footprint. A list of active permits with the State, County and City were reviewed. It was noted that the northern section of the landfill was developed in 1971 and is unlined, which is believed to be the cause of most groundwater issues on the site. Phase 3 – Phase 6 (1986-2019) of lined landfill development was reviewed. The following landfill statistics were noted; total landfill area is 358.7 acres, 2,000 tons MSW is collected per day, 3,000 cubic feet of landfill gas is generated per minute, and 9,000,000 gallons of leachate is generated per year. Mr. Janice noted to decrease the amount of gas flaring currently on site, Pine Bend is waiting for the construction of a high-BTU gas facility to be constructed by the third party who owned the previous gas-to-energy facility on the property. Mr. Janice noted the landfill gas can be burned for about 20 years after the landfill closes. The landfill gas is made of 50% methane and end of life for the landfill is be reached between late 2020's – 2030.

Mr. Janice presented a cross section of the landfill. The groundwater history of the site and related projects were reviewed including; completion of a groundwater contamination study (1985), expansion of city water supply to nearby household on well water (1994), final cover development on unlined areas (1993-1996), and a dual-extraction project to remove leachate in unlined cells (2002). Mr. Janice reviewed additional historical context including; Pine Bend's participation in enhanced groundwater monitoring as required by their MPCA Permit for increased analysis, an USEPA Issued "No Further Action" ruling (1995), removal from National Priorities List (1998), and USEPA Fifth "Five-Year" Review completed in 2020. The USEPA and statistical analyses have concluded current groundwater remedies continue to be effective, they are maintaining compliance with their permits, and trends in total VOC concentration is decreasing with a greater decrease in proximity to the landfill.

Mr. Janice reviewed the Minnesota Rule 7035.2815 Subpart 11. Per Condition 14 of City of Inver Grove Heights Resolution 18-69, Pine Bend Landfill is required to achieve gas management compliance as stated in Minnesota Rule 7035.2815, Subpart 11: The concentration of any

explosive gas must not exceed its lower explosion limit at the property boundary or 25 percent of its lower explosion limit in and around facility structures or any other on-site. To comply, Pine Bend Landfill must achieve a concentration of methane no greater than 5% at their property boundary.

Mr. Janice described a graphic of the gas collection system and gas monitoring probes at the landfill and described the engineering of the gas migration probes. Mr. Janice noted that there are 39 probes monitored quarterly and the probes with exceedances are monitored monthly. Historical exceedances exist on east, south, and west side of landfill, specifically in the unlined area. One challenge for managing gas migration is that the site lacks a natural buffer due to the nearby railroads, roadways and other perimeter constraints. Pine Bend has monitored off-site impacts of gas migration and there are no known significant land use issues. They have identified presence of methane near the Recycling Center and installed building gas monitors as a result. Since installation, no methane has been identified indoors. Since 2006, Pine Bend has been working with the MPCA and City on this issue to determine the best way to address it. Currently there are probes with intermittent exceedances.

The April 9, 2018 Resolution No. 18-69, Condition 14 requires compliance with Minnesota Rule 7035.2815 for six consecutive months prior to January 1, 2025. No waste may be acceptance by Pine Bend Landfill if compliance is not met by this deadline. When Pine Bend is not in compliance with this rule, annual updates on gas migration must be provided to the Environmental Commission in the first quarter of the year. Progress reports are included in the MPCA Annual Report which the City reviews and makes comments on.

Mr. Tom Shustarich, Engineering Consultant for Wenck on the behalf of Pine Bend, addressed the Commission. Mr. Shustarich noted gas migration is a challenge to manage due to a variety of unpredictable factors such as garbage moisture levels, changes in barometric pressures, and frozen ground conditions as gas movement fluctuates as it looks for paths of least resistance.

In 2006, Pine Bend completed a geoprobe investigation and fingerprint analysis for gas migration testing. This concluded no detections across railroad tracks to the north, but a detection near the Recycling Center across the railroad tracks. A building monitor was then installed at the Recycling Center, landfill scale house and landfill office building.

In 2012, Pine Bend attempted to passively vent gas by installing a vacuum on two probes but no decrease in methane concentration was found.

In 2013-2014, Pine Bend continued a geoprobe investigation in east and west side. One exceedance was found on the east side at the Recycling Center at Probe 4, the same location identified with an exceedance in 2006. Another exceedance was found on West 100 at Probe 6.

In 2015, Pine Bend continued the geoprobe investigation and MPCA work plan. Passive vents were installed at 5 locations adjacent to probes which have been used successfully in the MPCA's Closed Landfill Program. The exceedances trended down since installation but are not as low as required by state statute.

In 2016-2017 wind turbines were installed on the passive vents. Wind spins the turbine to create a vacuum to increase flow through probes. Again, the exceedances trended down since installation but are not as low as required by state statute.

In 2017- 2018, Pine Bend continued passive venting and MPCA work plan. Turbines were installed on passive vents and additional geoprobe investigation was completed for sample testing. Pine Bend has determined that probes with vents have led to a downward trend of exceedances but there are still intermittent exceedances.

Mr. Shustarich discussed the reasons to collect or vent the methane gas and to reduce gas migration. The active gas collection system's purpose is to route the methane gas to a location that was used by another facility to generate electricity. That facility is not currently in operation but is proposed to be developed into a new high-BTU gas facility, as soon as early 2021, to convert the methane to natural gas. It is thought that gas migrates out of the gas collection system in the unlined area of the landfill. Collecting the gas instead of allowing it to migrate decreases the chance of it building up in a structure to levels that could potentially cause an explosion.

In 2020, Pine Bend will test attaching a vacuum on the vents, connected to a blower with a temporary flare. Because the gas within the probes is low quality it cannot be converted to natural gas in the future system as initially planned. If the flare pilot works, two flares are anticipated, one on the east and one on the west side. Pine Bend anticipates starting the trial by Spring/Summer 2020

Pine Bend has found gas migration acts differently at different wells, due to different garbage materials located throughout the landfill and different substrates used over time to build the cells. They have not found any surface area exceedances indicating the gas migration is coming from the unlined area. There is no standard procedure for managing gas migration at landfills. If the 2020 pilot does not work, there are additional management options to test in the future such as building more gas wells or cut-off walls. Cut-off walls require digging near the landfill, power lines and other nearby infrastructure and therefore is a last resort management technique. In 2014, an MPCA work plan was developed and the City has been actively encouraging the landfill to meet these requirements through Pine Bend Landfill's Conditional Use Permit. Pine Bend has requested information from other landfills on how they have handled gas migration, but the solutions vary greatly by situation and effectiveness.

Mr. Janice noted additional items planned for 2020. 6C-2 cell construction will begin, which includes adding a new liner and then filling over it. The high-BTU gas facility construction is planned by a third party, Fortistar, for 2020. The facility is proposed to be located across from Fortistar's previous facility, across the railroad. Mrs. Sutherland noted the City has been in communication with Fortistar over the past year but has not yet received a formal application. It is anticipated to be received in early 2020.

4. ANNOUNCEMENTS

- A. Legal Training on Roles and Responsibilities Meeting was held on 01/07/2020.
Recording available at www.townsquare.tv/webstreaming.**
- B. Public comment received at the City Council meeting on 01/13/2020 regarding a Plastic Bag and Styrofoam Ordinance.**
- C. Xcel Energy's Partners in Energy (PIE) Application submitted.**

5. CONSENT AGENDA

- A. Minutes of November 21, 2019 Environmental Commission Meeting**

Motion by Commissioner DiGidio, seconded by Commissioner Mills to approve the minutes from November 21, 2019 as submitted.

Ayes: 7

Nays: 0 Motion carried.

6. PUBLIC COMMENT

7. REGULAR AGENDA

8. ADMINISTRATIVE PRESENTATIONS

9. COMMISSION COMMENTS

10. ADJOURN

Motion by Commissioner Todd, seconded by Commissioner DiGidio to adjourn at 7:53pm.

Ayes: 7

Nays: 0 Motion carried.