

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

N268848467

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: 04/12/2019
STAFF: Mike Kovalchick	COMPLIANCE STATUS: Non Compliance	
SUBJECT: Deployed Flir E8 Infrared camera to check for hotspots at landfill.		SOURCE CLASS: MAJOR
RESOLVED COMPLAINTS:		

On April 12, 2019, I 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.

I arrived at the landfill today between 10:30 to Noon time frame. The significant issue noted from today's visit is that the landfill's leachate problems appear to be escalating. Didn't check for odors as winds were out of the East gusting to 40 mph on the hill top. Primary purpose on the visit was to deploy the FLIR E8 Infrared camera to determine if any local hot spots on the landfill especially in the vicinity of the subsidence area on the North side to make sure there wasn't some sort of smoldering fire present at or near the surface. I stopped in the office briefly. Mark Johnson brought me to the top of the landfill overlooking the subsidence area. It was evident that more dirt had been added to the subsidence area. Mark indicated that there were grading the area in preparation for the temporary liner that will go on the upper North face to block any possible oxygen infiltration into the ETLF portion of the landfill. (Note: Discussed my test bore hole idea. He says because of so many unknowns he is afraid to drill in the middle of the thermal area at this time as that would introduce oxygen in to it etc.)

We got out and walk around that area using both the FLIR E8 and the H2S monitor. Background H2S was between .001 and .003 ppm. Scattered elevated areas of H2S noted in various areas right on the ground at approximately .015 ppm range. The previous boiling liquid area had been covered over and yet to break through the new dirt. Moderate odor was noted over the subsidence area but it appeared to be mostly of the petroleum contaminated soil variety probably coming from the dirt they were using as fill over the subsidence area. (I didn't smell the acrid gas smell that was noted previously.) Just below the subsidence area and just to the East is a new well. This is same well that I saw previously that had its well held dislodged. Starting from that well running in a line about 100 yards (scattered areas) to the East was a new leachate seep that we discovered while out there. Mark estimated that it must have started some time after my last visit as we walked right over it before without seeing it. The leachate is dark brown color with only a little odor and no hydrogen sulfide measured coming from it. It was seeping rather than flowing so didn't yet appear to be a storm water problem as the volume of the liquid was very low. No bubbling was seen at all so it appears doubtful that it is also a methane seep. (Didn't have the methane meter with me.) The temperature of it wasn't elevated. Mark mentioned that this new well was producing very high levels of methane. When they initially drilled it, there was a strong geyser of liquid that came out of the ground but the pressure quickly dropped and liquid flow had stopped. (High pressure liquid is a ETLF feature.) It isn't known in what way this new seep is related to this well or if it is related to ETLF event. Thermal scan of the area didn't detect any hot spots above background noise. (Note: Conditions were not ideal with high winds, some sun and all the new cover on the ground.) I did note from taking a distance thermal photo of the North liner that the temperature of the gas bubble portion of it was elevated. (See attached photo.) A well at the top just above the subsidence area had just recently been measured to have a 131 deg F. temperature reading with methane but no CO. Mark indicated that he didn't know if a new CO reading was available for the well inside the subsidence area. (i.e. the one that was measured very high previously.) (Note: Thermal scan of the outside portion of this well was only in the 70's F.)

At the top, they were actively grading over the area so that it looked vastly different than the previous visit. I even noticed that entire shape of the hill had changed as viewing from Beck/5 mile road area. This area is being graded over to help with storm water runoff and also in preparation to lay pipes down on the ground. After getting a flat tire to our truck fixed, we headed down to the South side of the landfill to view TS-01. While headed that way, Mark outlined a number of leachate issues. In the last couple of days, the whole leachate collection system had been shutdown for one day due to blockage in the outlet pipe. Somewhere in the pipe, is a narrow area. An

object got lodged in this spot. After about a day, they were able to get the object dislodged. The narrow part of the pipe was likely caused by scale building up had not been fixed yet. (ETLF events increase the levels of salts in the leachate increasing scale.) Mark thinks they may be overestimating the amount of leachate that they are pumping to the township sewer system due to the narrowing of the pipe so hopes that will help out when they start to increase pumping. He mentioned that anything they don't send out through the sewer will be hauled by truck offsite. Mark believes that when the leachate collection shutdown, the lack of aeration in the tanks generated a lot of odors and may be responsible for recent odor complaints. (I think there is a level indicator in the tanks, if it gets too high, it automatically trips all the lifts/pumps upstream. That is how the blockage was detected.) Mark mentioned that leachate from Cell 4 is jet black. They are having problems with the pumps there. They are getting a rubbery substance that is adhering to the pumps. They had it tested, it is some sort of polymerization reaction going on. Mark mentioned that they have received the first wave of pumps. (i.e. the 40) However, the person that ordered them only ordered the pumps themselves and not the kits used to attached the pumps to the wells so this has created a bit of a delay. He mentioned that they have starting welding pipes together and staging them in the vicinity of the old North temp flare. Mark mentioned that the new sump for TS-01 had just arrived. (See attached photo.) They will install the plumbing first before they dig into the side of the hill. The new sump was laying on the ground near the compost area. The level of the water in pond next to it was quite high. Mark mentioned that they are using that water for their dust truck etc. (I noted that a water truck was actively spraying the windrows with water while I was there.)

We arrived at TS-01. It was very active. Leachate had once again overwhelmed the pump and was close to breaching the small leachate dams. I could see actively flowing from various locations. The leachate appeared to have turned darker in color and was foamy. (Marks says recent tests show that it hasn't changed characteristics but not sure exactly what they are testing it for.) The leachate had swamped the well head itself so it was completely surrounded and mostly submerged. Thermal scan showed the leachate was hot at or above 110 degree F. The well head itself appeared cool. Mark got on the phone and called in a truck to pump out all the excess leachate. That concluded the visit.



Image 1(Top of landfill) : New grading of top of landfill.



Image



area.



Image 3(New leachate seep) : New leachate seep North side.



Image 4(New Sump) : New TS-01 Sump

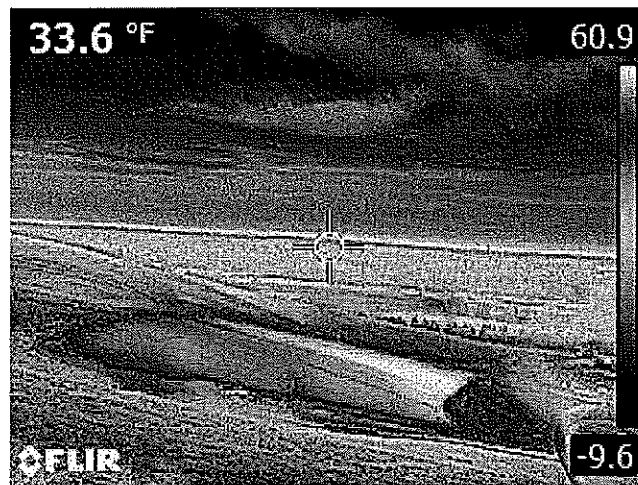


Image 5(North liner IR) : IR image of North liner showing heated gas bubble.



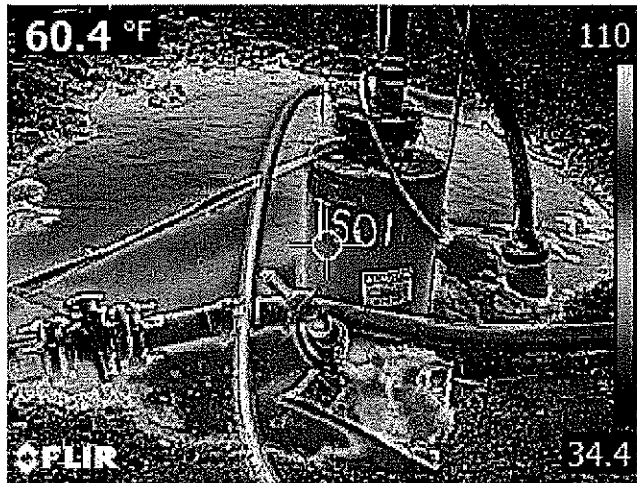


Image 7(IR Well Head) : IR image of TS-01 leachate pond with temperatures of up to 110 degrees F.

NAME M. Kovalchuk

DATE 10/14/19

SUPERVISOR [Signature]