

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

ACTIVITY REPORT: Self Initiated Inspection

N268849253

FACILITY: Advanced Disposal Services Arbor Hills Landfill Inc		SRN / ID: N2688
LOCATION: 10690 W. SIX MILE RD, NORTHVILLE		DISTRICT: Jackson
CITY: NORTHVILLE		COUNTY: WASHTENAW
CONTACT:		ACTIVITY DATE: 06/18/2019
STAFF: Mike Kovalchick	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MAJOR
SUBJECT: Visit included H2S monitoring walk inside the landfill and check of known odor locations.		
RESOLVED COMPLAINTS:		

On June 18, 2019, we conducted unannounced compliance inspection of Advanced Disposal Services (ADS) Arbor Hills landfill located in Northville, Michigan (Washtenaw County) at 10690 6 Mile Road. The purpose of this inspection was to determine the facility's compliance status with applicable federal and state air pollution regulations, particularly Michigan Act 451, Part 55, Air Pollution Control Act and administrative rules, conditions of the ADS's Renewable Operating Permit (ROP) number MI-ROP-N2688-2011a and Permit to Install (PTI) permits 19-17B and 79-17. The inspection was also conducted to support on-going EGLE efforts at negotiating a proposed Consent Order with ADS to resolve previously identified violations.

This report is to document our visit to the landfill this morning between 8:30 am to 11:30 am.

Some highlights:

Visited the temporary CAIRPOL H2S monitoring station just east of Napier road. It appeared undisturbed and the sensor showed full battery power despite the recent cloudy days.

Stopped at the office and met briefly with Mark Johnson. He was busy so he got Anthony to walk us around for the visit. I asked him why the candlestick flare was operating. He said that they now have excess gas beyond the capacity of Fortistar to utilize it. (I noted that there is additional 1000 cfm of gas now coming from the top of the hill in May compared to the previous month as they now have started to open up some but not all the gas wells valves up top. Note also there was at least a ten degree increase in the elevated temperature wells compared to the previous month but this might be due to seasonal effects? Methane concentration appears to still be slowing declining.)

We explained to Anthony that we wanted to do an inside the landfill perimeter walk to start at TS-01 and do a clockwise walk around entire landfill just below the top of the hill.

TS-01 overflow catch ponds still contained less than normal liquid levels as Mark had explained that they have high air pressure lines now over the entire landfill making all the pumps to work better. TS-01 is pumping nearly 15,000 gallons per day compared to previous estimates of 10,000 gpd. The ground hog size holes of gas directly adjacent TS-01 were still there but one of them had filled partially with water creating a lot of bubble action. I estimate that the amount of gas being released is no more than a normal well that isn't controlled so probably in the 150 scfm range. Intense odors were noted downwind (wind very light out of the East but occasionally SE and even NE-mixing was fair to poor due lingering morning inversion.) Jermon meter showed elevated H2S levels but I did not get close to where it was coming out of the ground to avoid saturating the sensor as what happened during the previous visit. (See attached photo. Took video etc.)

Visited the Frac tanks. Intense odors; gas mixed with some other type of nasty odor. Strong odors and elevated H2S readings noted well down wind. The amount of gas/steam coming out the top of the frac tanks appeared to far exceed the quantity of gas coming out at TS-01 and easily is a larger source of odors than TS-01. Anthony insisted that the aeration system was working as quite possibly if it wasn't, it would be far worse. Mark noted that the TS-01/aeration tank/lift station is now at least 1 month behind schedule so current target is August 1. (See attached photo.)

Adjacent to the Frac tanks is a steel catch basin that extends down to 53 feet deep? It wasn't clear to me its purpose but has been in place for decades. Mark outlined that there was some sort of incident back in May with material crashing/falling down into the catch basin breaking utility lines etc. in the process. They are still working on it. See attached photo. Right next to it is a containment pond of some sort. No odors directly related to this.

From there is was a long walk often through high grass(see attached photo) to the NW side of the landfill to the

vicinity of the problematic drain tile area next to the haul road. Elevated H₂S levels noted over a wide area. Elevated methane levels of several hundred ppm covered at least a 1 acre area drastically larger than any previous methane seep discovered during previous visits. One area had in excess 10,000 ppm but with no obvious surface marking such as crack in the ground or dead vegetation (we have GPS coordinates for it...see attach photo of high methane spot.) Note that there was 2 pink surface scan flags in this area next to the well but not near where I encountered the high methane. At this point, Anthony rejoined us. We were able to determine that the vacuum to well (might be 149R2 but photo I took of it unclear) in the vicinity had been lost (pinched off line?) and they were in the process of attempting to lay a line on top of the ground to restore vacuum to the well which should help catch most of the gas that I had discovered. This is only part of the drain tile area. (Note: Mark noted that they ordered the parts for the drain tile project including a nearly designed gas capture system but again were behind schedule due to the rainy weather.) Also noted leachate seeps and storm water that appeared to be contaminated with leachate in the storm water drain adjacent to the haul road (uphill side section) in similar location to previous visit. Anthony said that it wasn't the same seep as last time. We didn't fully survey the area but instead headed up the hill in a NE direction to round the NW corner of the landfill. Much of the cover in this area was thin with trash poking out of it in many areas especially in erosion ditches which were very numerous.

At the NW portion of the landfill, we encountered intense trash/sewage type odors over a wide area which is downwind of the North active face. H₂S was also somewhat elevated. (Mark later remarked that he thought they have been receiving sewage from Ann Arbor.) This part of the walk was very unpleasant due to the nauseating odors and hazardous walking conditions. It became increasingly difficult to proceed. We spotted Anthony off in the distant so walked towards him and then followed him back to where his truck was parked at the top of the hill. I then proceeded down the hill in a trash free area so could examine the area below the subsidence area. Moderate unpleasant odors likely due to the elevated temperature event continue although H₂S readings were only moderately elevated. It appears to be in the area just below 35 feet high pile of dirt that had been placed on the subsidence area. (See attached photo.)

Just below the new dirt was a leachate seep. The seep had been discovered during previous visit but now was extending in a line more than 100 yard long. (See attached photos.) It wasn't visited during the last visit as it was assumed that it was already covered up. Anthony mentioned that they will continue to push more dirt down the hill which should cover up this area.

The gas bubble under the geoliner just above the north active face had disappeared. Within a few feet of the north active face, I spotted what appeared to be asbestos drums/bags. (See attached photo.) Mark later confirmed that yes they are now disposing of the friable asbestos in pits near the active face and discontinued disposing of them at the top of the hill. It appears that at this location, it mostly certainly is getting covered up every day. Downside being is that the waste is in much closer proximity to landfill/truck personnel in an extremely active area.

Proceeded just below the top of the landfill in Arbor Hills East area. No odors were noted in this area. Near the top, on the SE/S facing side noted a small pond. Adjacent to the pond, the water had eroded an enormous ditch at least 6 feet deep. See attached photos. I noted to Mark that it isn't a good idea to have all this standing water near the top of the hill and mentioned previous engineering study that noted standing water in a similar location which added to a potential slope stability problem on the southside. Mark mentioned that they working on it.

From there, proceeded back to TS-01 where I was picked up by Anthony and Scott. See attached route map that we took. Anthony brought us back to the office where we briefed Mark on our findings before departing.

Top of the hill was too active to access or to think about looking for odors.

Mark mentioned they are now pumping more leachate and do have some township variance to pump more. He mentioned that on at least one occasion, they pumped 250,000 in day. This was back in May time frame associated with the incident that I witnessed. A broken horizontal leachate line was severed during construction forcing them to shutdown the whole leachate collection system. This causes the leachate to buildup. They then used a pump with a higher than expected capacity to alleviate which cause them to go over the township limit. (160,000 gpd?) I think he mentioned they are averaging close to 90,000.



Image 1(Leachate seep-North) : Leachate seep-North slope.



Image 2(Tall grass) : Tall grass.



Image 3(Leachate) : Leachate NW part of landfill.



Image 4(North slope) : North slope



Image 5(High methane) : High methane location on NW part of landfill just above West haul road.

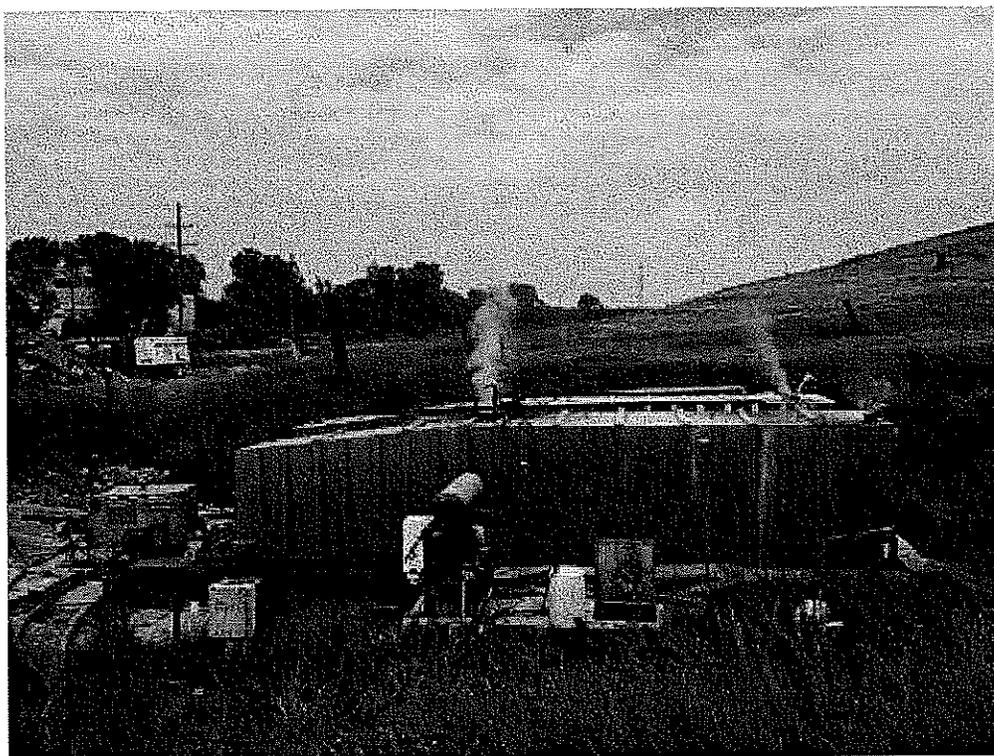


Image 6(Frac tanks) : Frac tanks with unknown gaseous emissions.



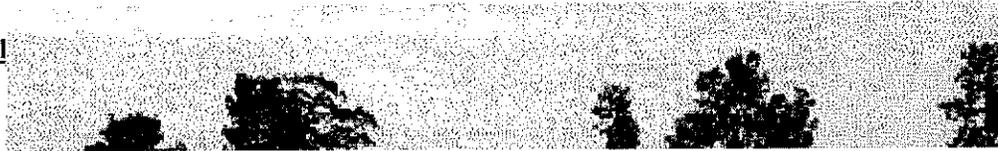


Image 8(Drainage ditch) : Drainage ditch on North slope with high methane/H₂S.



Image 9(Leachate seep) : Leachate seep.



Image 10(Small pond-South) : Small pond just below top of hill on South side.



Image 11(TS-01 gas hole) : TS-01 gas hole.



Image 12(Asbestos disposal) : Asbestos disposal-North active face.



Image 13(Landfill route) : Landfill walking route.

NAME M. Kozalchuk

DATE 10/14/19

SUPERVISOR [Signature]