

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

N801133862

FACILITY: MICHIGAN BELL TELEPHONE COMPANY, DBA AT&T MICHIGAN		SRN / ID: N8011
LOCATION: 221 N WASHINGTON SQUARE, LANSING		DISTRICT: Lansing
CITY: LANSING		COUNTY: INGHAM
CONTACT: Joe Cartwright , Manager Network Services		ACTIVITY DATE: 03/23/2016
STAFF: Daniel McGeen	COMPLIANCE STATUS: Unknown	SOURCE CLASS: MINOR
SUBJECT: Self-initiated inspection of office building with two diesel-fuel fired generators, covered by general PTI No. 79-08.		
RESOLVED COMPLAINTS:		

On 3/23/2016, the Department of Environmental Quality (DEQ), Air Quality Division (AQD), conducted a self-initiated inspection of Michigan Bell Telephone Company, dba AT&T Michigan, located at 221 N. Washington Square, Lansing. The purpose was to observe the operations of two diesel fuel-fired engine generators.

**Environmental contacts:**

Joe Cartwright, Manager Network Services; 734-635-6945; [jc8567@att.com](mailto:jc8567@att.com)

**Facility description:**

This office building has two diesel fuel-fired engine generators.

**Emission units\*:**

Emission unit	Emission unit description	Permit to Install No.	Compliance status
LNNGMIMNO1	Generator No. 1; 1275 kW diesel fuel-fired engine generator	79-08	Unknown, re: Rule 301
LNNGMIMNO2	Generator No. 2; 1275 kW diesel fuel-fired engine generator	79-08	Unknown, re: Rule 301

\*An *emission unit* is any part of a stationary source that emits or has the potential to emit an air contaminant.

**Regulatory overview:**

The diesel fuel-fired engine generators are covered by general Permit to Install (PTI) No. 79-08. Michigan Air Pollution Control Rule 301 regulates visible emissions in Michigan. General Condition No. 10 of this PTI is Rule 301 of the Michigan Air Pollution Control rules, and limits opacity of visible emissions to 20%, over a 6-minute average, except for one 6-minute average per hour not to exceed 27%.

This facility is considered to be a minor source for criteria air pollutants. *Criteria air pollutants* are those for which a National Ambient Air Quality Standard exists, and include carbon monoxide, nitrogen oxides, sulfur dioxide, volatile organic compounds (VOCs), lead, particulate matter smaller than 10 microns, and particulate matter smaller than 2.5 microns. A *major source* has the potential to emit (PTE) 100 tons per year (TPY) or more of a single criteria pollutant.

This facility is considered a minor, or *area source*, for Hazardous Air Pollutants (HAPs). A *major HAPs source* has a PTE of 10 TPY or more of a single HAP, or 25 TPY or more of aggregate HAPs.

**Fee Status:**

This facility is not considered fee-subject. They are not a major source for criteria pollutants, so they are not considered Category I fee-subject. They are not a major source for HAPs, so they are not category II fee-subject for that reason. They may potentially be subject to 40 CFR Part 60, Subpart IIII, and they are subject to 40 CFR Part 63, Subpart ZZZZ, the RICE MACT. This could make them a category II or III fee source, respectively, but AQD is not collecting annual fees from sources where engines subject to IIII or ZZZZ are AQD's only interest in the source.

This facility is not required to report annual emissions via the Michigan Air Emissions Reporting System (MAERS).

**Location:**

This facility is located in downtown Lansing. It is surrounded by a number of office buildings.

**Recent history:**

On 2/17/2016, AQD received the first and only complaint of air emissions from this facility. The two individuals listed as the complainant reported that black smoke, and then brown smoke, were seen coming from the roofline of the AT&T building. The smoke was reported to travel down the side of the building, and get drawn into the air handling system where the complainants were located. It was alleged that people began to feel ill from odors and smoke, with some people asking for and receiving approval to leave work, for the time. Reported symptoms included watering eyes.

On 2/19 and 2/22/2016, AQD visited the AT&T building, to follow up on the complaint. I was informed that on 2/17, generators nos. 1 and 2 each ran for an hour, as part of readiness testing. I was invited to observe the next readiness testing, to be held today, 3/23.

**Arrival:**

Weather conditions were 40 degrees F and overcast, with winds out of the northeast at about 15 miles per hour. I arrived at the AT&T building at 9:45 AM. I met with Mr. Joe Cartwright, Manager Network services, and Michael, from their Howell office, along with technicians Jim and Josh.

I had provided a copy of the DEQ brochure *Environmental Inspections: Rights and Responsibilities*, during my initial 2/19/2016 visit to the facility. I provided a copy of the DEQ Boiler NESHAP card, to assist the company in determining which, if any, requirements apply to them for any boilers or hot water heaters in the building.

**Inspection:**

I checked compliance with the special conditions of PTI No. 79-08. These conditions are for the flexible group FG-ENGINES.

Special Condition (SC) No. 1.1 sets a NOx limit of 515 lbs of NOx per 1,000 gallons of fuel use. A stack test is not being required, at this time.

SC No. 1.2 requires that the permittee only burn diesel fuel in FG-ENGINES. I was informed that the only fuel they are set up to burn is diesel fuel.

SC No. 1.3 states that if any electricity produced by FG\_ENGINES is sold to a utility power distribution system, the sulfur content of the diesel fuel used shall not exceed 0.05% by weight, on an annual average. I was informed that although AT&T may occasionally assist the Lansing Board of Water & light by producing power, they do not make any financial transactions.

SC No. 1.4 requires that the combined fuel use for all units included in FG-ENGINES shall not exceed 136,000 gallons per 12-month rolling time period. I was informed that their fuel use rate is well below this. I was shown a hard copy record demonstrating fuel use since October 2015 has been 591 gallons, though this figure might need to be adjusted, because they have a day tank of 120 gallon fuel capacity for the generators.

I was informed that they do have 12-month rolling records of fuel use. Mr. Cartwright offered to do a video conference to show me the records. I indicated that I would be willing to wait until the April 2016 monthly readiness testing, and view a hardcopy printout, at that time.

SC No. 1.5 requires that the permittee shall operate FG-ENGINES in accordance with manufacturer's recommendations for safe and proper operation to minimize emissions during periods of startup, shutdown, and malfunction. I was informed that they are following manufacturer's recommendations.

SC No. 1.6 states that the total capacity from each unit included in FG-ENGINES shall not exceed 5 Megawatts (MW). Each unit has a manufacturer's rated capacity on the nameplate of 1275 kilowatts (kW). This is well below the 5 MW maximum.

Note: the permit application was originally submitted to AQD for two generators each rated at 1250 kW capacity. The units are each rated 25 kW higher than that, in actuality, but this is still well within the range allowed by the general PTI.

SC No. 1.7 states that verification of NOx emission limits from one or more representative units from FG-ENGINES may be required. At this time, AQD has not required stack testing at this facility.

SC No. 1.8 requires the permittee to install, calibrate, maintain, and operate in a satisfactory manner a device to monitor and record the fuel use for FG-ENGINES on a monthly basis. AT&T appears to be in compliance with this requirement. For their underground diesel fuel storage tank, they have a computerized monitoring system. I was given an overview of the maintenance they perform on the unit. I observed the monitor, a Veeder-Route TLS 350 during the inspection. There were, at present, 8,590 gallons of diesel fuel in the underground tank. They also use a measuring stick to measure fuel level in the tank, I was told, and they check that against the monitor's reading.

Fuel from the underground storage tank mentioned above is routed to the day tank for FG-ENGINES, which has a 120 gallon capacity, I was informed.

SC No. 1.9 requires that the permittee keep, in a satisfactory manner, records of the date, duration, and description of any malfunction, any maintenance performed, and any testing results for FG-ENGINES. Michael showed me, on a laptop computer, an overview of numerous records conducted for maintenance purposes. I was shown individual examples of these records. They appeared to be meeting this condition.

SC No. 1.10 states that if any electricity produced by FG-ENGINES is sold to a utility power distribution system, the permittee shall keep records of the sulfur content. As previously discussed in this report, under SC. No. 1.3, they occasionally assist the Lansing BWL by providing electricity, but they do not sell it.

SC No. 1.11 requires the permittee to keep in a satisfactory manner, monthly and 12-month rolling time period fuel use records for FG-ENGINES. Mr. Cartwright offered to show me their recordkeeping, via videoconference, but I indicated that I could wait until the April readiness testing, and view hard copy records, at that time.

SC No. 1.12 requires the exhaust gases from FG-ENGINES to be discharged unobstructed vertically upwards, to the ambient air. The exhaust stacks for the generators appeared to exhaust unobstructed, vertically upwards. They are dark colored stacks, each about 3 feet high, above the roof of a small parapet, or building, on the main rooftop. Each is side by side with a silver stack, about 4 feet high. The silver stacks are not used, and appear to have been associated with previous generators at the site.

SC No. 1.13 prohibits replacing or modifying FG-ENGINES, or any portion thereof, unless sub-conditions a), b), and c) are followed. These sub-conditions require updating the general permit, continuing to meet general PTI applicability criteria, and keeping records of the date and description of replacement or modification. The units have not been replaced or modified, I was informed.

#### Run logs:

I observed operational logs for generators Nos. 1 and 2, with records going back through 2012. The most recent dates for operation of the generators involved either operational readiness exercises, or maintenance:

Generator No. 1 2015: dates 10/28, 11/18, 11/29, 12/16

Generator No. 1 2016 dates: 1/20, 2/17, 3/16

Generator No. 2 2015 dates: 8/10, 9/23, 10/1, 10/2, 10/7, 10/28, 11/18, 11/19, 11/25, 12/12

Generator No. 2 2016 dates: 1/20, an unknown date, and 2/17

**Opacity readings:**

We went onto the main roof of the building, a couple minutes before the planned 10:00 AM start time of generators Nos. 1 and 2. Weather conditions were overcast and 40 degrees F, with winds out of the northeast at 15 miles per hour. The generator exhaust stacks were short, black stacks, adjacent to taller, silver stacks, on the roof of a small building, or parapet. The stack height (110 feet above ground level) was about 15 feet taller than the roof on which we stood. I was able to stand about 45 feet back from the stacks, by standing near the edge of the roof. Care should be taken in this location, because there is no railing, just a short wall on the edge of the roof.

Generator No. 2 uses the east stack, while No. 1 uses the west stack, I was told. Most of the load today would be put on generator No. 2, which is their usual practice, I was informed. The units began running shortly after 10:00 AM. Emissions for the first 30 seconds consisted of black smoke, which was 100% opacity. Over the next 30 seconds, opacity dropped to about 45%. The smoke soon changed to a light gray in color, and remained that color for the duration of my visit.


The wind almost constantly caused the exhaust plumes from the generator stacks to downwash, and overlap themselves. This had the effect of greatly increasing the apparent opacity. I continued reading for about 8-9 minutes, but stopped as the wind showed no signs of letting up. The opacity appeared to be around 35-45%, at different times, but the plume overlapping on itself made these readings invalid. The results were therefore inconclusive.

After about 15 minutes, we returned to the roof. The wind was still causing the plumes to downwash and overlap themselves, increasing the apparent opacity. The overall opacity was less than during the initial attempt to read opacity, but the overlapping of the plumes made the readings invalid. These results were also inconclusive.

**Conclusion:**

I did not verify any instances of noncompliance, today. However, the visible emission readings I took of generator No. 2 today were not valid, because the plume almost constantly overlapped itself. This could exaggerate the apparent opacity. When weather conditions allow for accurate visible emission readings, AQD will be able to determine compliance status. This will be documented in a separate activity report.

NAME



DATE

6/2/2016

SUPERVISOR

