

**DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection**

N599745820

FACILITY: Granger Wood Street Landfill		SRN / ID: N5997
LOCATION: 16980 Wood Road, LANSING		DISTRICT: Lansing
CITY: LANSING		COUNTY: CLINTON
CONTACT: Kimberly Smelker , Operations Manager		ACTIVITY DATE: 08/28/2018
STAFF: Michelle Luplow	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Scheduled inspection of Granger Wood Street Landfill, Granger Container Service and EDL Wood Road Generating Station to determine compliance with MI-ROP-N5997-2013. This was a PCE conducted as part of an FCE.		
RESOLVED COMPLAINTS:		

Inspected by: Michelle Luplow (author) and Jeremy Brown (AQD, TPU, Asbestos)

Granger Wood Street Landfill/Granger Container Service Personnel Present:
 Kim Smelker (ksmelker@grangernet.com), Operations Manager
 Serenity Skillman (sskillman@grangernet.com), Environmental Compliance Specialist
 Phil Newsome, Sales Representative

Energy Developments Lansing Personnel Present:
 Phil Jaworsky

Other Pertinent Energy Developments Personnel:
 Dan Zimmerman (dan.zimmerman@energydevelopments.com), Director of North America HSE & Compliance

Purpose

Conduct an announced, scheduled, partial compliance evaluation (PCE) inspection of the Granger Wood Street Landfill (Granger), Granger Container Service, and an unannounced, scheduled, PCE of the Wood Street Generating Station (EDL). Compliance was determined using Granger Wood Street's ROP, MI-ROP-N5997-2013. This activity was done as part of a full compliance evaluation (FCE). The last inspection was conducted March 2016.

Facility Background/Regulatory Overview

The Granger Wood Street Landfill (Granger) is a municipal solid waste landfill with an associated gas-to-energy plant that is owned and operated by Energy Developments. The primary activity of this source is accepting municipal solid waste, consisting mostly of residential and commercial waste materials, with occasional receipt of municipal solid sludge. This site also accepts asbestos-containing materials (ACM) and is subject to the NESHAP for asbestos, 40 CFR, Part 61, Subpart M. The landfill itself was installed July 16, 1984, which initially made the landfill subject to 40 CFR 62 Subpart GGG, as it commenced construction before May 30, 1991. The landfill then received an expansion permit from the Waste Management and Radiological Protection Division (WMPRPD) after May 30, 1991 (specifically, according to Steve Blayer, WMPRPD, Construction Permit # 0410 on April 21, 2002 and Construction Permit #4056 on January 30, 2004), thus making the landfill subject to 40 CFR Part 60, Subpart WWW.

The new NSPS Subpart XXX will apply to all landfills that are modified, new, or reconstructed after July 17, 2014. For landfills not subject to the NSPS Subpart XXX, there is a proposed Emission Guideline (EG) NSPS Subpart Cf that applies to landfills accepting waste between November 8, 1987 and constructed, modified or new before July 17, 2015. These two regulations will replace NSPS Subpart WWW and NSPS Subpart Cc. Once the NSPS Subpart Cf EG has been incorporated into an approved State Implementation Plan, Granger's compliance with the guideline will be required. Currently the NSPS Subpart WWW and NSPS Subpart Cc are still enforceable regulations.

Tier II testing was conducted on the landfill May 23 and May 24, 2016, the findings of which (69.14 Mg NMOC/year) indicated that Granger had exceeded the 50 Mg/year threshold for NMOC under NSPS Subpart WWW and therefore became required to submit a gas collection and control system (GCCS) plan by July 25, 2017. The initial (draft) GCCS plan was received by AQD on July 26, 2017. The final, approved draft, of the GCCS plan was received March 21, 2018. The AQD and WMPRPD approved the GCCS plan on April 2, 2018. By January 25, 2019 GWSL is required to have their GCCS installed and operating according to the NSPS Subpart WWW. This will also mark the time by which Granger will be required to start conducting monthly well monitoring, quarterly surface emission monitoring, and in compliance with all other active collection system requirements under NSPS Subpart WWW.

Granger also owns and operates the Paulson Street Landfill (~51-acre site located south of the Wood Street Landfill, the gas from which is collected and sent to EDL's generating station), which is included in the GCCS plan. Granger purchased the site in 1973 and continued operations until 1986 when final cover was placed. The gas collection system for this site was

installed in 1985. K. Smelker and I discussed the compliance options for the closed Paulson Street portion of the landfill. She stated that there are only vertical well systems in place, some of which are above grade, others below grade. K. Smelker said the wells above grade would be no problem to monitor for temperature, pressure and oxygen, under the requirements of the NSPS Subpart WWW, but it is the wells below grade that they will not be able to monitor for temperature. She said they plan to temporarily decommission them by turning the valve that shuts off flow to those wells. I will investigate whether the AQD considers this a true decommissioning of the wells. Decommissioned wells are not required to be monitored for oxygen, temperature and pressure. She said Granger has already conducted monitoring of wells at both landfill sites,

Granger Wood Street/Granger Container Service/EDL currently has an ROP Renewal Application in-house to renew MI-ROP-N5997-2013.

K. Smelker said that Granger plans on installing a new flare, which may be in conjunction with the installation of a new engine at EDL's Wood Street generating site. The companies have not yet determined whether they will submit a permit jointly for these two emission units or under separate applications, but K. Smelker said that either way, the installation of these units would be considered a PSD project. The flare will have NSPS Subpart WWW requirements under the new ROP.

EDL currently owns and operates four G3516 CAT engines (engines 1-4, FGICE) and three G3520 CAT engines (engines 5-7, FGICEENGINESS). Engines 1-4, although subject to the (RICE) MACT Standard 40 CFR Part 63, Subparts A and ZZZZ, currently have no requirements for compliance. Engines 5-7 are subject to the NSPS 40 CFR 60 Subpart JJJJ.

Inspection

At approximately 8:00 a.m. on August 28, 2018, Jeremy Brown (Abestos TPU) and I met with Kim Smelker and Serenity Skillman at the Wood St Landfill office for an announced, scheduled inspection of the landfill and Granger Container Service. J. Brown and I jointly conducted the asbestos inspection, the inspection check for compliance with all other requirements in MI-ROP-N5997-2013 were conducted solely by me. I provided S. Skillman with a January 2017 Permit to Install Exemptions Handbook and briefly explained to her how exemptions applied to Granger currently and for future equipment installations.

At approximately 11:25 a.m. I arrived at EDL's Wood Street Generating station and met with Phil Jaworsky to conduct an inspection of the 7 engines.

GRANGER WOOD STREET LANDFILL

EULANDFILL<50

Granger has a gas collection and control system that routes all collected landfill gas to the gas treatment system and subsequently to the EDL engines which burn the gas for electricity production.

An open flare is used to burn excess gas when there is more landfill gas than the generators can burn at any given time. The flare was combusting landfill gas during the inspection, and I saw no signs opacity from the flare's flame.

Granger has portable, diesel-fired generators with electric capability for operating deodorizing misters surrounding the perimeter of the landfill to control landfill odors. K. Smelker said they use one generator for 4 misters and they have a total of 7 misters. The generators would likely be exempt under Rule 285(2)(g) if Granger ever planned to install this (render them non-portable). In August 2017, Granger also installed a new trial vaporizer system, consisting of PVC-piping constructed along the upper portion of the landfill's perimeter. K. Smelker said this is used to absorb odors from the top of the landfill. The liquid deodorizer is sprayed as a vapor mist. K. Smelker said they use this every day but is uncertain if it will be used permanently. K. Smelker said they bury odorous loads as soon as they are dumped to minimize odors.

There are currently no Emission Limits, Material Limits, Process/Operational Restrictions, Design/Equipment Parameters or Stack/Vent Restrictions requirements for EULANDFILL at this time.

Testing/Sampling & Monitoring/Recordkeeping

Granger is required to conduct Tier II or Tier III testing to determine NMOC emissions every 5 years and calculate the emissions according to methods in Appendix 7 of MI-ROP-N5997-2013, to compare to the 50 Mg/year threshold. Granger uses Tier II testing to determine NMOC emission rates. As stated under "Facility Background/Regulatory Overview," the most recent NMOC test was conducted May 23rd and 24th, 2018, and has acknowledged that the landfill now exceeds the NMOC 50 Mg/year threshold.

Monitoring/Recordkeeping

MI-ROP-N5997-2013 requires that Granger keep a record of the design capacity report for the facility, in addition to monitoring and recording the current amount of solid waste in-place and the year-by-year waste acceptance rate. K. Smelker provided me with the current amount of solid waste in place, through July 2018 and the year-by-year waste acceptance rates through 2017 for both the Paulson Street Landfill and Wood Street, in Mg (see attachment). The waste acceptance rate for 2017, including ash and contaminated soil, was 455,588 Mg. The current amount of solid waste in place through July 2018 was 10,522,130 Mg (as of March 2016, solid waste in place was 9,352,890 Mg).

The year-by-year acceptance rates are also reported to WMRPD under the WDS database. These records are accessible to the public. The following link is for OWMRP's Annual Report year-by-year waste acceptance rate: <http://www.deq.state.mi.us/wdsp/SolidWaste/AnnualLandfillReports.aspx?w=470523>. Wood St's Facility number is 470523.

Reporting

All required semi-annual and annual reports have been submitted in a timely manner.

EUASBESTOS

Jeremy Brown (Asbestos TPU) and I conducted a joint inspection of Granger for compliance with the NESHAP Subpart M, laid out under EUASBESTOS of MI-ROP-N5997-2013. K. Smelker said that asbestos-containing material (ACM) is deposited into trenches at the landfill and that the majority of non-friable ACM is also deposited into the ACM trenches. She said they also will put dusty materials (saw dust, for example) into the trenches to prevent fugitive dust issues, as well as medical waste, and animal remains.

K. Smelker said that

There are currently no Emission Limits, Material Limits, Testing/Sampling, or Stack/Vent Restrictions requirements for EUASBESTOS.

Process/Operational Restrictions

Instead of ensuring that there are no visible emissions from the asbestos active disposal site and ensuring that either a natural barrier or warning signs and fencing are posted, Granger has opted to cover the ACM at the end of each operating day. The type of cover they use depends on the weather. K. Smelker said that they use 4-6" of dirt to cover the materials in the pit if there is rain or high winds. They will also use dirt on Saturdays. The other cover, which they had approved by MDEQ WMRPD, is a paper mache/newspaper substance that contains tackifier. This material is sprayed on during all days when there are no high winds or rain.

Design/Equipment Parameters & Monitoring/Recordkeeping

Under the NSPS Subpart WWW, the gas collection devices are required to control all gas-producing areas except segregated areas of asbestos or non-degradable materials, and records of the nature, date of deposition, amount and location of asbestos-containing waste excluded from collection is required to be maintained. All ACM trenches are excluded from gas collection. K. Smelker explained that the trenches are lined up in rows and asbestos cells are stacked on top of each other. They will not dig through these areas to add gas collectors (horizontal/verticals); therefore, gas collection is not occurring throughout these areas. She said that they also keep a perimeter surrounding the trenches of about 20' of waste to segregate the trenches from the rest of the landfill. Because they exclude the trenches from collection they are required by the NSPS to keep a map of the nature, date of deposition, location and amount of asbestos deposited in the area. This is also required by the Subpart M NESHAP, which also includes the requirement to keep record of the depth and area and quantity in cubic meters (or cubic yards) of asbestos-containing waste material within the disposal site on a map or diagram of the disposal area. K. Smelker provided J. Brown and I with copies of 2 maps for 2 different asbestos disposal areas; they each contain the depth of the trench ("Top of Trench" minus "Bottom of Trench"), the trench area, the date of deposition, the location (northing and easting coordinates), and the quantity.

K. Smelker said they keep only asbestos trench open at a time at Granger Wood St.

Monitoring/Recordkeeping

Granger is required to keep waste shipment records containing the date of receipt; the name, address, and phone number of the waste generator and transporter(s); and the quantity of asbestos-containing waste material in cubic yards.

J. Brown received demolition notifications from 3 transporters, for disposal of entire buildings as asbestos containing material, one of which was shipped to Granger Wood Street from E.T. MacKenzie. He verified, via Granger's waste manifests, that the transporters accurately reported the disposal site for the demolition debris, and the quantity of asbestos containing materials. The manifest contains the name, address and phone number of the waste generator, the transporter, the quantity of ACM in cubic yards and the date of receipt. K. Smelker said waste manifests are only generated for asbestos.

K. Smelker said that most of the time Granger is the transporter and they have been trained to handle asbestos appropriately. They ensure that all bags are sealed prior to transportation. She also said that Granger has cameras set up at each of the gates to view what is in each of the loads entering the landfill. If the ACM quantity reported in the waste manifest does not appear to match the quantity of ACM in the manifest, they turn the trucks away. All transporters take the ACM waste directly to the ACM trench upon entering Granger. K. Smelker said they will also inspect loads once per week by pulling a random load of the ACM trench to check for asbestos. She also explained that Granger doesn't take as much asbestos-containing material as they used to, only about one load per day on average.

K. Smelker said the green copy of the signed waste manifests are sent back to the ACM generators at least once per month. The ROP requires that these be returned to the generator within 30 days of receipt.

Reporting

Granger is required to notify AQD at least 45 prior to excavating or otherwise disturbing any ACM that has been deposited in the landfill. During my previous inspections of this site, I believed that Granger did not need to notify AQD of excavations because Granger does not excavate or disturb the ACM waste contained in the trenches, and it does not appear that Granger has reported excavations in the past (there are no records of submittals in the Asbestos Notification System [ANS]). J. Brown and I discussed this requirement and it was decided that even though Granger tracks all their correctly identified ACM loads, there is no guarantee that asbestos loads from residences, or loads that were misidentified as non-ACM are not present, and therefore there will always be the possibility that Granger might disturb asbestos-containing material when excavating. J. Brown sent an email to K. Smelker (attached), explaining that starting now Granger will be required to submit excavation notices via the ANS.

GRANGER CONTAINER SERVICE

FGPAINTBOOTH

This FG is used for all coating exempt under Rule 287(2)(c). Granger has 1 paint booth that they use to repaint roll-off trash canisters or to repaint garbage truck parts. Table 1 contains a list of all coatings used in 2017 and 2018 per month. Actual records from K. Smelker are attached. The exemption allows up to 200 gallons of coating per month, minus water. The largest monthly quantity was 95.4 gallons in March 2017.

Table 1. Paint Usage

Month	2017 Gallons	2018 Gallons
January	58	37.9
February	61.8	32.6
March	95.4	24.1
April	70.9	20.6
May	45.1	
June	33.8	
July	65	
August	89.3	
September	73.9	
October	36.1	
November	51.1	
December	94.9	

Filters are also required to be installed properly. During the previous inspection, there were 2-3 filters that did not completely cover the vents. I mentioned this to K. Smelker and that these must be installed properly in the future. During the current inspection there were 2 entire filter panels removed, although no painting operations were being conducted. K. Smelker and S. Skillman reinstalled the filter panels while I was there. I informed them that it is important to ensure that these panels are installed and installed properly, especially during paint booth use. AQD has not received complaints of particulate from Granger.

FGNEWCOLDCLEANERS

Granger has 2 cold cleaners on their property. They are both approximately 1.5' x 3' for a total air:vapor interface of ~4.5 ft². These cold cleaners are exempt from a PTI per exemption Rule 281(2)(h).

Material Limits

Only up to 5% of various halogenated compounds are allowed in the cold cleaner solvent. K. Smelker said they only use mineral spirits in these units, which is 100% petroleum distillates according to the SDS that is attached; it does not contain any halogenated compounds.

Design/Equipment Parameters

Both cold cleaners had lids to cover the units when not in use and both lids were closed.

Monitoring/Recordkeeping

Written operating procedures are required to be conspicuously located near the cleaner. Both cold cleaners have operating procedures located on the inside of the lid.

Sand Blasting Operations

I was informed via the ROP Renewal application that Granger has a sand blasting booth. K. Smelker took me to the booth, and I noted that it is currently being used as storage space, although the sandblaster equipment was present. There appears to be no exhaust to the outside air. K. Smelker said in the past they used this to clean the garbage containers prior to welding, but now they ship out this work. In the event Granger makes this unit operational, it would likely be exempt under Rule 285(2)(l)(vi)(B).

EDL WOOD STREET GENERATING STATION

I arrived at approximately 11:25 a.m. at the generating station and met with Phil Jaworsky, after signing into EDL's log book, acquiring a visitor badge, and received an induction, which is required every 6 months, and provides the visitor with various safety requirements and site safety information. Visitors are required to wear gloves, long-sleeved shirts, hard hats, safety glasses and hearing protection. All visitors and employees are required to back their vehicles into the facility parking spots, rather than pull in moving forward.

FGICEENGINES: EUICEENGINE1-3 (Engines 5-7)

FGICEENGINES consists of three 3520C stationary non-emergency landfill gas, spark ignition, 4-stroke lean burn reciprocating internal combustion engines, each rated at 2,233 hp, 1600 kW. Table 2 contains a list of these engines with some of their specifications and operating parameters recorded during the inspection. Operational data was pulled from the continuous monitor for each engine

Table 2. Engines 5-7 operating conditions during inspection

	Total Plant	Engine 5	Engine 6	Engine 7
Serial Number		GZJ00429	GZJ00692	GZJ00388
Manufacture Date		2/17/2010	11/22/2014	4/7/2008
Installation Date		2015	2016	2015
Kilowatts (kW)		1500	1649	1507
Flow rate (lb/hr)		2212	2395	2193
Operating Hours		19,696	23,167	72,458
CH ₄ % (total entering the plant for engines 1-4)	52			
O ₂ % (total entering the plant for engines 1-4)	0.71			

Emission Limits, Testing/Sampling & Monitoring/Recordkeeping

All 3 engines within this flexible group have CO and NO_x limits under both the NSPS Subpart JJJJ and state Rule 336.2804. All 3 engines also have VOC limits under the NSPS Subpart JJJJ, and formaldehyde limits under Rule 336.1225(2).

Each engine is required to be tested to verify NO_x, CO and VOC emission rates under the NSPS Subpart JJJJ every 8760 hours of operation or 3 years, whichever occurs first. EDL has opted to test their engines once a year. The last test conducted on these engines for NO_x, CO, and VOC was March 16, 2018. The test report indicated compliance with all NO_x, CO and VOC emission limits for each engine.

The current testing language for formaldehyde requires at least one of the engines in FGICEENGINES be tested within 180 days after issuance of the permit. This language was pulled directly from a PTI; however, the Lansing District Office (LDO) AQD acknowledges that this is not the typical language we would insert as a requirement for formaldehyde emissions testing in an ROP. ROP testing requirements usually contain formaldehyde testing be conducted at least once per permitting cycle. The LDO AQD has made the determination to allow Granger to test at least one engine from FGICEENGINES before the expiration date of their current ROP, May 2, 2018. The formaldehyde test was conducted on March 16, 2018. The test report indicated compliance with the formaldehyde emission limit.

Material Limits & Monitoring/Recordkeeping

Engines 5-7 have a collective landfill gas throughput limit of 848.82 MMscf per 12-month rolling period, as determined at the end of each calendar month. D. Zimmerman provided me with the 12-month rolling landfill gas usage for Engines 5-7 combined (see attached). The total 12-month rolling usage from August 2017 – July 2018 was 772.64 MMscf. The highest usage rate on a 12-month rolling basis, as determined at the end of June 2018 was 779.18 MMscf (see attached).

Process/Operational Restrictions & Monitoring/Recordkeeping

A written Malfunction Abatement/Preventative Maintenance Plan (MAP/PMP) for the engines is required to be implemented and maintained, and include:

- identification of the equipment and supervisory personnel responsible for overseeing the inspection, maintenance, and repair;
- a description of the item or conditions to be inspected and frequency of the inspections or repairs;
- identification of the equipment operating parameters that shall be monitored to detect a malfunction of failure, the normal operating range of these parameters, and a description of the method of monitoring or surveillance procedures;
- identification of the major replacement parts maintained in inventory for quick replacement;
- and a description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

EDL's current version of the MAP/PMP is May 4, 2016 (attached). I will ask D. Zimmerman to review and revise as necessary, as there are references to old PTI's the MAP/PMP has been constructed for, rather than the ROP, in addition to changes in responsible company. Additionally, I will ask that a list of inventory parts that are generally present on site be included in the PMP, in addition to malfunctions that EDL has come across that would warrant corrective procedures or operational changes to be enacted.

All maintenance activities conducted according to the MAP/PMP are required to be recorded. D. Zimmerman provided me with January – July 2018 maintenance logs which demonstrate preventative and downtime maintenance for all 3 engines. The maintenance logs indicate that the MAP/PMP is being followed.

Each engine's air:fuel ratio is required to be adjusted based on each engine's kilowatt output to ensure each engine operates at its maximum design output based on the fuel available to burn, and the air:fuel ratio control is required to be installed, maintained and operated in a satisfactory manner. The air:fuel ratio for each engine automatically adjusts itself for each engine depending on the quality of the gas coming into the plant. During the inspection all 3 engines were operating at their maximum design output.

Design/Equipment Parameters

EDL is required to equip and maintain a non-resettable hours meter on each engine to track operated hours, in addition to fuel meters to monitor and record the daily fuel usage and volumetric flow rate of the fuel used. I verified that each engine has its own resettable hours meter, from which I recorded total hours on each engine. Additionally they have continuous monitoring and recordkeeping for the daily fuel usage and volumetric flow rate entering the facility.

Monitoring/Recordkeeping

The kilowatt output is required to be continuously monitored and to be recorded a minimum of once per day, excluding holidays and weekends. I requested kW output records for the 3 engines for the month of July 2018, which D. Zimmerman provided via excel spreadsheet, and the first 3 days of July is attached for reference. Each data point is logged every 5 minutes. Kilowatt output for the 3 engines stays within 1400+ to 1600+ kW, which is within the range the engines run at during stack tests, demonstrating routine operating conditions. I reviewed all data and verified that the scheduled maintenance downtime events logged in EDL's maintenance records coincided with 0 kW throughput for each engine.

EDL is also required to record the monthly and 12-month rolling hours of operation from each engine. EDL tracks operation hours per engine within the same spreadsheet that is used to record monthly and 12-month rolling landfill gas usage records. For engines 5, 6 and 7 the 12-month rolling hours from August 2017 – July 2018, as determined at the end of July 2018, were 8,509; 8,560; and 8,479 hours, respectively. The highest 12-month rolling operating hours for the 3 engines during this same time period were, respectively, 8,659 (September 2017), 8,682 (December 2017), and 8,635 (October 2017).

FGICE: EUICE1-4 (Engines 1-4)

The engines in FGICE consist of four 3516 CAT engines subject to the RICE MACT ZZZZ. Granger has numbered these as Engines 1-4. Each engine is rated at 800 kW, 1138 hp. Table 3 contains the operating status of each of the engines during the inspection. All engines, except for Engine 2, were running at the time of the inspection.

Table 3. FGICE engine operating data

	Total Plant	Engine 1	Engine 2	Engine 3	Engine 4
Serial Number		3RC00898	4EK01496	3RC00640	4EK00655
Operating hours		9,495.9	10,595.4	6,735.6	53,843.3
Kilowatts (kW)		869	NA	851	835
Flow rate - scfm (total entering the plant for engines 1-4)	1314				

CH4% (total entering the plant for engines 1-4)	49.5				
O2% (total entering the plant for engines 1-4)	0.16				

There have been several swaps/replacements conducted for the engines under FGICE within the past year. Upon my request, D. Zimmerman provided me with an exemption demonstration (Rule 278/285(2)(a)(vi)) and reconstruction analysis for the engine replacements, received on April 25, 2018, which was considered acceptable (see attached for the demonstration).

Engine #1 (3RC00640) was replaced with another 3516 engine (4EK00131) on July 25, 2017; Engine #2 (3RC00273) was replaced with another 3516 engine (4EK01496) on June 7, 2017; and Engine #3 (3RC00655) was replaced with the overhauled Engine #1 (3RC00640) on November 20, 2017. The demonstration includes the manufacture dates of the 3 previously installed engines at the site; the installation dates (including the day and the month of installation); a demonstration of whether the activity results in an increase of actual emissions greater than significance as mentioned in Rule 278; and the model type; max engine power and displacement; the engine family and engine type for each engine.

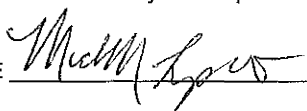
To use the 285(a)(vi) exemption for routine replacement of engines, facilities must include the swapping and replacement of engines as part of their PMP. EDL will be required within their new ROP to have a MAP/PMP. I will inform D. Zimmerman that there needs to be a statement included within their PMP explaining that overhauls are part of their maintenance routine. By conducting routine overhauls and maintenance on these engines EDL can ensure that the engines are meeting their permitted emission limits for NOx, CO, and VOC. The replacement engine will have a different serial number and/or manufacture date.

There are no Material Limits, Process/Operational Restrictions, or Monitoring/Recordkeeping requirements for FGICE at this time.

Emission Limits & Testing/Sampling

EDL is limited to 0.75 lb/hr formaldehyde for all 4 engines in FGICE. EDL was required, per the ROP, to conduct formaldehyde emission rate testing on at least one of the engines in FGICE within 180 days after issuance of the ROP. This condition was rolled into the ROP directly from PTI 357-07A issued in August 2012. Granger (at the time) tested the formaldehyde emissions in September 2012, which fell within the 180-day time period required in the PTI to test at least one of the 3516 engines. Granger was in compliance with their formaldehyde emissions at that time. Typically, the requirement to conduct emissions testing is not written in this way for ROP's, and AQD would require testing to be done within each ROP renewal cycle. The LDO AQD has made the determination to allow Granger to test at least one engine from FGICEENGINES before the expiration date of their current ROP, May 2, 2018. The formaldehyde test was conducted on March 16, 2018. The test report indicated compliance with the formaldehyde emission limit.

Compliance Statement: The Granger Wood Street Landfill, Grainger Container Service, and EDL Wood Road Generating Station are currently in compliance with MI-ROP-N5997-2013 at this time.

NAME 

DATE 9/13/18

SUPERVISOR 

