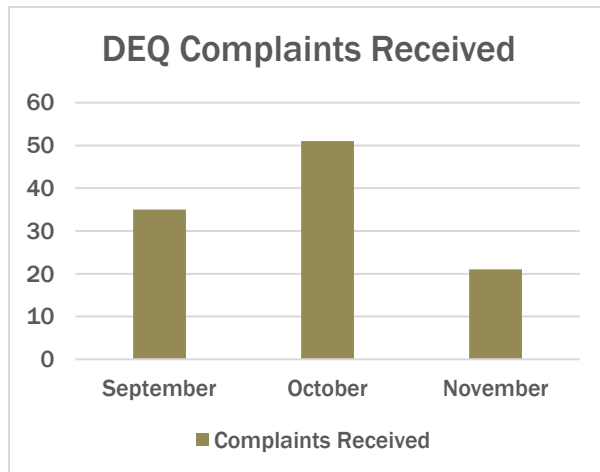




Action Summary

Arbor Hills Landfill, Northville Michigan Summary of Updates for September – November 2017

DEQ Actions



During this period, DEQ conducted 10 on-site inspections and/or area odor evaluations.

On September 6, 2017 DEQ participated in a public meeting held at Northville Township offices with Robert Nix, Township Supervisor. DEQ informational presentations were made by Larry Bean, District Supervisor Waste Management and Radiological Protection Division, and Scott Miller, District Supervisor Air Quality Division (AQD). Citizens were allowed time for open comments, as well as a question and answer session. Staff provided handouts and remained after the meeting for individual questions. A copy of the presentation and information about the meeting can be found at www.michigan.gov/deqarborhills, in the “Community Information” column.

DEQ and EPA Air Sampling to date

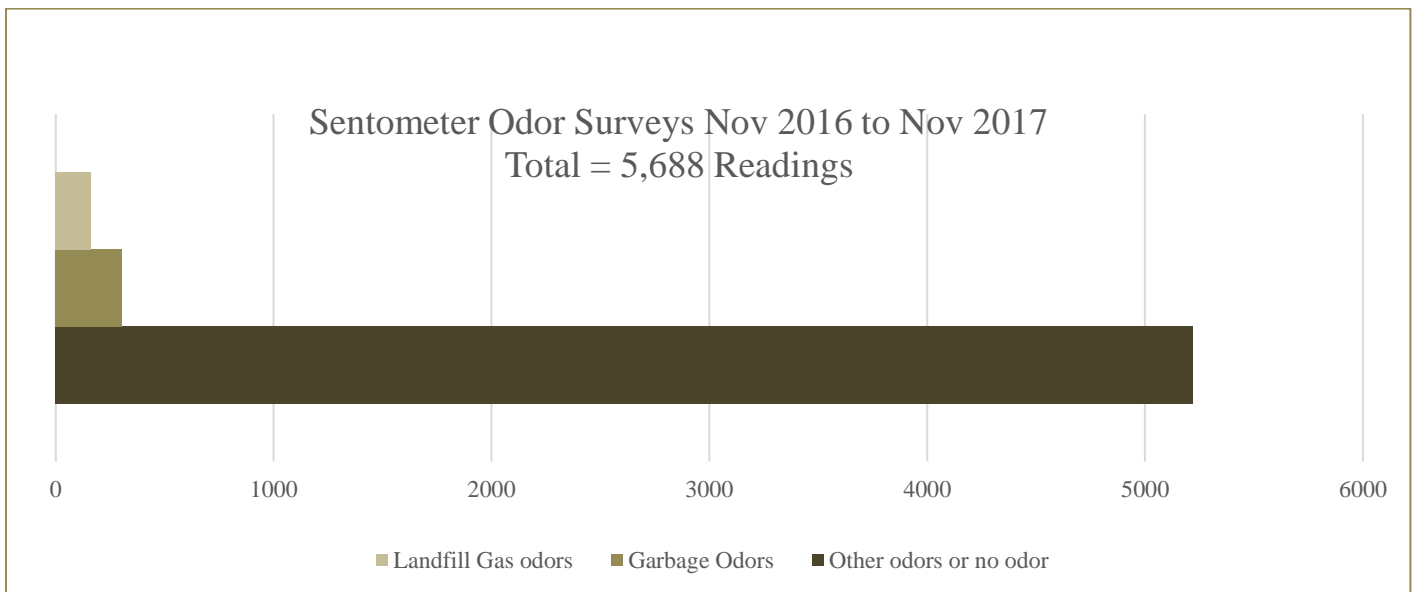
- Landfill Gas (LFG) is a natural byproduct of the decomposition of organic material in anaerobic (without oxygen) conditions. LFG contains roughly 50 to 55 percent methane and 45 to 50 percent carbon dioxide, with less than 1 percent non-methane organic compounds (NMOCs) and trace amounts of other compounds.
- AQD obtained [Summa Canister](#) samples on three occasions early in 2016 when the landfill gas odors were evident and complaints had increased dramatically from prior years. Canister samples were analyzed for methane (a major component of landfill gas) and NMOC's. The NMOCs were of primary interest because they can pose health concerns if present at high enough levels. AQD toxicologists compared the detected levels to available public health screening levels to see if they posed public health concerns. No public health concerns were identified.
- Landfill gas may contain hydrogen sulfide and other sulfur compounds that are highly odorous. These compounds typically have odor thresholds that allow a person to smell them long before levels that would pose health concerns.
- EPA conducted methane and hydrogen sulfide air monitoring over two dates in 2016. Results were reviewed by AQD toxicologists and no public health concerns were identified. EPA's conducted another round of sampling in October of 2017 and is in the process of evaluating the data and finalizing a report. This report will be available on the [Arbor Hills website](#) once it is completed.

Odor Surveys

Advanced Disposal Services (ADS) states that every complaint received by the MDEQ or ADS continue to be investigated in a timely manner and shared with all interested parties. All complaints investigated by Arbor Hills and third-party odor consultant, RKA, to determine the specific source and measure odor intensity. Timely actions are taken, as necessary, to reduce or eliminate any offsite odors.

- For additional information about RKA see their website: <http://www.rka-inc.com/about-us.html>

- AQD has audited the RKA odor survey process and has accompanied technicians on several occasions from a quality assurance/quality control perspective, most recently on December 1, 2017.
- AQD and WMRPD are continuing to conduct regular inspections and odor observations independent of RKA.
- Several community observation points have been added since September to address locations where complaints are originating. Observation times have been adjusted to reflect times complaints are being received.
- Regular, but low intensity odors continue to be observed. These odors are primarily associated with garbage, and to a lesser frequency, landfill gas. Compost odors have also been occasionally identified.
- As of October 2017, 546 odor surveys had been performed by RKA along with numerous inspections and odor observation investigations by DEQ staff.
- Odor Survey Specifics:
 - At community locations, landfill gas was never detected at a level greater than 2 on the Scentometer scale. Levels greater than 2 trigger immediate action.
 - Of the 546 surveys, a landfill gas odor at a community location was detected 65 times.
 - Of these, 42 percent were detected in January and February, prior to the installation and commissioning of the temporary flare at the northwest corner of the property.
 - Since the flare was installed in February 2017, landfill gas was detected 38 times at less than 2 on the Scentometer scale.



Odor Reduction Efforts

ADS's investment in improvements to the landfill gas collection system in 2017, and the installation of the temporary landfill gas flare, have resulted in significant reductions to offsite gas detection. The recent installation of the geomembrane of the final cover and temporary cover will continue to improve gas collection efficiency.

ADS has taken the following steps recently to mitigate odor issues, while construction continues through next summer:

- Installed a misting system to contain odors on site
- Applied an odor minimizing product to trash prior to covering
- Increased the thickness of soil cover
- Currently testing an alternative cover material for potentially enhanced odor control

ADS's work to renovate and upgrade Arbor Hills remains on schedule and they continue to make timely progress on requirements of the US EPA Compliance Plan. ADS's December report included:

- Approximately 2000 feet of 24-inch header pipe was installed along the west perimeter of the landfill;
- The 10-Acre temporary cap was installed on the west slope of the landfill;
- The 20-Acre south slope final cover is expected to be completed by December 31, 2017 except for grass seeding (spring 2018);

- 12 of 13 Caisson gas extraction wells installed earlier in the active cell areas were connected to the 24-inch header pipe installed along the north perimeter of the landfill.

Future Plans

AQD is currently processing a permit for operation of flares by Advanced Disposal Systems. This permit is near complete and expected posted for public comment in the near future. In the beginning of December, ADS secured an agreement with CSX rail to install a new larger gas line under the tracks. While this is an important phase of the overall gas improvements, this is just one of the many components to the overall project.

In coordination with DEQ, ADS continue to evaluate products and techniques to enhance daily cover and mitigate trash odors in both the active area of the landfill and the waste excavation area after operating hours. As a recent example, ADS will be using a smooth drum roller after placement of daily cover soils to reduce permeability of the cover soils in an attempt to reduce these after hour odors. RKA odor surveys, as well as regular inspections by DEQ and EPA will continue. Within our authorities, EPA and DEQ will continue to work with ADS to identify further improvements to continue to mitigate offsite odors. It should be noted, however, that due to the proximity of homes to a landfill of this size, odors will not be completely eliminated.

AQD and WMRPD District Supervisors scheduled an on-site meeting and inspection in December. Purpose is to follow up on the EPA inspection and compliance activities and to verify the status of corrective actions. In addition, DEQ will be evaluating waste management of overall landfill operations.

Where can I find more information or get help?

The MDEQ has developed a website specifically to keep the community updated on the issues involving Arbor Hills Landfill. The website is www.michigan.gov/deqarborhills. You are also encouraged to register to be part of our e-mail listserv. This is another way the MDEQ hopes to provide up to date information to interested parties. You can sign up at the public meeting or go to our website, www.michigan.gov/deq, click on the red envelope at the bottom of the page and then choose "Arbor Hills".

For complaints or other concerns you may contact Arbor Hills Directly using their community hotline
Community Hotline: 248-305-8432 or go to their website and fill out an online complaint form. The MDEQ is automatically sent all complaints received by the Arbor Hills website. You may also contact MDEQ Directly by calling our MDEQ Environmental Assistance Center at 800-662-9278 or by filling out our MDEQ Online Odor Complaint Form located on www.michigan.gov/arborhills website.



Michigan's Environmental Justice Policy promotes the fair, non-discriminatory treatment and meaningful involvement of Michigan's residents regarding the development, implementation, and enforcement of environmental laws, regulations, and policies by this state. Fair, non-discriminatory treatment intends that no group of people, including racial, ethnic, or low-income populations, will bear a disproportionately greater burden resulting from environmental laws, regulations, policies, and decision-making. Meaningful involvement of residents ensures an appropriate opportunity to participate in decisions about a proposed activity that will affect their environment and/or health.