

DEPARTMENT OF ENVIRONMENTAL QUALITY
 AIR QUALITY DIVISION
 ACTIVITY REPORT: Self Initiated Inspection

N268850157

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: Brian Sanders , General Manager		ACTIVITY DATE: 08/28/2019
STAFF: Mike Kovalchick	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MAJOR
SUBJECT: Summary of latest visit to the landfill.		
RESOLVED COMPLAINTS:		

On August 28, 2019, we conducted an announced 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.

We meet at the office at 9 am with Brian Sanders (New landfill manager) Anthony, Todd Whittle and a consultant with Weaver Consultants. (Some odors on Six/Napier road area. Diane noted trash odors all the way into the subdivisions earlier while doing a separate investigation prior to arrival.)

Some of the highlights from meeting/site visit:

Shown presentation about new horizontal collector wells that are going in and some added details on the drain-tile project adjacent to the NW haul road. Copy of this presentation was later emailed to us along with the results from the 2nd quarter methane surface scan.

New horizontal collector to be installed just below the subsidence area running West to East with a short line attached it that will tie it in with the nearest source of vacuum. This well should take care of all the high methane/H2S readings that I detected previously.

Another horizontal collector going in on the hillside well above the drain tile area. The horizontal collector project is scheduled to start next week. The contractor (Great Lakes) should be onsite Tuesday and start to break ground on Thursday.

After they complete this project, they will start on TS-01. The TS-01 project was explained a little different to us this time around and with more detail. A combination sump/lift station will be installed just above TS-01. They will dig a hole and attempt to intercept the leachate that maybe coming from as many as 2 old horizontal collectors that come in from the high temperature area. Then they will lower the new sump/lift station into the hole. They will then connect this new sump with the existing line that runs down the hill to the 2 frac tanks. At that point, old TS-01 will be disconnected/abandon. The 2 frac tanks are now likely to remain indefinitely. They connect to a nearby lift station that brings it to the "540" tanks. Carbon filtration and ion exchange treatment system is now in place for the liquid discharge prior to the lift station. Sodium hydroxide has been recently added into solution as well.

After they complete the TS-01 project, they will move on to the drain tile project which will be the most complicated/time consuming of the projects. It will involve the installation of 2200 foot long horizontal collector well that will run along the haul road in the vicinity of the existing drainage ditch on the uphill side. Vacuum will be applied every 400 feet along the collector. The line below the haul road will be slice open to expose the existing drain tile piping. This piping will be closed off and the liner will be repaired. New piping will instead be placed on top of the liner and run straight down the hill side. They believe the gas is currently originating in the area above the haul road/not below it and should be intercepted by the new horizontal collector.

Had long conversation with new landfill manager on a number of topics mostly odor related(Mark Johnson's last day was the previous Friday). We discussed at length the sewage sludge disposal at the landfill. He pointed out that it is a tiny fraction of the total amount of MSW that is being placed at the landfill and is quickly covered upon receipt. He says the MSW coming in can be quite odorous especially if there has been rain. Part of the reason why it is so odorous is that it may have been sitting at a transfer station for a while. (DRP transfer station goes to Arbor Hills he noted.) He mentioned that asbestos waste is being disposed of directly adjacent to the MSW

waste and is covered up at the same time it is placed in the ground. There is no separate disposal pit that they use all day as an example. They are, however, taking a GPS reading for each placement which gets sent to somebody else who is recording the information. He mentioned that now have a second water truck and deploy water trucks on a as needed basis. We discussed his views on the use of deodorant systems to control odors from the MSW active face area. He believes that there are systems available that are effective. They are looking into one right now that might be tested as early as next week. He is trying to get one where the chemical involved has a neutral odor. I remain concerned that we may not have enough enforceable language in the draft CO that fully addresses the odors from the MSW.

Discussed new treatment systems that are going in. They have basically completed the TS-01 frac tank leachate treatment system. Treated leachate from there is pumped into the main leachate tank. They have brought in a new treatment system for the main leachate tank. It is similar to the TS-01 frac tank treatment system all contained within a trailer. (The trailer is on-site but not hooked up yet.) This treatment system should be thought of as a polishing system. (The TS-01 leachate effectively getting treated twice.) After this trailer is hooked up, all the leachate from TS-01, AHW and the well condensate should be able to be directly discharge into the sanitary sewer system. Separately, they are bringing in another trailer to be used to treat the PCB leachate from AHE. It is basically a filtration system. They currently are just over the PCB limit in the wastewater so minimal treatment will be needed to allow them to also start discharging this wastewater directly into the sewer as well. The treatment systems should be completed in the near future.

We then started our tour of the landfill. We first stopped at an area near 6-mile road just below the former north active face area. They have been having problems with well #430 to 433. These are new wells in new cell 4E with a remote well head located close to the road. They are applying 50" of vacuum to these wells but aren't getting any flow out of them suggesting that the vacuum lines have been damaged by the placement of the new waste. They plan on directly connecting the vacuum lines to the actual well head which should fix the problem. This should happen shortly. We walked around this area but only minor gas odors were noted. Anthony thought that these wells could have been responsible for the 45+ complaints that were received last night but seems unlikely based on the limited odors observed in this area.

Next, we visited the drain tile project area. We could see that they had just surveyed where the horizontal collector was to be installed and marked it with stakes. Some gas odors were noted in this area but winds were strong so difficult to tell were the odors were coming from.

Next, we went up to the top of the hill to meet up with the senior technician "Darrell" for MCC (Monitoring, Control, and Compliance company.) He is currently taking downhole temperature reading for 60 wells include the 20 WOI wells and those wells with 250 feet of those. He started measuring wells yesterday and had completed 6 of them. He had finished a total of 4 today just prior to us leaving. We meet Darrell at well 286R. This well was only a few feet away from the current active MSW disposal area. This area was very loud and odorous. Darrell already had the top of the well head removed with visible odorous steam coming out. He had placed a tennis ball to close off the vacuum pipe to prevent air from getting into the lines.

This is the procedure he followed to measure the temperature. He first took standard well gas parameter readings using the Envision meter like we witnessed during the previous visit. He used the temperature reading from that to make sure it matched the thermocouple that he was using attached basically to an extra-large tape measure on a reel with pieces of tape used to mark out the ten foot intervals on the tape measure. He changed out the first thermocouple as he suspected a problem with it. He then used a separate reel to lower the line into the hole to determine the liquid level and recorded it. Then he determined the depth to the bottom of the well and recorded that it. (It is little tricky to figure out having to pull/drop tape a few times to be sure on bottom.) They he started back at the top again and lowered the thermocouple attached to the tape measure down the hole. The thermocouple digital display device was attached to the side of the reel. He took measurements every ten feet and recorded the results. He paused for a couple minutes at each level for the readings to stabilize.

I recorded the following for 286R.

20 feet 144 F

30 feet 145 F

40 feet 146 F

50 feet 146 F

60 feet 147 F

70 feet 143 F

80 feet 139 F

90 feet 138 F

97 feet 138 F. (Note: 80 feet to water, hole depth 87 feet. July well head temp given to us previously was 133 F. Note also the slight cooling trend at bottom of well.)

I recorded the following for well 290 which was one of two wells that we visited last time. No steam and much less gas appeared to be coming out this well compared to 286R.

Well head 75 F

10 feet 79 F

20 feet 84 F

30 feet 84.5 F

40 feet 83.8 F

50 feet 90.7 F

60 feet 98.4 F

70 feet 115.6 F

80 feet 136 F

90 feet 141.6 F

100 feet 149 F

110 feet 146 F

120 feet 150 F

130 feet 154 F

150 feet 163 F

160 feet 163.8 F (In liquid. Liquid level at 130 feet, total depth 178 feet. July well head temp given to us previously only 75 degrees F so drastic difference as we suspected there would be. No cooling trend at bottom in this well. If no liquid present, would likely have been hotter.)

Darrell noted to me that the highest he had observed at other landfills that he has tested was 180 degrees F downhole. Overall, taking the measurements was taking longer than expected so it was likely going to take a few more days to complete. It appears that Carleton Farms will be doing a similar downhole temperature survey likely using the same contractor per conversation with Anthony. We should get all the results on September 15th.

After observing this well, we then returned briefly to the office parking lot before leave just after 12pm. See attached photos.



Image 1(Top removed-well) : Top removed from well head to do downhole temperature test.





Image 3(Testing 286R) : Testing well head 286R.



Image 4(West haul road ditch) : West haul road ditch were horizontal well is going in marked with yellow pole.



Image 5(Active face on top) : Active face on top.



Image 6(Well haul road ditch) : Well haul road ditch.



Image 7(Down hole test) : Down hole temperature testing.



Image 8(Down hole testing) : Down hole testing.

NAME M. Kovalchuk

DATE 10/14/19

SUPERVISOR 