

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

N268850864

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: 09/25/2019
STAFF: Mike Kovalchick	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MAJOR
SUBJECT: Latest landfill site visit.		
RESOLVED COMPLAINTS:		

On September 25, 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 office at 8:30 am (and stayed till 11 am) and met with Brian Sanders and Anthony.

Stronger than normal odors noted on Napier. Wind was brisk out of the SSW. Waste/Leachate/Sewage type of smell-very unpleasant. (Odor complaints had been received.) Dust levels were less than normal.

Upon arrival at office, I noted that the main candle stick flare, and the East Enclosed flare were operating. Anthony didn't know why. He did say that he knows that the flares have been on quite a bit lately due to the increased gas flow but also because of the warm weather. He said that when the weather is warm, the equipment (Turbines?) at Fortistar heats up to the point that it forces them to vent the excess gas instead of burning of it.

Discussed many separate issues prior to Brian taking me out to the landfill. Probably the biggest issue was with future Cell #6 which is located at the far NE corner of the landfill at the intersection of Six Mile/Napier roads and closest to the subdivisions. The current plan is to begin excavating the old waste associated with unlined Ann Arbor's East next Spring. It will be done in small squares at a time. The excavation needs to be completed in preparation of laying of a new leachate liner. They estimated that the new waste won't be received in Cell 6 for about 2 years. They showed me a blue print of the proposed designed noting that what they were showing will be modified. It did show the outline of a new cell covering about 16 acres of the available 33 acres in that area with the weight scales remaining in place. The new cell goes all way to just about touching Napier road. I mentioned that I was quite concerned about odors occurring when they were excavating the old waste and transferring it to adjacent Cell 4C especially since this cell is so close to the residential area. Anthony mentioned that did do an Odor Minimization Plan for Cell 4C when it was originally constructed having to move waste in a similar fashion. I suggested that they start by dusting off that plan and applied to the new planned cell. Anthony mentioned that he said the old waste associated with Cell 4C wasn't that odorous and he expects the same with waste that is removed from the new cell.

Discussed the various construction projects. TS-01 project was basically completed last week. There are now 2 sumps there; the old and new one. The new one is located just uphill from the old one. Two separate liquid pumps were installed in the new one. They mentioned that they were able to locate the old horizontal collector (Installed back in 2006 Anthony thought?). It was a 6" diameter line. Liquid was seeing flowing out briskly but not excessively so. This horizontal collector runs N/S with the other end going just past 259R3 to the East and then terminating just West of 290 likely more than 100 feet below the surface (AKA It's source region is the 2 hottest wells in the landfill.) The horizontal pipe isn't directly connected to the sump. Rather, it ends in a large 25 foot across bed of gravel that surrounds the sump. This area is capped off with clay. The old sump will remain as a back-up to the new one. The old pump will remain operational. It turns on based on a float system. The leachate overflow ponds are still there. They will start pumping them as early as later today. They will then be filled in with clean dirt and graded. Some type of berm will be put in place so that in case of catastrophic failure of the TS-01, the liquid would be directed away from the large storm water pond far below. (i.e. don't want to contaminate that pond.)

They are almost finished with the North side horizontal collector which is below and just NW of the old

subsidence area. It will be 562 feet long with another 50 feet or so left to do. They thought that they might finish today but probably not as they hit an air force-main pipe that crossed the path of it which they were working on repairing. They have been doing one section of it per day covering up the trench each evening and capping off the horizontal pipe that has already been laid. It slopes down towards the WNW where there is a sump to remove the liquid. The opposite end is where they will be drawing off the gas.

The West Haul road project is scheduled to start Monday September 30th with full excavation to start around Wednesday and last perhaps to the end of October. It will be 2600 feet long with 4 separate gas extractions points every 400 feet.

Arbor Hills East new leachate collection system is now operating. (The equipment is all inside a trailer.) PCBs levels are now non-detect. They will need to show YUCA about 6 months of data prior to being able to discharge to sewer. Arbor Hills West new treatment system is also now operating. It cuts COD by 50% and PFAS type compounds by 98%. Brian noted that ADS is currently in violation of the COD requirements with YUCA. He mentioned that he heard that YUCA might be removing COD permit requirements in 6 months. Meantime, ADS is working towards compliance. They plan on using the 2 green bullet shape tanks for treatment by installing an aeration system in there. Brian noted that the residence time of the aeration system in the 2 frac tanks that treat the liquid from TS-01 is not sufficient to lower the very high COD levels. (Frac tank leachate gets mixed in with the other leachate from Arbor Hills West.) They are currently doing calculations to figure out the aeration requirements.

Discussed recent odor complaints. Brian says he has been working 16 hours a day lately partially due to all the odor investigations that he has been doing. Overall, my impression is that Brian doesn't think odors are generally reaching the residential areas at this time.

Brian took me on tour of the landfill. First stop was the flare control room that is located directly adjacent to Fortistar. I wanted to go there since it was a rare chance to look at the operating temperature of one of the enclosed flares. I took photos of the operating parameters of both the main candle stick flare and the East enclosed flare. Next stop was the leachate tanks and the 2 new treatment systems. No odors noted there.

Next stop was the 2 Frac tanks. (See photo.) Very strong foul chemical like smell noted down wind of the tanks. I asked Brian about the status of the tanks. He says he now considers them semi-permanent. I noted that odors from these tanks need to be controlled. He seemed amendable to doing this.

Just West of the frac tanks along the perimeter road is what he called the Super Sump. All the leachate from Arbor Hills West (besides TS-01) flows into it and then on to a nearby lift station. As soon as we stepped out of the truck, was assailed by strong odors similar in quantity/quality to how TS-01 use to be. Brian warned me not to get too close due to potentially high levels of H₂S. It was quickly obvious that a plastic hose had popped off that connected captured emissions with a carbon barrel style unit. Brian quickly attached the hose and adjusted a pump associated with a 35 % hydrogen peroxide solution that was being pumped down into the sump. He said that they add this solution to control odors and to knock down the COD levels. Odors dissipated after Brian finished his adjustments. The Super Sump could be problematic if leachate quantity/quality changes which likely overwhelm the barebones system that is in place or not well maintained. (See attached photos.) I noted that the leachate level gauge in the sump showed that it contained 27 inches of liquid. Brian didn't know how deep the sump went down.

Next, we visited the new TS-01. It definitely appeared to be operating. No odors were noted around the old TS-01 and the pump wasn't on. The pumps were running in the new TS-01. I noted some local high levels of gas next to the new sump head. Upon closer inspection, all the gas odors were coming from the 2 small well pump exhaust ports. It may be worth the bother to control those 2 vent pipes. (Does NSPS require this? I would think it does if above 500 ppm methane?) I was surprised that odors were so strong from it since many similar wells elsewhere that have the pumps don't have noticeable odors. Brian noted that TS-01 has the highest H₂S levels of any well in the landfill.

Next, we visited the North side of the landfill where they were actively working on the North horizontal collector. An open trench was visible with some pea gravel on the bottom of it. I could see what looked like a piece of styrofoam covering up the existing pipe that had already been installed. Directly next to the trench, was the new perforated horizontal pipe that they were going to lower/attach. It appeared that they had this one section to complete and then one more 50 feet section and then they would be done. The workers were busy trying to fix a broken air force- main pipe. Strong odors were coming out of the trench. (They have been covering the active trench section each evening.)

Coming up wind of the trench, wide spread strong odors were note blowing down from the active disposal area above. Brian said that it smelled like C&D waste mixed with insulation. He says that when the insulation gets wet, it smells very bad. While walking around the vicinity, one very strong pocket of gas odor was noted but was too windy to trace where it was coming from. From here, I walked by myself to the gully below the subsidence area. Lot more dirt had been bulldozed into the surrounding area. No odors were detected. The deep odorous erosion ditch seen previously appeared to have been recently covered out. Visible below was a large new pond. Brian mentioned that a recent rain storm had dropped several inches of rain in a short period of time creating this large pond just below and to the East of Cell 4. (See photo.) They were actively pumping out the pond and discharging it in to the storm water. Across Six-Mile road, it didn't appear that the Compost area was flooded. Prior to leaving, Brian spoke with the construction workers and they confirmed that they were almost done with this project and would be starting on the West Haul road project Monday. Brian pointed out the location of the new sump associated with this new horizontal collector which is located on the NW end. As we were leaving, we stopped in the vicinity of cassion well # 405 on the north side. See attached photo. Brian noted that 2 of these wells he had discovered earlier that morning had popped their tops off due to subsidence. This one had popped it again for the second time today. Some odors were noted but nothing excessive.

FLARE DATA			
FLARE 391 GAS HIGH PROBE TEMPERATURE (TE 391A)			deg F
FLARE 391 GAS MIDDLE PROBE TEMPERATURE (TE 391B)			deg F
FLARE 391 GAS LOW PROBE TEMPERATURE (TE 391C)			deg F
FLARE 392 GAS HIGH PROBE TEMPERATURE (TE 392A)			deg F
FLARE 392 GAS MIDDLE PROBE TEMPERATURE (TE 392B)			deg F
FLARE 392 GAS LOW PROBE TEMPERATURE (TE 392C)			deg F
HANDLE STICK FLARE 393 WASTE GAS TEMPERATURE (TE 393A)			deg F
HANDLE STICK FLARE 393 WASTE GAS TEMPERATURE (TE 393B)			deg F
CANDLE STICK FLARE 393 PILOT GAS TEMPERATURE (TE 393)			deg F
<hr/>			
FLARE 391 LOUVER COMMAND POSITION (LVR 391)			% Open
FLARE 392 LOUVER COMMAND POSITION (LVR 392)			% Open
<hr/>			
		CMD	RET
FLARE 391 FLOW CONTROL VALVE (VM 391)		0.0	0.0 % Open
FLARE 392 FLOW CONTROL VALVE (VM 392)		61.7	61.8 % Open
FLARE 393 FLOW CONTROL VALVE (VM 393)		51.1	50.8 % Open
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CONTROL	OVERALL DATA	SYSTEM DATA	FLARE DATA
			LOUVER DATA
			TRENCH MENU
			ALARM HIST

Image 1(Flare data) : Flare data.

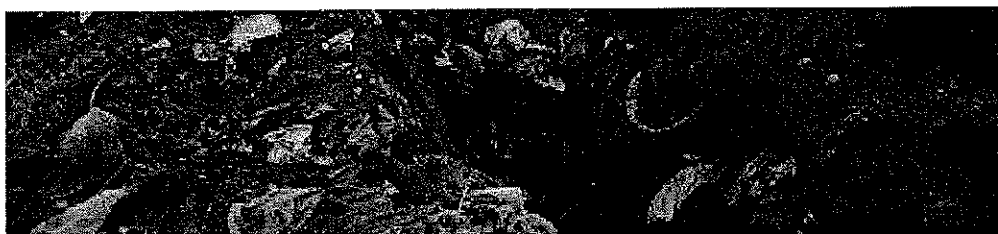




Image 3(Well pipe) : Perforated pipe to be used for new horizontal well on North side.

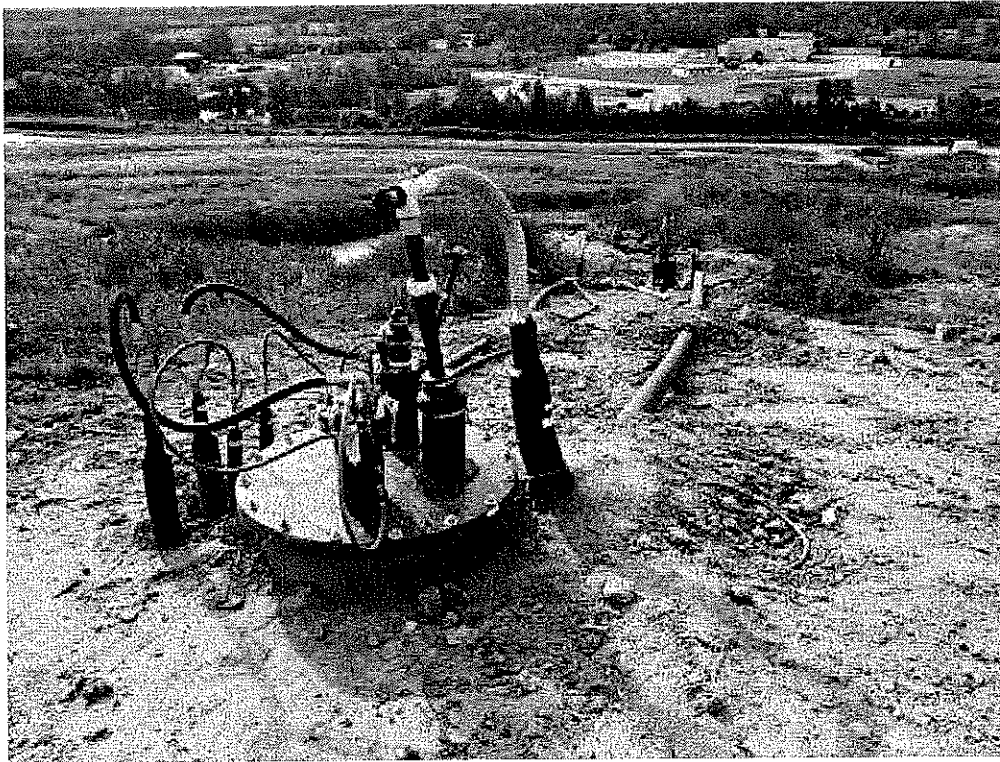


Image 4(New TS-01) : New TS-01



Image 5(New TS-01) : New TS-01



Image 6(North side) : North side



Image 7(Frac tanks) : Frac tank emissions.

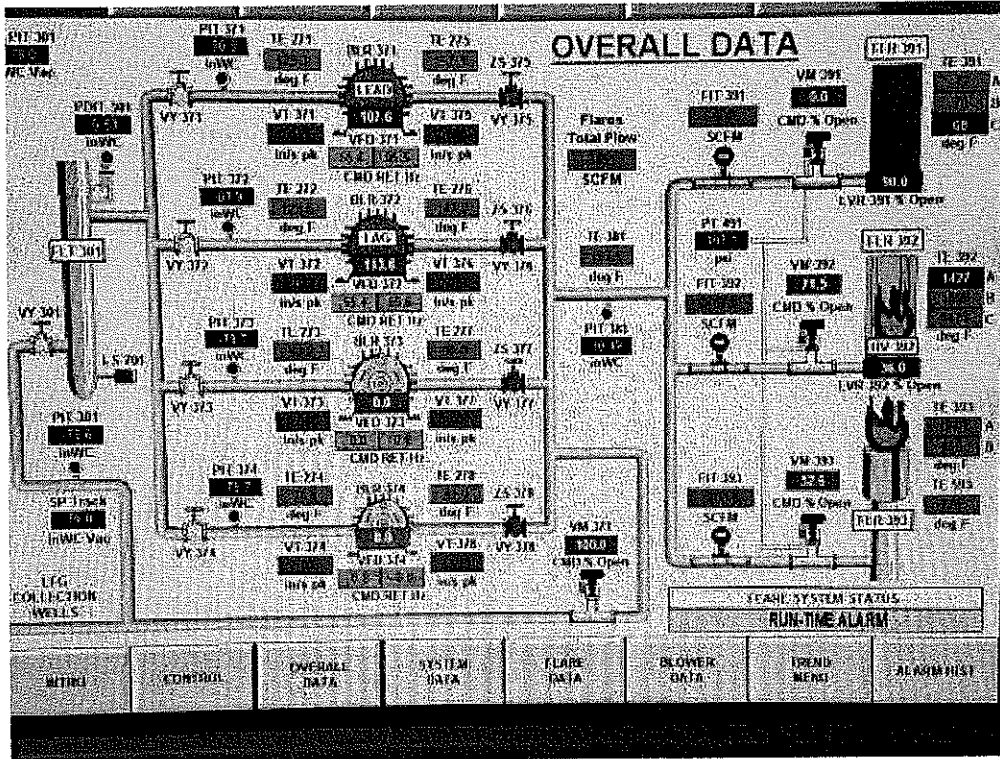


Image 8(Flare data) : Flare data



Image 9(TS-01 pond) : TS-01 pond that is being removed.



Image 10(Super sump) : Super sump carbon control.



Image 11(Cassion well 405) : Cassion well 405 with partially dislodged top.

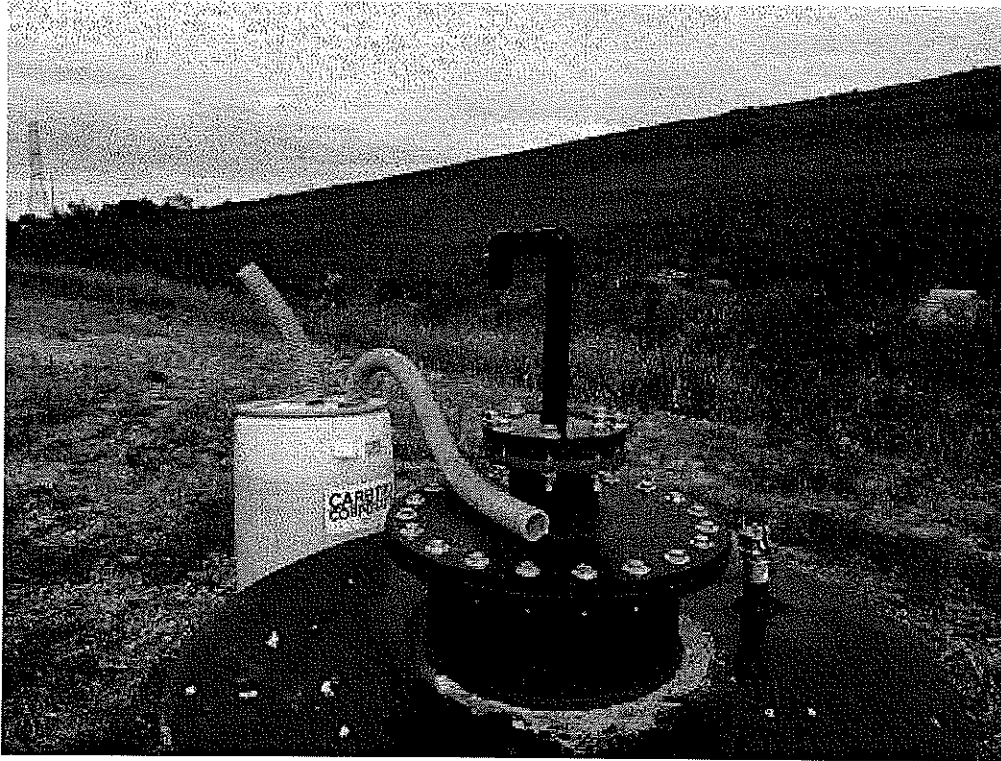


Image 12(Super sump) : Super sump where hose to carbon unit had fallen off.

NAME M. Kovalchick

DATE 10/14/19

SUPERVISOR [Signature]