Michigan Department of Environmental Quality

Waste Management and Radiological Protection Division

Part 115 - Annual Landfill Operations Checklist

Part A: General Operations

1. *List any violations that have been observed in the past year.*

   There have been 2 violations observed for odor issues at Arbor Hills, in addition to a follow up complaint for not sufficiently addressing one of the violations. In May 2017 an EPA consent order was established and requires monthly construction updates, and monthly updates on gas well monitoring, well updates, and methane content of gas. This consent order is active for two years.

2. *List any areas of concern identified in the past year.*

   A few areas of concern at Arbor Hills are the overall odor issues, compost practices, and the amount of waste the landfill accepts.

3. *List any violations that were observed during the course of this inspection.*

   Leachate levels in cell 4 were reported at 326.0" in the primary collection system, which is well over the allowed amount.

4. *Are any of these violations/areas of concern recurring from inspections in the last three years?* ☐ Yes ☒ No

   Comments:

Part B: Odors

1. *How many odor complaints have been received in the previous year by the facility and by the MDEQ (include complaint totals for AQD + WMRPD in MDEQ total)?*

   Hundreds of odor complaints have been received by the facility and MDEQ over the past year.

2. *How many were verified as violations of Rule 901 of Part 55 by the MDEQ?*

   2 verified violations.

3. *Based on MDEQ and/or Facility staff opinions, what were the probable sources for the nuisance odors?*

   Probable sources of nuisance odors are garbage, landfill gas, and compost.

4. *How were the nuisance odors controlled?*

Daily cover has been increased to help control odor, as well as additional perimeter monitoring, deodorizing spray is being applied, and compost is only turned/ground in favorable weather conditions.

5. *Are the controls effective?*

These practices have reduced, but have not eliminated, nuisance odors.

Part C: Landfill Gas Control and Monitoring

1. *How is gas managed at the landfill? (Check all that apply)*

☒ *Active:* ☒ *Generates electricity* ☐ *Used industrially* ☒ *Flared* ☐ *Other*

☐ *Passive:* ☐ *Flared* ☐ *Vented* ☐ *Other*

2. *If actively controlled, does the landfill have plans to modify/expand the gas collection system?*

GCCS plan includes yearly updates of gas collection system and is modified every 2-5 years. Currently ARBOR Hills is increasing the amount of blowers from 2 to 4, in order to handle the amount of gas produced and avoid overheating the system.

3. *Is perimeter methane monitoring conducted at the facility?* ☒ *Yes* ☐ *No*

Comments:

4. *How many in-ground gas probes are monitored*? 23

Comments:

5. *If applicable, are the gas probes screened intervals open to the vadose (unsaturated) zone?* ☒ *Yes* ☐ *No*

Comments:

6. Does the landfill measure water levels during sampling in each gas probe?
☒ *Yes* ☐ *No*

Comments:

7. *How many bar-hole probes are monitored?* None

8. *How many above ground locations (not including probe and building locations) are monitored outside?*

None

9. *Do all on-site buildings and homes have ambient monitors?* ☒ *Yes* ☐ *No*

Comments: Salt barn, maintenance shed, scale houses, and compost office. The main office is located far enough from the landfill to not require monitoring.

10. *Are all gas monitors calibrated for methane and tested to verify that the alarms would work when methane levels meet or exceed 25% of the LEL (1.*25% methane by volume)? ☒ Yes ☐ No

Comments: Annually

11. *Summarize any methane exceedances of the lower explosive limit (LEL) at the property boundary that were recorded in the past year. Include Probe #(s), duration of exceedance, and levels:*

Probe #14, 16R, and 28R2 have consistently been reading >100% of the LEL

12. *Summarize any methane exceedances of 25% of the LEL as measured in facility structures recorded in the past year. Include structure affected, duration of exceedance, and levels:*

None

13. *If methane exceedances have occurred in the past year, summarize any corrective actions taken to control landfill gas at the facility:*

Auto waste collectors to be installed.

14. *Does the facility routinely submit gas monitoring data to WMRPD?*

Annual reports through EPA consent order (near April/May).

Part D: Leachate Collection and Secondary Collection System

1. *What is the action flow rate (AFR) for the facility?*

Cell 1, 2, 3, 5: 25 gal/ac/day
Cell 4: 5 gal/ac/day

2. *Have there been any exceedances of the AFR for any cell at the facility in the past year?* ☒ *Yes* ☐ *No*

Describe: Cell 4 reading 20.24 gal/ac/day. Possibly due to current construction near cell. The liquid is clear and believed to be stormwater as opposed to excess leachate.

If yes, did the facility implement a liquids management plan? ☒ *Yes* ☐ *No*

Comments: Increased monitoring and sampling.

3. *What is the response flow rate (RFR) for the facility?*

   Cell 1, 2, 3, 5: 200 gal/ac/day
   Cell 4: 25 gal/ac/day

4. *Have there been any exceedances of the RFR for any cell at the facility in the past year?* ☐ *Yes* ☒ *No*

   Describe:

5. *What is the total volume of leachate generated by the facility in the last year (identify time frame included in volume calculation)?*

   Approximately 36 million gallons.

6. *What is the volume of leachate sent for treatment and disposal in the last year (identify time frame included in volume calculation)?*

   All, no recirculation.

7. *Where was the leachate sent to for treatment and disposal?*

   Sewer to city of Northville to YCUA (Ypsilanti Community Utilities Authority).
   Pump and haul to Dart.

8. *How is leachate removed from the site?*
   ☒ *Truck and haul*
   ☒ *Hooked to sanitary sewer*

9. *What is the total volume of leachate reintroduced into the facility in the last year (identify time frame included in volume calculation)?*

   None

10. *What is the maximum allowable volume or rate of leachate recirculation allowed in the facility's approved leachate recirculation plan?*

    Arbor Hills is able with approved plan, but does not recirculate leachate.

11. *Has there been any ponding of leachate due to recirculation?*

    N/A

12. *Where/how does the landfill collect its leachate sample(s)?*

    Side slope risers, at each sump, and at the outfall.

13. *Describe any leachate head compliance problems that have occurred in the landfill in the last year, and how they were addressed.*

    Cell 4 accumulating rainfall, pump insufficient and possible transducer issues.

    Have these problems resulted in the Facility being cited a violation of Part 115? Explain.

    No violation but is a current issue that needs to be addressed.

14. *Is there any evidence or history of leachate outbreaks in either the open or closed landfill areas?* ☒ *Yes* ☐ *No*

    Comments: Small seeps noticed occasionally but addressed quickly.

    Do any of the leachate outbreaks constitute a violation of Part 115? *No*

    Explain. Stated as an issue, not a violation.

Part E. Prohibited Waste

1. *How often is the facility completing random and suspicious load inspections?*

   A minimum of 5 random inspections completed a month.

2. *Do these inspections appear to be adequate?*

   Yes, no prohibited waste observed during inspection.

3. *If you observed a random or suspicious load inspection, was prohibited waste found?*

   No prohibited waste found.

4. *Briefly describe the process used to determine which loads will be inspected as part of the random load inspection system at the facility.*

   How many loads are inspected each month? (Give Number or Range of Numbers) 5 loads

   How are loads chosen for inspection? (Describe the Process Used)

   Loads chosen at random. Recommendations made to spread out inspections so they occur at the beginning, middle and end of months, rather than only midmonth.

Part F. Cover Material

1. *Does the facility use alternate daily cover?* ☒ *Yes* ☐ *No*

   What is used? Contaminated soils

   Comments: Need to monitor side slopes for possible runoff.

2. *Does the facility maintain testing records for class b and c daily cover materials?* ☒ *Yes* ☐ *No*

   Comments: Records were provided.

3. *How often are class b and c alternate daily cover materials tested?*

   Each soil is tested and profiled before it is received.

4. *Does the facility have an up to date map that identifies areas with final cover and interim cover?*

   Yes, a map was provided. Plastic and clay are used as interim cover.