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

N803534245

FACILITY: CAPITAL REGION AIRPORT AUTHORITY		SRN / ID: N8035
LOCATION: 3170 WEST STATE RD, LANSING		DISTRICT: Lansing
CITY: LANSING		COUNTY: CLINTON
CONTACT: Ron O'Neil, Director of Maintenance		ACTIVITY DATE: 04/07/2016
STAFF: Julie Brunner	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Scheduled inspection of the Capital Regional Area Authority (CRAA)		
RESOLVED COMPLAINTS:		

On April 7, 2016, I conducted a scheduled inspection of the Capital Regional Airport Authority (CRAA) in Lansing. The last compliance inspection of the facility was on February 25, 2014.

Contacts:

Ron O'Neal (CRAA), Director of Maintenance, 517-886-3729 (cell: 517-282-3503), roneil@craa.com
 Kevin Miller (CRAA), Airfield Mgr, 517-886-3725 (cell: 517-881-0664), kmiller@craa.com
 Rick Tyler (AV Flight)

Facility Description:

CRAA operates the Capital Region International Airport. Domestic and international flights arrive and depart the airport daily. Waste from in-coming international flights is not allowed to be imported into the country and is incinerated on-site. The waste is regulated as Animal and Plant Health Inspection Section (APHIS) waste.

The airport facility is located off of West Grand River Avenue on the northwest side of Lansing in a mixed use area with residential, commercial and light industrial areas.

CRAA is a minor source of any regulated air contaminants including hazardous air pollutants (HAPs) and not subject to the Title V Renewable Operating Permit (ROP) program. CRAA has one active Permit to Install (PTI) No. 118-08. PTI 118-08 is for an international waste incinerator. The emission unit on the permit is defined as follows:

Emission Unit ID	Emission Unit Description
EUINCINERATOR	Model 200-CA Destructor Waste Incinerator Natural Gas-Fired Burn Rate: 100-200 lb/hr Maximum Charge: Burn Rate Divided By Three

Inspection:

I arrived at Gate 10 at 8:50 AM. It was 36°F with a rain/snow mix. The wind was out of the west at 12 MPH and the UV index was low. I was met by Ron, Kevin, and Rick at the gate, and escorted to the building that houses the incinerator. I briefly provided an overview of the inspection process and provided them with the "Environmental Inspections" brochure.

The incinerator (on PTI 118-08) is located in a small metal building on the north side of the airport. The building is heated with electric heaters. Labeled 2-wheeled carts with lids line two walls that contain the waste to be burned. A scale, log books, and Operation and Maintenance (O & M) manuals are located in the building.

I viewed the paper record log which showed that CRAA was taking waste from other airports. CRAA received approval in September 2015 from DEQ-RRD and in August 2015 from Clinton County to take waste from other airports. (Copies of the waste importation and letter of consistency for airport APHIS waste, Waste Data System Number 494983 attached.) The other airports that can send waste to be incinerated in the CRAA incinerator are Bishop International Airport in Genesee County, Grand Rapids International Airport in Kent County, Willow Run

Airport in Wayne County, and Oakland International Airport in Oakland County. CRAA started taking waste from other airports in November of 2015. CRAA doesn't currently charge to take waste from other airports but is looking at fees for AV Fight which is the waste hauler.

I provided a copy of the email change between Ron, Michelle, and Bryan Grochowski dated June 2 & 3, 2015 on approvals needed to take other airport's waste.

We discussed PTI 118-08, and a possible need for a modification. I recommended not taking waste from other airports until the permitting question was answered. I called after the inspection to inform Ron that figuring out the federal regulations may take some time. The facility will need to exercise judgement on whether they want to take waste from other airports. The waste defined as APHIS does meet the conditions of the permit, and currently it does not look like a modification to the permit is needed. I called Ron on April 11, 2016, and let him know that no changes to PTI 118-08 are needed at this time.

The incinerator was not running at the time of inspection. We opened the door and there was ash in the bottom from the morning's burn. The operator removes the ash by shovel, puts it in a bag that is in a 55 gallon metal can, and transfers the closed bag to a larger dumpster with lid. The ash goes to Granger at Wood Street for disposal. A copy of the Granger Non-Hazardous Waste & Asbestos Manifest dated 3/8/2016 was provided. The ash is tested once per year. A copy of the ash analysis dated 5/14/2015 was provided. The parameters tested were arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. All parameters were below detection with the exception of barium at 1.0 mg/L in the TCLP extract. The analysis was a leach test.

The incinerator is vertical with a lower chamber for burning the waste and an upper chamber for the afterburner control of exhaust gases from the burning. To operate, both chambers are heated at the same time to 1700°F which takes about an hour. Then the operator opens the door and throws the bag of waste in the lower chamber. It takes approximately 2.5 hours to burn 66 pounds of waste. Temperatures in the incinerator can get up to 2300°F. After the waste is finished burning in the lower chamber, the upper chamber stays on for 4 to 6 hours after. A minimum temperature of 1600°F is required to be maintained in the secondary chamber (upper chamber afterburner), and the temperature logs demonstrate compliance with special condition (SC) 1.5.

The volume of waste combusted is 6 to 8 bags per week depending on what is received. (60-100 pounds equal 8 hours of operation.) 72-hours is the maximum the waste can be held by the flight crew. Once the waste is received at the incinerator building it can only be held for 72-hours before burning.

The incinerator is not to exceed the following burn rates per SC 1.2:

Waste Type	Description (See Appendix A)	Burn Rate (pound/hour)
0	Trash	200 (200/3=66.7)
1	Rubbish	200 (200/3=66.7)
2	Refuse	145 (145/3=48.3)
3	Garbage	125 (125/3=33.3)

A copy of the "CRAA International Garbage Incinerator Log" dated from 3/23/2015 to 4/10/16 was emailed after the inspection (attached). On 3/23/16, the following weight of garbage burned was recorded as 6.37 lb, 9.26 lb, 7.54 lb, and 12.25 lb for a total of 35.42 pounds. The waste type is not defined on the logs, but a note at the bottom of the logs indicates that the bags cannot weigh more than 66 pounds. Based on the incinerator log, the highest weight of garbage burned in one day was 192.9 pounds on 11/8/15. No exceedance of the hourly weight limits was noted in the logs.

As part of the O & M, the incinerator is inspected once per year by Joseph Day for mechanical and Loy Instrumentation for electrical. From the instrumentation on the incinerator, the temperature history can be downloaded electronically. The afterburner appeared to be installed, maintained and operated in a satisfactory manner per SC 1.6.

Appendix B – Operation and Maintenance Guidelines (PTI 118-08):

There is annual training of all operators given by the USDA on prohibited items and CRAA updates programs

before training. The only comment I have is that in Appendix B, No. 10 is the requirement for quarterly inspections to check and service all equipment. I noted annual inspections but not quarterly.

Appendix C – Waste Management Plan (PTI 118-08):

1. Containers – closed. 3 mil bags – yellow, labeled “Foreign Waste”.
2. Spill containment and adsorbent material in building. Log of Spills – blank because there have been no spills in the building.
3. Locked building, and signs posted on door.
4. No prohibited waste.

The building that houses the incinerator is well kept and clean. All waste and ash from the incinerator is in closed containers. The floor is clean of any debris and the operation appears well organized.

Facility Heat

For the main terminal of the airport, heat is provided by two (2) identical 8.2 MMBtu/hr natural gas-fired boilers located in a separate room beside the baggage claim area. The boilers were installed in 2002 and were manufactured by Johnston Boiler Company. The date of manufacture for the boilers is 2002. One boiler is operated at a time with one on stand-by.

Mike Forster (maintenance/operations) walked me through the boiler room. The boilers are inspected every January to February by Joseph Day. The state inspection is on a 3-year cycle.

The boilers were re-built in 2010 (refractory) and Boiler #2 was redone in 2012 due to cracking. The boilers exhaust out the roof, straight up – approximately 6 feet above the roof. The roof height is ~ 20 feet.

Boiler No. 1 was not operating at the time of inspection (on standby). Boiler No. 2 was operating at 9% of load.

The boilers are not subject to any New Source Performance Standards. The boiler(s) meet the requirements of exemption Rule 282(b)(i).

Emergency Generators

There are four (4) diesel fuel-fired, four (4) natural gas-fired, and one (1) portable diesel fuel-fired emergency generator on-site.

The generators are tested once per month, and serviced once per year. The following information was requested for the generators and is attached.

- a. Engine manufacturer, model number, and serial number
- b. Date the engine was manufactured.
- c. Date the engine was installed at your facility
- d. Engine output (horsepower or kilowatts)
- e. Fuel type (diesel or natural gas)
- f. Maximum fuel consumption capacity of the engine.
- g. Total hours of operation on the clock for each engine.

One (1) generator was inspected. It is located just north of the baggage claim area in a separate housing shed and is the newest. The following information was recorded off the generator:

Cummins Power Generation, diesel fuel-fired, 800 kW, 1000 KVA
Unit Model DOCC-150195
Serial No. C150811997

Engine exhaust is out the roof, vertical on the east end of the engine.

The hours clock could not be located on the engine, but according to the information submitted it has 81.7 hours on the clock.

This is the largest generator on-site and at maximum uses 56.4 gph of fuel. The maximum heat input for this engine is calculated as follows: 56.4 gph x 0.1385 MMBtu/gal = 7.81 MMBtu/hr. The generator does meet exemption Rule 285(g) which says:

Rule 285(g) - Internal combustion engines that have less than 10,000,000 Btu/hour maximum heat input.

All emergency generators on-site appear to meet exemption Rule 285(g).

The sulfur content of the fuel oil used at the facility should be less than 0.0015% by weight as required by the NRLM diesel fuel standard in 40 CFR 80.510(c). For emergency generators, it is assumed that they operate no more than 500 hours per year at worse-case.

Departure

Concerns were identified at the time of inspection pending future verification. Records not obtained during the inspection were to be emailed. I departed the facility at approximately 10:55 AM.

Review of Federal Regulations:

The following is a review of federal standards that may apply to the boilers, the diesel fuel and natural gas-fired emergency generator and the incinerator at the facility. Listed are the applicability and/or definitions for each standard below.

The natural gas-fired boilers are not subject to 40 CFR 63, Subpart JJJJJJ because they meet the definition of a gas-fired boiler.

40 CFR 63, Subpart JJJJJJ—National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

§63.11195 Are any boilers not subject to this subpart?

The types of boilers listed in paragraphs (a) through (k) of this section are not subject to this subpart and to any requirements in this subpart....

(e) A gas-fired boiler as defined in this subpart.

§63.11237 What definitions apply to this subpart?

Gas-fired boiler includes any boiler that burns gaseous fuels not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year.

The diesel fuel-fired emergency generators may be subject to 40 CFR 60, Subpart IIII. Listed below is some of the applicability requirements for reference.

40 CFR 60, Subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

§60.4200 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) and other persons as specified in paragraphs (a)(1) through (4) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(1) Manufacturers of stationary CI ICE with a displacement of less than 30 liters per cylinder where the model year is:

- (i) 2007 or later, for engines that are not fire pump engines;
- (ii) The model year listed in Table 3 to this subpart or later model year, for fire pump engines.

(2) Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are:

- (i) Manufactured after April 1, 2006, and are not fire pump engines, or
- (ii) Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

(3) Owners and operators of any stationary CI ICE that are modified or reconstructed after July 11, 2005 and any person that modifies or reconstructs any stationary CI ICE after July 11, 2005.

(4) The provisions of §60.4208 of this subpart are applicable to all owners and operators of stationary CI ICE that commence construction after July 11, 2005.

The natural gas-fired emergency generators may be subject to 40 CFR 60, Subpart JJJJ. Listed below is some of the applicability requirements for reference.

40 CFR 60, Subpart JJJJ—Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (6) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(1) Manufacturers of stationary SI ICE with a maximum engine power less than or equal to 19 kilowatt (KW) (25 horsepower (HP)) that are manufactured on or after July 1, 2008.

(2) Manufacturers of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are gasoline fueled or that are rich burn engines fueled by liquefied petroleum gas (LPG), where the date of manufacture is:

(i) On or after July 1, 2008; or

(ii) On or after January 1, 2009, for emergency engines.

(3) Manufacturers of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are not gasoline fueled and are not rich burn engines fueled by LPG, where the manufacturer participates in the voluntary manufacturer certification program described in this subpart and where the date of manufacture is:

(i) On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

(ii) On or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP;

(iii) On or after July 1, 2008, for engines with a maximum engine power less than 500 HP; or

(iv) On or after January 1, 2009, for emergency engines.

(4) Owners and operators of stationary SI ICE that commence construction after June 12, 2006, where the stationary SI ICE are manufactured:

(i) On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

(ii) on or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP;

(iii) on or after July 1, 2008, for engines with a maximum engine power less than 500 HP; or

(iv) on or after January 1, 2009, for emergency engines with a maximum engine power greater than 19 KW (25 HP).

(5) Owners and operators of stationary SI ICE that are modified or reconstructed after June 12, 2006, and any person that modifies or reconstructs any stationary SI ICE after June 12, 2006.

(6) The provisions of §60.4236 of this subpart are applicable to all owners and operators of stationary SI ICE that commence construction after June 12, 2006.

40 CFR 63, Subpart ZZZZ applies to the reciprocating internal combustion engines (RICE) located at CRAA. The emergency generators are RICE. Listed below is some of the applicability requirements for reference.

40 CFR 63, Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

§63.6585 Am I subject to this subpart?

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

(a) A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68

megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.

(c) An area source of HAP emissions is a source that is not a major source.

(d) If you are an owner or operator of an area source subject to this subpart, your status as an entity subject to a standard or other requirements under this subpart does not subject you to the obligation to obtain a permit under 40 CFR part 70 or 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.

(e) If you are an owner or operator of a stationary RICE used for national security purposes, you may be eligible to request an exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C.

(f) The emergency stationary RICE listed in paragraphs (f)(1) through (3) of this section are not subject to this subpart. The stationary RICE must meet the definition of an emergency stationary RICE in §63.6675, which includes operating according to the provisions specified in §63.6640(f).

(1) Existing residential emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

(2) Existing commercial emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

(3) Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

Commercial and Industrial Solid Waste Incineration Units (CISWI) Regulations (Proposed 80 FR 3018; January 21, 2015. Subpart DDDD starts on page 3056):

The incinerator on PTI 118-08 is not currently subject to any CISWI regulations. Below is a quick write-up of the current and proposed CISWI regulations and how they apply to the CRAA incinerator. CRAA doesn't have to comply with anything right now, but EPA will finalize the proposed regulation. It isn't expected to change drastically from its current version, and at that time the CRAA will need to comply with the CISWI regulation. EPA set the compliance date for February 2018 and that probably won't change either.

Current 40 CFR 60, Subpart CCCC

Commenced construction after June 4, 2010

∅ Does not apply to the CRAA incinerator as it commenced construction in 2008

Proposed 40 CFR 60, Subpart DDDD

CISWI units in the "incinerator" subcategory commenced construction on or before November 30, 1999 OR between November 30, 1999 and on or before June 4, 2010

o Incinerator = any furnace used in the process of combusting solid waste for the purpose of reducing the volume of the waste by removing combustible matter

∅ Applies to CRAA incinerator

CISWI units in the small remote incinerator, energy recovery unit, and waste-burning kiln subcategories that commenced construction on or before June 4, 2010

∅ None of these apply to CRAA incinerator

Compliance by February 7, 2018

Incinerators must comply IF they meet definition of CISWI (60.2875) and are not exempt under 60.2555.

60.2875 – CISWI = distinct operating unit of any commercial or industrial facility that combusts any solid waste as defined by 40 CFR part 241.

o Commercial or industrial facility are not defined in the proposed rule

o Commercial reg def = making or intended to make a profit

o Industrial reg def = engaging in any general business activity

∅ Would apply to CRAA incinerator

Exemptions from 60.2555:

o Pathological waste incinerator

- o Municipal waste combustion units
- o Medical waste incineration units
- o Small power production facilities
- o Cogeneration facilities
- o Hazardous waste combustion units
- o Materials recovery units
- o Air curtain incinerators (partial exemptions)
- o Sewage treatment plants
- o Sewage sludge incineration units
- o Other solid waste incineration units
- o CCAA incinerator is not exempt under proposed rule

Once the proposed rule is finalized, Michigan will do a state plan and CCAA will have to comply by February 7, 2018.

Records:

Mr. O'Neil emailed the requested records.

MAERS:

The facility does not currently report emission information to MAERS.

Summary:

The facility appeared to be in compliance with PTI 118-08, applicable rules, and regulations. New federal regulations for the incinerator are proposed. Once the regulation is final, a review for compliance with the new regulation will need to be conducted. It would be a good idea to start thinking now about changes needed (if any) to come into compliance by the applicability date.

I recommend that a facility-wide potential to emit for all emissions of criteria pollutants be performed to determine if the facility is subject to Title V or whether an opt-out permit is needed. Also, the facility should review the federal standards that are applicable to the emergency generators for compliance.

NAME Julio P. Brown

DATE 6/7/16

SUPERVISOR B.M.

