

## **Odor control efforts at Apex Sanitary Landfill since fall of 2011** **Summary as of April 19, 2013**

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Following a conference call on April 15, 2013 between Ohio EPA Director Scott Nally and concerned citizens who live near Apex Sanitary Landfill (located at 11 County Road 78, Amsterdam, Jefferson County), the Director requested a summary of odor control efforts at Apex since the enforcement case began which resulted in the December 22, 2011, consent order. Ohio EPA issued a citizen advisory and news release at the time: <http://www.epa.state.oh.us/Portals/47/nr/2011/december/Apex.pdf>.

Below is the summary of odor control efforts at Apex.

Apex and its consultants promoted a greatly expanded gas collection and control system as the primary method to control odors. Ohio EPA agreed to this approach and also required Apex to propose a plan to expand the gas system twice a year going forward. The expansion of the gas system and other engineering controls employed by Apex include the following:

- By March 2012, Apex expanded the active gas system by installing 41 new vertical wells and additional horizontal collectors. The new additions increased the amount of landfill gas removed and combusted in a new flare by five times the amount collected in 2010 and 2011.
- By the end of 2012, Apex had 62 vertical gas extraction wells, 7 gravel column wells and 13 horizontal extraction trenches. These are all common methods to collect and control landfill gas.
- Apex has redesigned the way waste is placed at the edge of each cell so that a temporary soil plug is used to improve landfill gas containment during future cell tie-ins.
- By the end of 2012, Apex has placed 53 acres of transitional cover, which is a 24-inch thick soil cover that will remain until the placement of final cap.
- By June of 2013, the facility should reach final elevations at the northern end of the landfill as approved in the current permit. This will require Apex to complete placement of transitional cover over the crown of the 40 northern acres of the facility. The addition of transitional cover should aid in controlling odors.

Apex has summarized its daily odor control efforts since the fall of 2011 as follows:

- Odor control suppression equipment is used on a daily basis and has evolved into more reliance on mobile units like vapor misters, Jacko misters and high volume misting units. The vapor misters use compressed air lines that are now installed and used at vertical gas extraction wells, so there are many areas on the landfill to place these units. Jacko misters are mounted on tractors and can dispense water based deodorants near any areas of cover materials that need to be repaired. The high volume misting units are mounted on trailers and used near the working face. The number of pieces of equipment and their locations

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- are determined by on-site personnel based on site conditions and communication with the odor surveillance staff.
- The fixed landfill perimeter vapor system is still in place along the northern end of the landfill. It provides for odor suppression at the outside edge of the haul roads which go around the landfill. There is some consideration of whether it should be relocated up to a bench two thirds of the way up to the crown of the landfill.
  - Apex has assigned personnel on-site whose responsibility is odor management. The odor personnel oversee placement of odor suppression equipment as well as maintaining the active gas system.
  - Apex has reduced its working face size to an area typically 150 ft. x 150 ft. to help control waste odors.
  - Apex is using screened soil to increase the effectiveness of intermediate cover and often daily cover. This is done to reduce voids and helps to lessen odor releases.
  - Apex has reviewed odorous waste streams and made the decision to discontinue acceptance of some sludges. Apex has also rejected some over the road waste when it was determined that the load could create an odor issue at the facility.
  - Apex has created a division that monitors for odor and responds to citizen complaints. These trained staff conduct routine monitoring for off-site odors within the community 24 hours a day, 7 days a week. Complaints received on the hotline are investigated immediately.
  - Apex maintains records regarding odor monitoring and complaint response. The records are readily available to Ohio EPA and the Jefferson County General Health District for inspection.

Ohio EPA and the Jefferson County General Health District (JCGHD) cited odor violations 14 times from January 12, 2012 to March 13, 2012 during the time when field work was performed to expand the active gas system. After April 2012, no violations have been cited for failure to control odors. Detectable odors have been observed by Ohio EPA or JCGHD inspection staff within the areas immediately downwind of the landfill, but they have not been at an intensity or persistence that would be cited as a violation. There is general agreement among all the inspectors and engineers that have performed odor monitoring around Apex Sanitary Landfill that there has been a marked improvement since the fall of 2011.

Ohio EPA's Division of Materials and Waste Management is developing a Standard Operating Procedure for investigating off-site odors from solid waste landfills that the Agency and health departments can use in the future. In addition to the odor surveillances conducted thus far, Ohio EPA intends to conduct increased odor investigations.