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

N598741211

FACILITY: Brent Run Landfill		**SRN / ID:** N5987
LOCATION: 8335 W. Vienna Rd, MONTROSE		**DISTRICT:** Lansing
CITY: MONTROSE		**COUNTY:** GENESEE
CONTACT: Tim Church , District Manager		**ACTIVITY DATE:** 08/09/2017
STAFF: Michelle Luplow	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: Scheduled, unannounced inspection of Granger Electric. Scheduled, announced inspection of Brent Run Landfill. Both activities are PCE's as part of an FCE.		
RESOLVED COMPLAINTS:		

Inspected by: Michelle Luplow

Personnel Present (Brent Run Landfill): Tim Church (timc@wasteconnections.com), District Manager, Brent Run Landfill

Personnel Present (Granger Electric):
Bill Prestin (bill.prestin@energydevelopments.com), Operations Technician, Granger Energy Services (Brent Run)
Patrick Walters (pat.walters@energydevelopments.com), Operations Technician, Granger Energy Services (Brent Run)

Personnel Not Onsite: Dan Zimmerman, Compliance and Safety Officer, Granger Electric (dan.zimmerman@energydevelopments.com)

Purpose: Conduct an announced, scheduled, partial compliance evaluation (PCE) inspection of the Brent Run Landfill and unannounced inspection of the Granger Generating Station (services Brent Run). Compliance was determined using the sectioned ROP, MI-ROP-N5987-2015, which was issued in October 2015. This activity was done as part of a full compliance evaluation (FCE).

Facility Background/Regulatory Overview: The Brent Run Landfill is a municipal solid waste landfill with an associated gas-to-energy plant that is run by Granger Electric. The primary activity of this source is accepting municipal solid waste, consisting mostly of residential and commercial waste materials, with receipt of municipal solid sludge on a daily basis. 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 December 13, 1995, making it subject to 40 CFR Part 60, Subpart WWW, as it has been constructed after May 30, 1991. T. Church said they have a 1 ppt citrus and water odor misting system which is used to control odors; it is operable, but has not been used this summer. He indicated that it is cumbersome to use in that they have to haul water using a tanker truck, and can only be used when it is not freezing out. He said they are looking into a different odor control system which he said is being used at other landfills throughout Michigan. In addition to odor control systems, Brent Run also engineers horizontal wells in active areas of the landfill to control odors.

There is a new NSPS EPA ruling for landfills that was finalized October 28, 2016. The new NSPS Subpart XXX will apply to all landfills that are modified, new, or reconstructed after July 17, 2014. For all other landfills, there is an Emission Guideline (EG) NSPS Subpart Cf that applies to landfills accepting waste between November 8, 1987 and constructed, modified or new before July 17, 2014. These two regulations will replace NSPS Subpart WWW and NSPS Subpart Cc, respectively. Both Subparts in their entirety were stayed from May 31, 2017 through August 29, 2017. Steve Blayer, WMRPD, said that Brent Run's construction permit was issued on 12/20/2013, and that Brent Run commenced construction on Cell 11 in the spring of 2014. Based on this information, it is likely that Brent Run will be subject to the NSPS Subpart Cf. EPA approval of Michigan's SIP for obtaining delegation of Emission Guideline Subpart Cf is projected for final approval in November 2017. K. Mahmood verified that this is correct for Brent Run's current operations. ROPs will not be reopened to incorporate these requirements, but rather, the requirements will be incorporated during renewal.

On August 18, 2016, PTI 78-16 was approved for EUENGINE6, a CAT 3520C engine, to replace EUENGINE2 (G3516 engine). A Minor Modification was issued on April 28, 2017 under MI-ROP-N5987-2015a, to add EUENGINE6 into the ROP and remove EUENGINE2 by removing flexible group FGICEENGINES2 and replacing it with an EUENGINE1 emission unit, maintaining all requirements that FGICEENGINES2 had for both engines.

EUENGINE1 is a G3516 engine that is subject to NESHAP, 40 CFR Part 63, Subparts A and ZZZZ (RICE MACT), but there are no associated applicable requirements at this time. EUENGINE3 (G3516), EUENGINE4 (G3516), EUENGINE5 (G3512) (FGICEENGINES), and EUENGINE6 are subject to the RICE MACT. EUENGINE3 and EUENGINE6 is both subject to the NSPS 40 CFT 60 Subpart JJJJ.

Bill Prestin informed me on August 7, 2017, that Granger Electric has been sold to a company based out of Australia, Energy Developments, "EDL". Dan Zimmerman said he would inform me if any changes to staffing, especially for the responsible official, are made.

MI-ROP-N5987-2015 was issued in October 2015. The ROP was received administratively incomplete and resulted in violation notices for both Brent Run Landfill and Granger Electric sections of the ROP, and the loss of an application shield. The new ROP was issued before the previous ROP expired, therefore a consent order was not necessary.

Inspection: I had attempted to conduct an unannounced inspection of the Brent Run Landfill on August 7, 2017; however, Tim Church was not onsite that day, so I scheduled an announced inspection with him on August 9, 2017. At approximately 8:30 a.m. on August 9, 2017 I met with Tim Church at Brent Run's office for the announced, scheduled inspection of the landfill. I provided T. Church with a January 2017 Permit to Install Exemptions Handbook.

An unannounced inspection was conducted at the Granger Electric Facility on August 7, 2017. At 9:00 a.m. I met with Bill Prestin and Patrick Walters for the unannounced inspection of Granger Energy Service's Brent Run generating station and also provided Bill with a January 2017 Permit to Install Exemptions Handbook.

Section 1: Brent Run Landfill Inspection

EULANDFILL

Brent Run has a gas collection and control system that routes all collected landfill gas to the gas treatment system and subsequently to the Granger engines which burn the gas for electricity production. Flares (candlestick and enclosed) are available to burn excess gas when there is more gas than the generators can burn at any given time.

Emission Limits & Testing/Sampling

Brent Run is required to conduct surface monitoring which includes documenting the monitoring route on a topographical map of the landfill. Surface monitoring is conducted to determine compliance with the methane concentration limit of 500 ppm above background level, required to be conducted on a quarterly basis. For each semi-annual report that Brent Run submits to AQD, quarterly reports for surface emission monitoring (SEM) are included. These reports include a map of the route that is traversed for surface monitoring. The ROP requires a distance of 30 meter intervals (~100 feet). During the 2015 inspection, Khaled Mahmood, Cornerstone consultant, showed me on the topographical map the scale that indicates how far apart the traverse lines are. According to the map's scale, the distance between the traverse routes appears to meet the 30-meter interval requirement, except where slopes on the landfill are particularly steep, in which case the NSPS allows these areas to be excluded from monitoring. K. Mahmood explained that the surface monitoring consultants (Monitoring Control and Compliance, Inc [MCC]) are required to follow the SEM map that Brent Run has constructed. He explained that the SEM map itself can change every year because the landfill topography continues to change as active and filled areas develop. In these cases, a new map with new traverse lines is created.

All quarterly SEM reports are reviewed for compliance with the 500 ppm methane limit. The most recent semi-annual report contains an SEM report during the July 1 – December 31, 2016 semi-annual period. The SEM were conducted August 23, 2016 and November 18, 2016; there were no exceedances of the 500 ppm above background limit during the 2 quarters.

The monitoring is required to be conducted using an organic vapor analyzer, flame ionization detector, or other portable monitor. The quarterly reports contain what type of analyzer was used. For the most recent quarters, a Trimble SiteFID (flame ionization detector) was used.

The testing conditions also require background concentrations be determined by sampling upwind and downwind. Each of the quarterly reports is reviewed to ensure that upwind and downwind sampling has been conducted. The "Calibration Precision Record" shows the procedure and results of the background concentration at the surface of the landfill, upwind and downwind.

There are no Material Limits for EULANDFILL at this time.

Monitoring/Recordkeeping

A program is required to be implemented to monitor cover integrity and implement cover repairs on a monthly basis. T. Church provided me with MCC's "Monthly Cover Integrity Inspection Surface Monitoring Design Plan" for 2017 (up through June 2017, attached). These inspections are conducted on a monthly basis. These documents contain notes on the cover integrity of the landfill throughout the calendar year, but can also contain notes on issues spotted, and if there were no issues, it is documented as such. It also appears that if a fix in the cover was required the fix was also documented. T. Church explained that if holes are found during the inspection they usually will fill the holes with clay, depending on the severity; the inspections also serve as "leak checks" for the landfill liquids by watching for dead grass patches, etc. He said that the problems are always fixed by the subsequent month's inspection. For the monthly cover integrity reports January – June 2017 it was documented that no issues were found.

Brent Run is also required to keep records of the current amount of solid waste in place and the year-by-year waste acceptance rate onsite, as well as the original design capacity report that triggered NSPS. The current amount of solid waste

in place and year-by-year acceptance rates are reported to WMRPD under the Waste Database System (WDS, http://intranet.deq.state.mi.us/wds/SolidWaste/AnnualLandfillReports.aspx?w=406671). The current amount of solid waste in place, according to the WDS report, (1996-2016) is 36,892,411 yd^3. The landfill opened in December 1995, so it is appropriate that the waste acceptance log started in 1996. K. Mahmood emailed me Brent Run's current and only design capacity report in 2015, noting a maximum design capacity of 9.3 million megagrams, which triggered the NSPS threshold of 2.5 million megagrams.

If Brent Run adds liquids other than leachate into the waste mass, they must comply with the bioreactor requirements of 40 CFR 63.1947, 1955(c) and 1980(c) through (f), or keep record of calculations showing that the moisture wt% expected in the waste to which liquid is added is less than 40%. T. Church said that Brent Run does not dispose of liquid waste into the landfill. He explained that they receive liquid waste, but process it to make it solidified before sending it to the landfill; they have been practicing this method of liquid disposal since 2011. He also said that the leachate from the waste mass is not recycled back into the waste mass but pumped into the sewer instead. They requirement to comply with bioreactor requirements or liquid content recordkeeping therefore does not apply at this time.

Records for surface monitoring are required to be kept for the following: topographical maps of route traversed, locations and concentrations of any readings exceeding 500 ppm above background, and the weather conditions on the day of testing. As addressed above, a topographical map of the surface monitoring route traversed was provided, there were no reported emissions in excess of 500 ppm from background. The "Calibration Precision Record" also includes the weather conditions during the surface monitoring.

Reporting
Brent Run is required to submit semi-annual certifications, SEM exceedances and startup, shutdown, malfunction (SSM) reports by March 15 for July 1 – December 31 and September 15 for January 1 to June 30. Annual certifications are required to be submitted by March 15. All reports (semi-annual and annual) have been submitted timely since the 2013 inspection. This includes reporting surface emissions exceedances, deviations during the 6-month reporting periods, and submittal of the startup, shutdown, and malfunction (SSM) reports.

The most recent reports received were for the reporting period July 2016 – December 2016.

EUACTIVECOLL
This emission unit encompasses the landfill gas collection system with its associated "control equipment": EUOPENFLARE, EUENCLOSEDFLARE, and EUTREATMENTSYS. EUTREATMENTSYS was moved to Section 2 of the ROP during the recent renewal, as the gas treatment system is Granger Electric's responsibility. T. Church and K. Mahmood explained during the 2015 inspection, that the open flare is used when the engines need maintenance or when an engine breaks down, to burn off the excess gas that the remaining engines don't have the capacity to burn. (The enclosed flare hasn't been operated since 2013).

T. Church explained that on the rare occasion that a well was hit or some other issue occurred with the GCCS, that Brent Run will call Granger Electric to pull off on the engines.

There are no Emission or Material Limits for EUACTIVECOLL at this time.

Process/Operational Restrictions
Blower vacuums are used to pull the landfill gas from the landfill in through the treatment system. K. Mahmood said during the 2015 inspection that Brent Run has several blowers that are alternately used during gas collection. They operate on electricity and it was explained to me that if the power goes out they have an emergency generator (not located onsite) to provide power for the blowers to continue to collect the gas rather than have landfill gas vented to the atmosphere.

Brent Run is required to collect gas from cells when the waste has been in place for 5+ years for active cells and 2+ years for closed or final grade cells. T. Church said that Brent Run closes their collection wells when they no longer produce gas (when CH4% levels off at around 5-10%). He also said that horizontal collectors are placed in the active sites sooner than the 5-year requirement in order to better control odors/be a good neighbor. He explained that horizontal collectors, in these cases, are "sacrificed," as after a few years they become pinched, etc as a result of the compaction of the garbage with heavy machinery. He said that within 1.5 – 2 years of opening an active landfill, horizontal collectors will be installed to capture gas, and, if the layout makes sense, they will also install horizontal collectors prior to waste being deposited in a new active cell in preparation for collection. They have been installing horizontal collectors in this fashion since 2012. Horizontal collectors in the active sites of the landfill are also more inclined to have higher oxygen levels because they are relatively closer to the surface of the landfill than other horizontal collectors.

Design/Equipment Parameters
Brent Run is required to design their collection system in such a way that minimizes off-site migration of subsurface gas. Installing the horizontal collection wells even before the 5-year waste-in-place requirement, as previously discussed, allows Brent Run to meet this design parameter requirement.

All wellheads are required to have sampling ports installed for measuring temperature. T. Church showed me an uninstalled wellhead and showed me the 3 sampling ports for temperature, pressure and oxygen. He said these are on each wellhead in the landfill.

The collection pipes are required to be made of PVC, HDPE, fiberglass, stainless steel or other nonporous, corrosion-resistant materials. T. Church verified that all collection pipes are made of HDPE.

The maximum gas generation flow rate is also required to be determined in order to design the active gas collection system sufficient enough to handle this projected quantity. Brent Run uses LandGEM to determine this flow rate. The projected maximum landfill gas generate rate at the end of calendar year 2017, according to K. Mahmood is 3,726 scfm. K. Mahmood also said there is a 70% collection efficiency, resulting in an estimated flow of 2,608 scfm. The LandGEM model uses a similar formula to the one that is required to be used in 40 CFR 60.755(a)(1) for new collection systems. T. Church said that pulling the gas in the system at 42" H_2O is typically the optimal pull rate to maintain the O_2 to CH_4 ratio at levels prime for engine operation.

Monitoring/Recordkeeping, Process/Operational Restrictions, & Reporting
In October 2016, an email was sent to Brent Run contacts Tim Church, Khaled Mahmood, and Matt Boudreau (Cornerstone consultant) with the following information concerning alternative timeline requests for oxygen and temperature exceedances, positive pressures, decommissioning of wells, and other requests:

> As you may know, the NSPS WWW, 60.755(a) (5), allows a facility to request an alternative timeline for correcting exceedances of GCCS well operating parameters. I am writing to inform you that the deadline for submitting an alternative request is 15 days from the exceedance. In the past, MDEQ-AQD staff has considered alternative timeline requests, regardless of whether the facility submitted the request within 15 days.
>
> Recent discussions with EPA reconfirmed the 15-day NSPS requirement for requesting an alternative timeline. As a result of this discussion, in order to be compliant with the NSPS companies are required to submit alternative timeline requests within the 15-day deadline or MDEQ-AQD may deny these requests, as specified under NSPS WWW. In addition, facilities should include any denied requests in their semi-annual deviation reports.
>
> Each situation and request is unique and it is difficult to prescribe what information must be included in a specific request; however, it is expected that, at a minimum, a request shall include:
> - the operating parameter that has exceeded the regulatory limit;
> - the date that the exceedance was initially detected;
> - a detailed narrative discussion of all steps taken by the landfill owner or operator to correct the exceedance within the 15-day period;
> - an explanation of why, despite the best efforts of the landfill owner or operator, the corrective action/repair work selected by the landfill owner or operator could not be implemented within 15 days and why exceedance could not otherwise be corrected within 15 calendar days;
> - a summary of the historical data for the well in question (should include a minimum of 6 months of past data, construction specifications for the well, description of the cover in the area, the age and type of waste, and any other information pertinent to the well);
> - the following data collected at the well head:
>   - temperature of the landfill gas,
>   - percentage of the gas that is methane, oxygen, and CO2
>   - gauge pressure;
> - a detailed narrative discussion of the intended corrective measure and the amount of time the owner or operator estimates it will take to accomplish the correction;
> - a detailed justification of why the proposed alternative timeline represents the amount of time necessary to implement the proposed corrective action/repair;
> - a detailed justification of why an expansion of the gas collection system is unwarranted (if applicable);
> - a detailed narrative describing why complying with the timeframes provided for in the rule would result in (1) unreasonable cost of control resulting from plant age, location, or basic process design; (2) physical impossibility of installing necessary control equipment; or (3) other factors specific to the facility that make application of a less stringent compliance time significantly more reasonable.

This notice was provided to ensure that facilities understood that corrective actions should be taken within 15 days. If they are not corrected in 15 days, a request for an alternative timeline must be placed within that 15-day timeframe, otherwise a deviation is required to be reported for failure to request within the 15-day timeframe. This was not always enforced consistently throughout the State of Michigan.

Under the Monitoring/Recordkeeping requirements, Brent Run is required to monitor the gauge pressure in the gas collection header at each well on a monthly basis. Additionally, the Process/Operational Restrictions condition 3 requires that well head pressures be negative unless there is a fire or increased well temperatures, a geo-membrane or synthetic cover is used, or the well is decommissioned. Brent Run submits a semi-annual summary table of all wells that experienced positive pressure during that period. The wells are monitored more than once per month by MCC. When positive pressures cannot be corrected within 15 days of the first measurement, Brent Run is required to contact AQD to obtain approval for an alternative timeline (or gas collection system should be expanded) to correct the positive pressure on the well-head. Brent Run has been consistent with asking for alternative timelines for all wells not in compliance with the negative pressure requirement, and within the 15-day timeline after the October 2016 email was sent.

In addition to gauge pressure monitoring, Brent Run is also required to monitor the wells for temperature and oxygen on a monthly basis. Condition 4 of the Process/Operational Restrictions specifies that landfill gas temperatures at the wellhead be less than 55°C (131°F) and oxygen levels be less than 5%. Brent Run submits a semi-annual summary table of all wells that experienced exceedances of the temperature and oxygen maximum level limits. The wells are monitored monthly for these 2 operating parameters and Brent Run has been consistent with asking for alternative timelines when appropriate.

Table 1 consists of all approved oxygen higher operating values (HOVs) for various well-heads within the landfill. As allowed by Process/Operational Restrictions condition 4, HOVs are approved if the permittee can provide supporting data demonstrating that the elevated parameters do not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

In addition to semi-annual reporting, Brent Run, through Cornerstone, has instituted a new type of monthly reporting for well parameter exceedances, corrective actions for the exceedances, any alternative timeline requests, AQD approvals of HOV's and whether or not the issues were resolved. This spreadsheet is sent to AQD monthly for all exceedances during that month and includes initial and subsequent well readings if initial readings show exceedances. Attached is an example of the 2016 and 2017 alternative timeline requests and approvals.

Table 1. Oxygen Higher Operating Values

Well ID	Higher Operating Value	HOV Request Date	HOV Approval Date
Horizontal Collector 03 (HC03)	21.9%	11/2/15	No longer needed, well is being abandoned (rendered permanently inoperable) by filling it with bentonite and capping wellhead off below grade.
Leachate Riser 6B (LR 6B)	21%	9/8/15	10/5/2015
Leachate Riser 7A (LR 7A)	21.9%		4/20/2012

Brent Run is also required to maintain a plot map to include existing and planned collectors in the system with a unique ID location label for each. T. Church showed me the large plot map that they keep in their office. It contains identification numbers with all associated horizontal and vertical collectors currently in place. K. Mahmood explained during the 2015 inspection that Brent Run plans the well installations year by year, based on their overall goal as supplied in the Initial Design Capacity report (June 1996). Additionally, the density of the wells, horizontal collectors, surface collectors and other gas extraction devices are required to be determined via the procedures specified in 40 CFR 60.758(a)(1). K. Mahmood provided a letter of approval from the AQD and WMRPD of Brent Run's GCCS design plan in February 2006 for the May 2004 GCCS Design Plan submittal. Included with this was a description of how compliance with 40 CFR 60.759(a)(1) and subsequently, 40 CFR 60.759(a)(2) was determined. Compliance with 40 CFR 60.759(a)(1) is required under SC VI.4(b).

Decommissioned Wells
Brent Run informed AQD on 10/7/15 that Brent Run will decommission Well 88 because it did not respond to the corrections applied to bring the $\%O_2$ below 5% and as far as they can tell the well casing is in good condition, which means there should be no air infiltration. T. Church explained that the increase in oxygen content in the well head could generally be attributed to a pinched pipe, which increases the vacuum on the well. K. Mahmood said that decommissioning wells can be long term but are temporary. It involves removing the well from operation by closing the well's valve to stop vacuum, and no monitoring is done on them.

Reporting
Semi-annual reports for the GCCS system are required to include the value and length of time for each exceedance of applicable parameters monitored in SC VI.1 and VI.3, all periods when the GCCS was not operating in excess of 5 days, and records of positive pressure wells which are maintained as such in effort to avoid fire. An SSM report is also required to be submitted semi-annually. Brent Run has submitted all required reports for this unit to date.

EUENCLOSEDFLARE

According to T. Church, the enclosed flare was installed in the 1990's. It was not operating during the inspection, and T. Church said that it has not operated for control of landfill gas since July 2013. They currently operate the flare once per month for maintenance and readiness testing, which is also used to determine what upgrades and maintenance still needs to be done. After the 2015 inspection, in December 2015, T. Church initiated actions to get the enclosed flare back into operating order. This included the following installations of new equipment: a calibrated flow meter, a pilot gas line, flame arrestor, rain cap, and refractory. A digital monitoring system for flow and temperature was also installed which T. Church said is now electronically redirected to the PLC inside the electric plant. Flow and temperature were previously recorded on analog circular charts. T. Church said these updates have made the enclosed flare fully operational, but that there are still some items on the flare that need some attention, including painting the flare's exterior surface.

K. Mahmood said the flare is capable of handling 1389 scfm. Between the open and enclosed flare capacities, the flares can handle 2739 scfm landfill gas. As previously mentioned in the report, after 70% collection efficiency the maximum flow to the flares is approximately 2,608 scfm; if all engines were simultaneously inoperable, the flares would be capable of handling all landfill gas flow. The enclosed flare does not have a bypass line.

T. Church explained that the enclosed flare is equipped with a purge system to purge the enclosure of any residual landfill gas that has collected at the bottom of the flare, thus removing any explosive environment hazards prior to igniting the pilot light. Once this is done it takes approximately 1.5 hours to get the flare started and up to temperature before it can burn the landfill gas. The enclosed flare temperature is controlled by manual adjustment of the air intake. T. Church is primarily responsible for this adjustment. The last time the flare was operated was approximately the last week of July. MCC conducted recalibrations during this time and operated the unit for ~ 2 hours.

Emission Limits and Testing/Sampling
The enclosed flare is required to have an NMOC reduction of 98% or an NMOC outlet concentration of 20 ppmv. K. Mahmood provided me with the test report for the April 12, 2002 performance test as AQD did not have a copy of this in their files. The 4/2002 test results showed an average of 1.27 ppmv NMOC outlet concentration, meeting the 20 ppmv emission limit.

There are no Emission Limits for EUENCLOSEDFLARE at this time.

Process/Operational Restrictions
Brent Run is required to operate the enclosed flare within the parameter ranges established during the 2002 performance test. Testing data from the test report show that the flow rates were around 375 scfm and the temperatures during the test were around 1320°F. If Brent Run uses this flare in the future, these are the operating parameters to pay attention to. If this flare is used in the future and there are 3-hour block averages where the combustion temperature is more than 28C below the average combustion temperature determined during the performance test, an exceedance is required to be recorded and reported (per SC IV.2.a.i.).

The enclosed flare is required to be operated at all times when the collected gas is routed to the system. In the event that the GCCS is inoperable, Brent Run is required to shut down the gas mover system and all valves in the GCCS that contribute to venting of the gas to atmosphere within one hour. T. Church explained that the flares run off electricity from the Granger Electric Plant. If the power is out for an extended period of time (4+ hours) they bring in a portable generator to run the flare. If the Granger Electric Plant blacks out for maintenance, Consumer's power provides back-up power for the flares. During these times when Granger Electric is offline, Brent Run will continue to pull gas off the field, but only as much as the flare can handle. He further explained that when the plant has power, the flare valves remain open. When power is lost, the flare valves automatically close. He explained that the only place in the GCCS where gas could escape via valves is through the flare valves, which can be manually closed as well.

Monitoring/Recordkeeping
Brent Run is required to calibrate, maintain, and operate the enclosed flare according to the manufacturer's specifications, including installing a temperature monitoring device equipped with a continuous recorder and a device that records flow to the flare that is installed, calibrated, and maintained also. As discussed earlier, T. Church ensured that a digital monitoring system was installed which provides continuous data for flow and temperature.

Reporting
Semi-annual reports for the GCCS system are required to include the value and length of time for each exceedance of applicable parameters monitored in SC VI.1, and a description and duration of all periods when the flare was not operating in excess of 1 hour. An SSM report (according to their SSM plan) is also required to be submitted semi-annually. Brent Run has submitted all required reports for this unit to date.

EUOPENFLARE
This flare was not operating during the inspection. The open flare was installed in 2012 and was incorporated into the ROP during the 2015 renewal cycle. According to K. Mahmood during the 2015 inspection, the flare is considered to be air-assisted and is capable of handling 1350 scfm of landfill gas. The pilot light is lit with propane. An electronic data recorder is used to capture temperature and flow data. T. Church explained that the flare is used when engines are down; this involves communication between Brent Run and Granger Electric to ensure gas from the landfill is either being combusted in the landfill gas engines for electricity or being combusted in the flare, so as to prevent fugitive emissions to the ambient air. The

flare is designed to operate at a certain vacuum set-point that can be auto (via frequency drive) or manually set. Generally speaking, if 2+ engines go down, Granger Electric will call Tim to let him know they need him to manually adjust the flare to handle the extra landfill gas that the down engines would have been combusting. He explained that once the flare reaches a certain temperature, the automated valves open and the blower turns on simultaneously over a period of 45 seconds to direct landfill gas to the flame and combust the excess landfill gas. During this time, the pilot flame remains lit for a certain amount of time before shutting off. It takes approximately 5-15 minutes to get EUOPENFLARE operating at a temperature which will support combustion of landfill gas.

Additionally, T. Church explained that a mechanical check valve is installed after the blower, but before the stack. The forced air from the blower forces open the valve to allow landfill gas to the flame, a safety feature

There are currently no Material Limits associated with EUOPENFLARE at this time.

Emission Limits, Process/Operational Restrictions & Testing/Sampling
Visible emissions from the flare are limited to 0% opacity. A performance test is required per 40 CFR 60.18. Brent Run had 180 days from the October 13, 2015 ROP issuance date to complete the performance test (April 2016). The performance test was conducted on March 16, 2016, with the test report submitted May 16, 2016 and included visible emission readings, determination of the Net Heating Value, the stack gas velocity and volumetric flow rate. According to Method 22, Alternative 42 (attached), visible emission readings can be performed for 30 minutes rather than the 2-hour period required under the NSPS Subpart WWW. Brent Run has utilized Method 22, Alternative 42 for the visible emissions test and found that no visible emissions were observed during the 30-minute testing period. A net heating value of 18.7 MJ/m^3 was determined using Method 3C, Alternative 42. The Process/Operational Restrictions allow for the net heating value of the gas for air-assisted flares to be 11.2 MJ/scm or greater.

Additionally, air-assisted flares are to be designed and operated with an exit velocity less than the V_{max} velocity, as determined by the method in 40 CFR 60.18(f)(6). The performance test concluded that the exit velocity was 32.7 ft/s, which they stated in the test report is less than 60 ft/sec (the lower-end limit associated with non-assisted and steam-assisted flares). I will verify with T. Church and K. Mahmood the accuracy of their previous statement that the flare was air-assisted; it is not clear from the test protocol nor the test report what type of flare it is, nor is it clear which exit velocity per the NSPS they are trying to determine compliance with (which goes hand-in-hand with type of flare). Brent Run is currently in compliance with visible emission and net heating value restrictions at this time. Follow-up is necessary with Brent Run to determine compliance with exit velocities.

Design/Equipment Parameters
In addition to the exit velocity requirements (discussed above), Brent Run is also required to install, calibrate, maintain, and operate the open flare according to manufacturer's specifications, including a heat sensing device (such as a UV beam sensor or thermocouple), at the pilot light or the flame itself to monitor and continuously detect the presence of a flame. During the 2015 inspection, K Mahmood said that the flare is equipped with a UV monitor to monitor the pilot flame. T. Church explained that the pilot flame is not lit all the time, and that the pilot light is only lit during startup of the flare. He said the flame sensor is only used for the detection of the flare, not the pilot flame, and further explained that if at any time the flame sensor doesn't detect the flare flame, it automatically shuts down the blower and shuts the valve which allows landfill gas into the combustion chamber.

Monitoring/Recordkeeping
Brent Run is required to keep up-to-date, readily accessible records of flow to the control device, with readings taken at least every 15 minutes. T. Church explained that with the digital recording system, both temperature and flow are continuously monitored and recorded. He explained that MCC retrieves this data from a memory card that the data is logged on. I did not request flow records for this inspection; however, during the 2015 inspection, K. Mahmood provided a spreadsheet of the flow to the flare and the flare temperature for the month of November, with data points being captured every 12-15 minutes.

Reporting
Semi-annual reports for the GCCS system are required to include the value and length of time for each exceedance of applicable parameters monitored in 756(c) and a description and duration of all periods when the flare was not operating in excess of 1 hour. An SSM report (according to their SSM plan) is also required to be submitted semi-annually. Brent Run has submitted all required reports for this unit to date.

EUASBESTOS
T. Church said that Brent Run Landfill receives asbestos containing material (ACM) daily. T. Church explained that the Flint Land Bank Authority currently has ACM projects in Flint, and Brent Run is one of the landfills receiving the demolition debris. They are demolishing houses that are not stable enough to be inspected for asbestos (because they are either dilapidated or remains from a fire), so entire houses are treated as ACM, though not bagged as ACM waste. The houses are torn down and placed in trucks that are covered and transported to the landfills. T. Church said these loads are dumped directly into the ACM pits. This has been determined acceptable handling of the ACM by other AQD Districts who are involved in these demolition projects.

There are no Emission Limits or Material Limits for EUASBESTOS at this time.

Monitoring/Recordkeeping
Waste shipment records are required to be kept containing the name, address, and phone number of the waste generator, transporter(s) and the quantity of asbestos-containing waste material in cubic yards, in addition to the presence of improperly enclosed or uncovered waste, or any ACM not sealed in leak-tight containers. For instances where there is a significant amount of ACM that was improperly enclosed or uncovered, a report is required to be submitted in writing to the AQD by the following working day. The waste shipment record is required to be included in the report.

Additionally, Brent Run is required to keep documentation of the location, depth and area, and quantity in cubic meters (or cubic yards) of ACM waste material within the disposal site, on a map or diagram.

T. Church said that Brent Run generates tickets with associated ticket numbers that contain the waste generator name, transporter name, number of cubic yards brought in for that ticket, and a checklist of items to look for both when receiving the waste and disposing of the waste. The ticket numbers are then referenced in the Disposal Location Chart with Garmin GPS coordinates (longitude, latitude) that Cornerstone staff convert to northing and easting coordinates and elevation (depth) once per year, which are then plotted onto diagrams for each year of ACM acceptance. As the landfill waste settles, the location of the ACM will change over time, but the logged coordinates remain the same.

T. Church informed me during the inspection that during the month of July 2017, 11 loads of ACM were disposed of at Brent Run as demolition waste. The waste, however, was not properly manifested at the time of disposal: the transporter company, Jim's Recycling, Inc out of Attica, Lapeer County did not disclose that the waste was ACM, but rather stated it was demolition waste, until 10 loads had already been received and landfilled. Because Brent Run was unaware that this was ACM, the locations of the material deposited throughout the landfill were not documented in the appropriate manner, as described above. The loads were associated with asbestos abatement of non-friable roofing material located at Lapeer Armory, 2140 W. Genesee in Lapeer. I will be working with the AQD Asbestos Inspector for Lapeer County and Steve Blayer, DEQ WMRPD, to address this issue and ensure that the abatement was legally conducted from their perspectives. One of the main questions to answer is, "How does a landfill ensure that the hauler is bringing in what they say they're bringing in?" T. Church explained that the landfill operators are trained to notice if there are items in the waste stream that are not acceptable, but ACM, unless it is contained in the appropriate ACM containment, would not be easily identifiable. He also explained that the operators, based on experience, know who the bad actors are and will pay closer attention to these entities. I will remind T. Church that the undocumented locations of ACM throughout the landfill should be reported as a deviation in Brent Run's semi-annual reporting.

The manifest documents for the 11 loads of ACM, which demonstrate compliance with the waste manifest recordkeeping requirements (see attached), were received 9/12/17 via email from T. Church. Also attached is a letter from Gina Lincoln, Brent Run's Office Manager, explaining that Jim's Recycling believed they had an appropriate manifest, which they believed was the signed Brent Run document (profile) certifying that the waste they are bringing in is what they say it is (demolition waste). Brent Run discussed the procedure with the company again, and then submitted the profile to the Special Waste Approver for approval before generating the proper waste manifests for ACM.

Process/Operational Restrictions
Asbestos-containing material is required to be covered in at least 15 cm of non-ACM compacted material at the end of each operating day or once every 24-hour period if the use of warning signs or natural barriers are not used to deter public access. Brent Run does have fencing at its northern perimeter along Vienna Rd, but I did not verify whether fencing surrounded the other 3 boundaries; however, there are no warning signs posted. To meet this requirement. T. Church said that the ACM is covered soon after it is deposited with landfill waste with a minimum cover of 18".

Design/Equipment Parameters
The GCCS collection wells are required to control all gas-producing areas, except for segregated areas of asbestos or nondegradable material. T. Church explained that their ACM is distributed randomly throughout the landfill; there is no specific location for ACM deposits and therefore all gas-producing areas are controlled.

There are no Testing/Sampling requirements for EUASBESTOS at this time.

VII. Reporting
Brent Run is required to notify AQD at least 45 prior to excavating or disturbing ACM in the landfill. Brent Run accomplishes this by sending out a notification at the beginning of each calendar year explaining that excavations will occur on a continuous basis throughout the year, and explain the way in which they will control ACM dust during these excavations. The excavations are predominantly to install vertical and horizontal collectors. Vertical wells are made by drilling holes into the waste, and wetting the waste that has been drilled out of the hole to ensure any disturbed ACM is not released to the ambient air. Horizontal wells are installed by trenching through the waste to install the collectors. T. Church explained on the off-chance that there is an emergency situation (if they hit a vacuum line, for example, and have to drill through asbestos to mitigate the issue) the notification they submit at the beginning of the year also includes these situations. Locations for installing vertical wells are chosen in less concentrated areas of ACM disposal. When horizontal wells are installed, sample ports are also installed in each of the wellheads to check the gas quality in the collector. When there is greater than 40%

CH_4, or when the cell begins to smell, they will start collecting the gas from these cells using the horizontal collectors. Brent Run has not yet drilled this calendar year.

FGCOLDCLEANERS
Brent Run Landfill has one cold cleaner present onsite in their maintenance building. The cold cleaner is considered "new" under Part 7 rules because it was installed after July 1, 1979. (T. Church said it was installed in 1994). Brent Run uses mineral oil in their cold cleaner.

Material Limits
Brent Run is only allowed up to 5% of various halogenated compounds in their cold cleaner. Brent Run meets this requirement, as the only chemical in their cold cleaner is mineral oil, which does not contain halogenated compounds.

Design/Equipment Parameters
The cleaner is required to have an air/vapor interface no more than 10 square feet to operate under exemption Rule 281(2)(h). T. Church measured the dimensions of the cold cleaner to be 36"x26", approximately 6 square feet.

Mechanical assistance of the cover is required if the Reid Vapor Pressure (RVP) of the solvent is more than 0.3 psia. Brent Run uses mineral spirits as their solvent and according to Cameo Chemical's SDS, has a RVP of 0.13 psia. This cold cleaner is not subject to this requirement at this time.

Condition IV.5 has requirements for those new cold cleaners using solvents with a RVP greater than 0.6 psia. Brent Run's cold cleaner is not subject to this condition at this time.

Monitoring/Recordkeeping
Written operating procedures are required to be maintained for each cold cleaner and located conspicuously near the cleaner. Brent Run is in compliance with this condition.

Compliance Statement: Brent Run Landfill is in compliance with Section 1 of MI-ROP-N5987-2015a at this time.

Section 2: Granger Electric Inspection
The inspection was conducted from 9:00 a.m. – 10:30 a.m. on 8/7/17. Upon entering the site I saw no signs of opacity from any of the engines' stacks. Granger provided records on 8/27/17.

EUTREATMENTSYS
This emission unit treats the landfill gas coming into the electric plant by removing moisture and particulate, making it suitable for combustion in the landfill gas engines.

There are currently no Emission or Material Limits for EUTREATMENTSYS at this time.

Process/Operational Restrictions
The treatment system is required to be operated at all times when the collected gas is routed to the system. The treatment system is a necessary component in the gas routing process prior to sending the gas to the landfill gas engines. Without treatment, damage to the engines would occur.

Granger Electric is required to have both a Preventative Maintenance Plan (PMP) and a Startup, Shutdown, Malfunction (SSM) plan for the treatment system. Both were provided to me during the 2015 inspection, and again with the ROP Renewal Submittal.

There are currently no Testing/Sampling conditions for EUTREATMENTSYS at this time.

Reporting
Granger Electric is also required to semi-annually report exceedances, or periods when the treatment system was not operating for periods exceeding 1 hour. Granger Electric reports treatment system downtime in exceedance of 1 hour, which includes the total duration of downtime and exact shutdown and startup times for these occurrences for all semi-annual reporting.

Startup, Shutdown and Malfunction (SSM) reports are required to be submitted semi-annually as well. B. Prestin said that there have been no SSM's in 2017. I will verify this when the semi-annual reports come in for the first half of 2017. B. Prestin keeps records for SSM's, which are used to create the semi-annual SSM reports.

Engines Present Onsite

Table 2 contains a list of all engines currently present onsite. Each serial number was verified by B. Prestin and I in the engine room. Overhaul dates listed are those that were conducted at the Granger Electric site; it does not take into account overhauls conducted on the engine previous to be installed at this site. Table 3 provides a list of the engines and associated operating parameters recorded during the inspection. B. Prestin said there have been no swaps or overhauls conducted on any of the engines in-place since the 2015 inspection (other than installing Engine 6 in place of Engine 2. All 5 engines were running during the inspection.

Table 2. Engines Present Onsite with Associated Installation Parameters

Engine FG	Engine	kW Rating	Build Date	Date Online	Last Overhaul Date	Serial #	Model #
NA	#1	800	3/21/1995	3/1998	NA	4EK00464	G3516
NA	#6	1600	On or after 7/1/2007. Actual date TBD	10/2016	NA	GZJ00387	G3520
FGENGINES	#3	1600	11/27/2011	11/2012	NA	GZJ00550	G3520C
	#4	1600	9/1/2005	11/2012	~11/28/15	GZJ00197	G3520C
	#5	600	10/27/1986	11/2010	NA	4KC00096	G3512

Table 3. Process information recorded on EUENGINES1, 3-6 during inspection

	EUENGINE1	EUENGINE3	EUENGINE4	EUENGINE5	EUENGINE6
Kilowatts (kW)	799	1519	1588	603	1607
% Load (goal: 90% of max)	99	95	99	100	100
CH_4 (%)	50.7	50.7	50.7	50.7	50.7
O_2 (%)	0.01	0.01	0.01	0.01	0.01
Hours	45,775	40,722	14,920	50,521	64,011

FGICEENGINES (EUEngines 3, 4, 5)
This FG consists of the two 1600 kW, G3520C engines, and one 600 kW, Cat 3512 engine.

Emission Limits & Testing/Sampling
Granger is required to test EUENGINE3 or EUENGINE4, and EUENGINE5 once per permitting cycle for formaldehyde emissions. They have until October 13, 2020 to complete this testing. The last formaldehyde testing was conducted on 1/22/13 for EUENGINE 4 and 5. Each met their formaldehyde emissions limits, 2.10 lb/hr and 0.75 lb/hr, respectively.

Material Limits & Monitoring Recordkeeping
Granger is limited to 724.88 MMscf landfill gas per 12-month rolling time period for all engines combined in this flexible group. They are required to monitor and record the landfill gas usage continually. D. Zimmerman provided me with an electronic record of the 12-month rolling landfill gas usage for all 3 engines combined. For the 12-month rolling period of August 2016 – July 2017 the total gas used was 608.96 MMscf.

Process/Operational Restrictions
A previously approved malfunction abatement plan (MAP)/preventative maintenance plan (PMP) is required to be implemented and maintained if Granger wishes to operate these engines. The most recent plan was updated in December 2016 after the issuance of PTI 78-16, to include EUENGINE6 and remove EUENGINE2.

The MAP/PMP is required, at a minimum, to contain the following: the ID of the equipment and the personnel responsible for overseeing the inspection and maintenance and repair of the engines; a description of the items to be inspected and the

frequency of inspection; ID of the equipment monitored to detect a malfunction, normal operating ranges of the parameters, and a description of the method of monitoring/surveillance procedures; ID of major replacement parts in inventory; and a description of corrective procedures in the event of a malfunction. The December 2016 MAP/PMP addresses each of these requirements.

Process/Operational Restrictions & Design/Equipment Parameters
Granger is required to adjust the air:fuel ratios on the engines as needed, based on the engine's kilowatt output. I asked B. Prestin about the control of the air:fuel ratio, and he explained that each engine regulates its own air:fuel ratio in order to maintain a specific output. He said that he manually adjusts the air:fuel on EUENGINES 1 and 5.

EUENGINES3 & 4 are also required to have nonresettable hours meters installed. EUENGINES1, 3, 4, 5, and 6 all have nonresettable hours meters.

Monitoring/Recordkeeping
Granger Electric is required to continuously monitor the kW output from EUENGINES3-5 and record the kW output at least once per day. The "Granger Electric Brent Run Power Plant" data sheet is where the Granger Electric operators will record various engine parameters daily. Kilowatt output is one of those parameters. The readings are taken from digital output monitors for each engine which monitor the kW output continuously. I requested daily records for the month of July 2017. D. Zimmerman provided an Excel spreadsheet of continuous kW output (readings recorded approximately every 10 minutes), which is more than what is required. Attached is a snapshot of records taken on 7/1/17. The recorded outputs for the entire month reflect maximum achievable operating conditions for the engines.

The hours of operation for EUENGINES3 & 4 are required to be monitored continuously and recorded on a monthly and 12-month rolling period. Granger's consultants tabulate all of this data into a spreadsheet. It contains monthly and 12-month rolling data for both hours of operation and landfill gas usage for EUENGINES 3-5. B. Prestin and P. Walters also record the total hours of operation for each engine daily on the "Granger Electric Brent Run Power Plant" record sheet. The flow to each engine is continuously monitored through a computer program and the hours of operation are based on the hours recorded on the engines' nonresettable hours meter. The total hours for the 12-month rolling period from August 2016 – July 2017 is 8,437 hours for EUENGINE3 and 8,610 hours for EUENGINE4.

Records of all maintenance activities conducted according to the MAP/PMP are required to be kept. All maintenance activities that were conducted, based on B. Prestin's maintenance schedule board, are recorded in the "Plant Maintenance Log" (January-April, May-July 2017, attached) where staff record the date, description and which engine maintenance activities were conducted. This log, in addition to the maintenance board B. Prestin keeps, satisfies this requirement.

Reporting
All required annual and semi-annual reporting has been submitted to-date.

EUENGINE1
This EU was once included in FGICEENGINES2, but has since been made its own emission unit in the ROP, as EUENGINE2 of this flexible group has been removed.

Emission Limits & Testing/Sampling
The formaldehyde emission rate from this unit is required to be verified once per permitting cycle. Granger has until October 13, 2020 to conduct this testing. The last stack test for formaldehyde was performed on 1/22/13. According to the stack test report by Derenzo & Associates, formaldehyde emissions during the test were below the emission limit of 0.75 lb/hr.

There are no Material Limits, Process/Operational Restrictions, Design/Equipment Parameters, or Monitoring/Recordkeeping requirements for EUENGINE1 at this time.

Reporting
All required annual and semi-annual reporting has been submitted to-date.

EUENGINE6
EUENGINE6 is the most recently installed engine. It replaced EUENGINE2. Requirements for this EU also fall under FGRICENSPS and FGRICEMACT.

Emission Limits & Testing/Sampling
Within 180 days after initial startup of EUENGINE6, and every 5 years from the most recent stack test thereafter, Granger is required to verify NO_x, CO, SO_2, and VOC, and formaldehyde emission rates at maximum routine operating conditions. D. Zimmerman said EUENGINE6 went onine in October 2016. Testing for all pollutants was conducted on December 8, 2016. Based on the review of the stack test report (1/31/2017) Granger is meeting all emission limits for each of the pollutants at this time.

Material Limits & Monitoring/Recordkeeping

EUENGINE6 is limited to 284.34 MMscf landfill gas per 12-month rolling time period. Granger is required to continuously monitor and record the landfill gas usage. D. Zimmerman provided me with an electronic record of the 12-month rolling (August 2016 – July 2017) landfill gas usage for EUENGINE6 for a total of 243.11 MMscf.

Process/Operational Restrictions
As discussed under FGICEENGINES, Granger Electric meets the MAP/PMP requirements for EUENGINE6 at this time.

Design/Equipment Parameters
EUENGINE6 is also required to have an air-to-fuel ratio controller that is operated in a satisfactory manner. As discussed in FGICEENGINES, this unit as an automatic air-to-fuel ratio controller installed.

Monitoring/Recordkeeping
There are multiple recordkeeping requirements for this unit related to emission limits and engine specifications, which have already been addressed in this report.

Reporting
Annual and semi-annual compliance reports are due by September 15. Compliance with this requirement will be determined at that time.

Stack/Vent Restrictions
The stack is required to be 60' minimum above ground, with a maximum diameter of 14'. D. Zimmerman provided me with a mechanical design of the stack dimensions. The design plan indicates that the stack is 60' above ground level, which includes a 2' raincap. The exhaust diameter of the pipe, prior to the raincap is 14", and the diameter of the raincap is 20". Working with Andy Drury, Permits Section, and Jim Haywood, AQD modeler, we discussed the impact of a 2-foot long, 20" raincap on dispersion. Tracey McDonald modeled the emissions based on a 13.8' diameter exhaust stack. Jim Haywood said that, relatively speaking, 2' out of 60' is not enough to impact the dispersion of the exhaust gases. Engines tend to release gases at a high enough velocity that the 20" diameter raincap will not have a significant effect, and therefore the dimensions of the stack as built are acceptable. Attached is the stack design plan.

FGRICENSPS (EUENGINE3 & 6)
The NSPS requirements apply only to EUENGINE3 and EUENGINE6.

Emission Limits & Testing/Sampling
Granger is required to conduct performance testing within one year after startup and every 8760 hours after that to determine compliance with the NSPS g/bhp-hr limits for NOx, CO, and VOC. Testing was conducted on these engines December 8, 2016. The test report received by AQD on January 31, 2017 had been reviewed at time of receipt and results indicate that the engines' emissions are in compliance with the NSPS emission limits at this time.

There are currently no Material Limits for FGRICENSPS at this time.

Process/Operational Restrictions & Monitoring/Recordkeeping
Non-certified engines are required to be maintained to minimize emissions. The implementation of the MAP/PMP satisfies this condition. Additionally, B. Prestin explained that he and P. Walters are responsible for visual walkthrough/inspection, maintenance and repair of the engines on a daily basis, and keeps an organized inventory of all maintenance parts. He has a routine maintenance schedule board for all maintenance activities that need to be performed on a routine basis and that are based on the number of operating hours of each engine. Maintenance conducted is recorded in their maintenance logs, as previously discussed.

Design/Equipment Parameters
Both engines are required by the NSPS to have non-resettable hours meters installed. As discussed in the previous sections for each engine, both are equipped with non-resettable hours meters.

Monitoring/Recordkeeping
Operating hours are required to be continuously monitored for the NSPS on EUENGINE3. As discussed in FGICENGINES, this is being done.

Reporting
Annual and semi-annual compliance reports are due by September 15. Compliance with this requirement will be determined at that time for EUENGINE6. EUENGINE3 reports have been submitted in a timely manner.

FGRICEMACT: (EUENGINE3-6)
These requirements only apply to all engines except for EUENGINE1.

There are currently no Emission Limits or Material Limits for FGRICEMACT at this time.

Process/Operational Restrictions
HAP emissions are required to be minimized by operating the engines in a manner to minimize HAP emissions. Because Granger meets the formaldehyde emission limits under the NSPS, HAPs emissions are minimized in an appropriate manner.

Design/Equipment Parameters & Monitoring/Recordkeeping
Fuel meters are required to be installed on each engine in EUENGINES 3-6 to monitor and record the daily fuel usage and volumetric flow rate of each fuel used if the engines fire landfill gas at 10% or more of the gross heat input. As discussed earlier, B. Prestin records the volumetric flow rate daily, as flow through the entire plant. The volumetric flow rate is also recorded continuously via a computer monitoring system.

There are currently no Testing/Sampling requirements for FGRICEMACT at this time.

Reporting
Granger is required to submit annual reports which include the fuel flow rate and heating values that were used in the calculations to determine gross heat input on an annual basis, and demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10% or more of the total fuel consumption on an annual basis. They are also required to report any problems or errors suspected from the fuel flow rate meters.

All reports have been submitted and reviewed for compliance.

Compliance Statement: Granger Electric is currently in compliance with Section 2 of MI-ROP-N5987-2015a at this time.

NAME Michelle Jones DATE 9/19/17 SUPERVISOR B.M.