

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

N289663969

FACILITY: C&C Expanded Sanitary Landfill		SRN / ID: N2896
LOCATION: 14800 P Drive North, MARSHALL		DISTRICT: Kalamazoo
CITY: MARSHALL		COUNTY: CALHOUN
CONTACT: Stephanie Goodman , Environmental Manager		ACTIVITY DATE: 08/09/2022
STAFF: Matthew Deskins	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Unannounced Scheduled Inspection		
RESOLVED COMPLAINTS:		

On August 9, 2022 AQD staff (Matt Deskins) went to conduct a scheduled unannounced inspection of C & C Landfill (N2896) located in Marshall, Calhoun County. C & C Landfill is a licensed Type II municipal solid waste (MSW) landfill that is owned by Republic Services and is currently subject to the following Renewable Operating Permit (ROP) and federal regulations:

ROP No. MI-ROP-N2896-2017 (Note: An ROP Renewal Application was submitted on time and was determined to be Administratively Complete. Thus, the landfill has an Application and Permit Shield in Effect and AQD Staff is in the process of drafting the ROP Renewal). Also, the current ROP contains outdated federal NSPS and/or MACT regulations which will be replaced by the following federal regulations and/or requirements that are now applicable.

New Source Performance Standard (NSPS) for Municipal Solid Waste Landfills promulgated in 40 CFR Part 60 Subparts A and XXX. The NSPS XXX basically replaces the NSPS WWW for C&C Landfill due to its applicability being dependent upon the most recent construction permit that increased the landfill's design capacity. EGLE's Materials Management Division (MMD) is responsible for issuing these permits and if one was issued to the landfill on or after July 17, 2014, they are considered a new source and the new NSPS XXX would apply. C&C Landfill had one of these permits issued to them by MMD on April 16, 2018. Once the regulation became applicable to the landfill, the next timeline for when the regulation actually takes effect is when the landfill commences construction of the vertical or lateral expansions approved by the construction permit. In this case, C&C Landfill commenced construction on March 15, 2019 which became the NSPS XXX effective date. Since the effective date, the landfill has submitted an updated initial design capacity and NMOC reports on time (Submittals dated June 12, 2019). The Gas Collection and Control Systems (GCCS) design plan was due one year after the first NMOC emission rate report indicates emissions are equal to or greater than 34 Mg (was a 50 Mg emission limit under the NSPS WWW), so the GCCS plan was due by June 12, 2020. It was submitted on time and AQD staff reviewed and ultimately approved it with some exceptions. The GCCS will have also needed to be installed and operated in compliance with the Subpart XXX requirements 18 months after that which would have been back on December 12, 2021. The landfill had already installed and was operating the GCCS system under the NSPS WWW regulation.

National Emission Standard for Hazardous Air Pollutants (NESHAP) for Municipal Solid Waste Landfills promulgated in 40 CFR Part 63 Subparts A and AAAA. This MACT was updated and had an effective date of September 27, 2021.

National Emission Standard for Hazardous Air Pollutants (NESHAP) for Asbestos promulgated in 40 CFR Part 61 Subparts A and M.

The purpose of the inspection was to determine the landfill's compliance with the preceding federal air regulations as well as any regulations that are still applicable in the facilities Renewable Operating Permit (ROP) No. MI-ROP-N2896-2017. NOTE: The ROP at one time had been a sectioned permit with C&C Energy (f.k.a. Gas Recovery Systems (GRS) which is owned by Opal Fuels (f.k.a. Foristar)) as section 2. In 2011/2012, both the landfill and C&C Energy requested that they be issued separate ROPs which the AQD has allowed at other facilities. The AQD approved the request and C&C Energy was later issued the SRN (P0222); however, they are still considered one stationary source with the landfill for all other purposes. Staff departed for the facility at approximately 9:45 a.m.

AQD staff arrived at the C & C Landfill at approximately 10:40 a.m. Staff first attempted to circle the perimeter roads of the landfill to see if any odors could be detected and none were noted. Note: Staff couldn't make a complete circuit due to P Drive North, which borders the landfill on the north side, was now closed approximately 1/2 a mile west of 15 Mile Road. Winds were out of the west however so making a complete circuit wouldn't have mattered in this instance. Staff then proceeded to scale house where they had checked in in the past. Staff noted a sign that said a new scale house was located further to the west. Staff still proceeded through the open gate to the old scale house and knocked on the door. Staff then introduced them self to the employee who came to the door and she said that staff would need to go down to the new scale house and ask for Pat Meads (Landfill Manager) who could assist staff. Staff then asked her what the situation was with the P Drive North being closed. She mentioned that the Calhoun County Road Commission privatized the road from 15 Mile Road to the west where it is closed and that section is now owned by Republic. Staff thanked her for her time and proceeded down to the new scale house. Once at the new scale house, staff went in and introduced them self to the scale house operator (Courtney) and asked if Pat Meads was available. She mentioned he was but he was currently out on site with Stephanie Goodman (Environmental Manager) and that they should be back in a few minutes. Staff mentioned that they were glad to hear that Stephanie was on-site also because she is whom staff normally had to contact about various records required to be kept by the permit. Courtney then radioed Pat to verify when he would be back and he said they would be there in about 10 minutes. Courtney then asked staff to sign in which they did.

Once Pat arrived back at the scale house, staff greeted him, gave him a business card, and stated the purpose of the visit. Pat then led him back to his office and once there, Stephanie came in to greet staff also. She mentioned that she had a meeting at 11:30 out on site but wanted to know if she could assist with anything staff might need. Staff then mentioned that similar to previous inspections, they would like to see the following information: (6 Months of Wellfield Data, the past year of Quarterly Surface Emissions Monitoring Data, Asbestos Manifests and Disposal Locations, Open Flare Combustion Data, etc.). Stephanie mentioned that all records are electronic now, except for the various the asbestos items, and that she could pull up what staff needed on her computer. She then pulled everything up and showed staff how to access the different reports. She then asked staff the status of the ROP Renewal that they had submitted the previous year. Staff mentioned that they had

just finished drafting it and it was currently with staff's supervisor for their review. Staff mentioned that they should be getting it for their 30-day company comment period pretty soon. Staff then asked her and Pat some general questions about landfill operations prior to her having to depart for her meeting. The following summarizes our conversation along with the emission units contained in the ROP. NOTE: Although the new NSPS XXX and updated MACT AAAA regulations now apply, most of their requirements are similar to the NSPS WWW and staff will note any major differences under the respective emission units. Also, a lot of the conditions contained in the ROP are requirements that have already been completed and/or are future requirements for when the landfill is closed.

As mentioned in the opening paragraph, C & C Landfill's ROP does not contain two sections currently and the following emission units and/or flexible groups are contained in it: EULANDFILL, EUACTIVECOLL, EUASBESTOS, EUFLARE1, EUCOLDCLEANERS, and EURULE290. The landfill at one time had two enclosed flares that used to make up a flexible group known as FGENCLOSEDFLARES but they were removed. They replaced those two units back in 2013 with an open flare (Manufactured by Zink and rated for 3,000 scfm) that went through New Source Review. That permit was later incorporated into their ROP and the enclosed flare portion removed.

EULANDFILL: Appears to be in COMPLIANCE

According to Pat, C & C Landfill is averaging around 2300 tons of waste a day with variations dependent upon whether it is summer or winter. They are required to keep annual reports of the amount of waste in place which gets submitted annually to the EGLE's Materials Management Division (MMD). They also have approval from MMD to re-circulate up to 12,000 gallons of leachate per day. Staff had been told during the last inspection that they stopped recirculating leachate at the landfill in 2017 due to a new company policy. Pat and Stephanie confirmed that was still the case/policy. The facility has an Odor Management Plan (OMP) as required and it is implemented should any odiferous wastes be brought in. This plan had to be developed years ago due to odor issues from the disposal of wastewater treatment plant sludge. The site is still taking in sludge that comes from the City of Battle Creek. Pat said that company policy was to still only dispose of 20 gallons of wet waste per ton of MSW. Stephanie then mentioned that this amount is not set in stone and can vary depending on what types of solid waste each of their landfills receives. They then confirmed that the sludge still comes in during the cold weather months of November (around Thanksgiving) through April 1st when the sludge can't be land applied. Pat said that they usually average around 70 tons of it a day during that time. The AQD hasn't received any complaints of odors pertaining to any waste, landfill gas, or sludge type smells for quite some time.

The facility has an approved active gas collection system as well as associated control system (EUFLARE1) that the gas is routed to as required. Currently, the landfill gas produced is piped to C&C Energy where it is combusted in their internal combustion engines and turbine for electrical generation. The open flare is mainly used for back-up purposes should the engine(s) and/or turbine go down. They also use to run it to keep a consistent vacuum on the well field which they haven't had to do anymore. Their target is to still have around 55-60 inches of H₂O vacuum on the wellfield according to Stephanie.

Staff then inquired about well field and surface emissions monitoring (SEMs). Stephanie said that SCS Field Services (SCS) is still contracted to do both of those. Staff reviewed 6 months (January 2022 through June of 2022) of wellfield data. The facility has the recent monthly data for July but it hasn't been downloaded and compiled yet. Staff noted that the well monitoring is meeting the NSPS monitoring requirements or they have asked for approval to have an alternate remedy as allowed under the new federal regulation(s). Quarterly surface emissions monitoring is being conducted and the facility appears to be keeping the appropriate records as required. Staff reviewed records for the past four quarters of data. The records staff reviewed included instrument calibration data, weather data, and a map showing the route traversed while doing the monitoring. SCS uses a portable analyzer (Inficon Irwin Methane Leak Detector) for their surface emissions monitoring. Staff noted that any exceedences (over 500 ppm CH₄) detected were addressed and follow-up monitoring was done in the appropriate time frames. For those exceedences that couldn't be addressed within regulatory timeframes, the landfill has requested an alternative remedy to address them as allowed by the new federal regulation(s). Follow-up re-monitoring of them has indicated compliance. Staff noted the SEMS events can take several days to complete now. Stephanie mentioned that was a result of now having to monitor all the surface penetrations that can take a day or more by themselves. She also mentioned that most of the exceedences are from these penetrations and they are actually starting to use GCL around new wellheads and riser in attempts to keep it from being an issue down the road. SCS is also conducting the monthly cover integrity checks as part of their monthly well field sampling routine. The facility has a Startup, Shutdown, and Malfunction Plan (SSM) which was required under the old MACT AAAA, but isn't required under the updated one. The facility has also been submitting the required semi-annual/annual ROP Certifications. SSM Reports are no longer required to be submitted by the updated MACT AAAA.

NOTE: The inclusion of monitoring all surface penetrations in the waste mast during SEMs was one of the main changes of the updated federal regulation(s), along with what corrective actions need to be taken if exceedences cannot be addressed within a certain timeframe. The main changes to the monthly wellhead monitoring included an increase in the allowable wellhead temperature from 131 degrees F to 145 degrees F. Also, although Oxygen and/or Nitrogen still had to be monitored, there are no longer limits established for them in the regulation(s). Lastly, the new regulation(s) include doing a "Root Cause Analysis" for any exceedences of monitored parameters that can't be corrected in the appropriate time frames along with the potential of having to do "Enhanced Monitoring" for wells that exceed 145 degrees F.

EUACTIVECOLL: Appears to be in COMPLIANCE

The facility has an up to date ASBUILT drawing showing the existing collection system and proposed expansion areas that they submitted to the AQD and MMD. It appears that the collection system is constructed of appropriate materials (HDPE and/or PVC is used). Currently, the facility has 192 NSPS subject gas wells (vertical and horizontal wells). They also have leachate risers and cleanouts that are hooked up to the GCCS as well. Some of gas wells are combo wells (wells with liquid pumps) and they are equipped with Landtec wellheads. The facility keeps well logs of any newly drilled wells. As mentioned previously, SCS is conducting the monthly wellhead monitoring for the landfill and they use a Landtec GEM 5000 gas analyzer

and are recording static pressure (vacuum), oxygen, and temperature as required. If any of these parameters exceed operational standards during monitoring, the timeframe for corrective actions appears to be being adhered to. If corrective actions do not bring a well back into compliance, the facility has requested alternate remedies as required. Staff reviewed 6 months of monthly data as mentioned under EULANDFILL above and did not note any issues. The facility has been submitting the required semi-annual and annual ROP Certification Reports on time. SSM Reports are no longer required to be submitted by the updated MACT AAAA.

EUASBESTOS: Appears to be in COMPLIANCE

The facility has a perimeter fence surrounding the entire property which should adequately deter access by the general public as required. The facility appears to be keeping all the required records which include: shipping records (manifests) of the generator, transporter, and quantity of asbestos accepted; and monthly disposal maps showing the depth and location of all buried asbestos, etc. Staff reviewed several months of manifests and compared them to their monthly asbestos disposal maps and did not note any issues. Also, only friable asbestos has to be tracked.

EUFLARE1: Appears to be in COMPLIANCE

As mentioned previously, the flare is manufactured by Zink and rated at 3,000 scfm. It was installed back in 2013 and it replaced the two enclosed flares and is used mainly as a back-up device to the engines and turbine at C&C Energy. The flare was originally in operation when staff arrived because the turbine was down at the energy plant, but it was later off because the turbine was brought back on-line. It is equipped with a heat sensor to detect flame presence and a digital data recorder (Yokogawa) that records flow, temperature, and vacuum every 2 minutes. The information is downloaded from the Yokogawa twice a month and they also have a cloud based on-line application called Fleet Zoom where they also track it. When it was running, Stephanie was able to pull up its operating data up on her computer using the Fleet Zoom application and it showed that it had a flow of approximately 1600 scfm going to it along with a combustion temperature of approximately 1150 degrees F. The open flare was tested after it was installed and the net heating value and other requirements were met. The flare is also equipped with a pneumatic valve that automatically closes if the whole system (engines, turbine, and flare) should shut down to prevent landfill gas from venting uncontrolled to the atmosphere. The facility appears to be keeping the appropriate records and submitting the appropriate reports as they pertain to the open flare.

EURULE290: Appears to be in COMPLIANCE

As has been mentioned in previous inspection reports, the groundwater treatment system (Air Stripper) on site is what was being operated under this exemption and it has not been in use since March of 2004 under an approval from the MMD. Stephanie confirmed that was still the case. The treatment system was originally put in place as a requirement of an MMD Remedial Action Plan to address groundwater contamination. Over the years contaminant levels have hardly been detected in the groundwater, so MMD has allowed the facility to just monitor the situation. Stephanie said that they still want to dismantle to it but that still hasn't been done yet.

FGCOLDCLEANERS: Appears to be in COMPLIANCE

The parts cleaner is located in the maintenance garage. It is a Crystal Clean Aqueous Solution heated unit. The aqueous cleaning agent used in it is water based and the VOC concentration in it is miniscule and well under the percentage of VOC required to meet the definition of a cold cleaner.

INSPECTION CONCLUSION: The facility appears to be in COMPLIANCE with the terms and conditions of MI-ROP-N2896-2017, the NSPS XXX, and MACT AAAA at the present time. Staff thanked Pat and Stephanie for their time and departed at approximately 1:30 p.m.

NAME Matt Dahn

DATE 8-11-22

SUPERVISOR RIL 8/11/22