

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604

OCT 18 2019

DATE:

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Covanta Indianapolis, Inc., Indianapolis, Indiana

FROM: Charles Hall, Environmental Engineer *CHall*
AECAB (MN/OH)

THRU: Brian Dickens, Section Chief
AECAB (MN/OH)

TO: File, Covanta Indianapolis, Inc., Indianapolis, Indiana

BASIC INFORMATION

Facility Name: Covanta Indianapolis, Inc.

Facility Location: 2320 South Harding Street, Indianapolis, Indiana

Date of Inspection: 24 September 2019

EPA Inspector:

1. Charles Hall, Environmental Engineer

Other Attendees:

1. George Drew, Regional Environmental Manager
2. Jeffrey Horn, Facility Manager (closing conference only)
3. Austin Jarvis, Environmental Specialist

Contact Email Address: ajarvis@covanta.com

Purpose of Inspection: inspection of three large municipal waste combustors

Facility Type: large municipal waste combustor

Regulations Central to Inspection: Indiana's Clean Air Act Section 111(d) Plan for Existing Large Municipal Waste Combustors and the definition of modification in Section 129 of the Clean Air Act.

Arrival Time: 1330 hrs EDT

Departure Time: 1600 hrs EDT

Inspection Type:

- ☒ Unannounced Inspection
- ☐ Announced Inspection

OPENING CONFERENCE

- ☒ Credentials Presented
- ☒ CBI warning to facility provided

The following information was obtained verbally from Drew and Jarvis unless otherwise noted.

Process Description: Municipal solid waste is unloaded from packer trucks into a solid waste pit. Covanta fills the feed hopper to one of the three 726-ton per day mass burn waterwall municipal waste combustion (MWC) units at the Facility. Each MWC unit has a steam load operating limit of 212,000 pounds of steam per hour. The air pollution control train for each MWC unit consists of a spray dryer absorber that injects a lime slurry into the stream of combustion gases, an activated carbon injection system, a fabric filter, and a selective non-catalytic reduction unit. Each pulse jet fabric filter has ten compartments with 270 PTFE riton-coated bags. Each MWC unit is equipped with continuous emission monitors (CEM) for carbon monoxide, nitrogen oxides, oxygen, and sulfur dioxide and a continuous opacity monitor (COM). Covanta also installed in-line backup CEMs and COMs. Each MWC unit is equipped with a liquid direct injection (LDI) system with which Covanta feeds: 1, Ink wash, latex paint wash, fermentation broth, and solid waste landfill leachate; 2, Water soluble oil-based coolants and metal working fluids that do not meet the definition of used oil; or 3, Rinsate from empty non-hazardous Federal Insecticide, Fungicide, and Rodenticide Act pesticide containers. Each MWC unit is equipped with two 140 million British thermal unit per hour natural gas-fired burners used for start-up, shutdown, and flame stabilization. Construction of each MWC unit commenced in 1988.

Staff Interview: The interview focused on the subject of modification. Drew noted that Covanta has analyzed whether it has modified the MWC units at other Covanta-owned facilities. The availability of documents for the original construction and the subsequent replacement of major components is one difficulty that Covanta has found in its analyses of some of the Covanta-owned MWCs in EPA's Region 1. Drew acknowledged that Covanta replaces each superheater every 2 to 3 years while other major components have service lives of 15 to 20 years.

TOUR INFORMATION

EPA toured the facility: Yes

Data Collected and Observations: During the inspection, the inspector collected the following emission and operating data summarized in Tables 1 and 2:

Table 1. Summary of Carbon Monoxide (CO), Opacity, Oxides of Nitrogen (NO _x) and Sulfur Dioxide (SO ₂) Emission Data				
Pollutant	Limit	1	2	3
CO (4-hour block average)	100 ppmV	17	51	21
Opacity (6-minute average)	10%	0	0	0
NO _x (24-hour block average)	205 ppmV	161	167	126
SO ₂ (24-hour geometric average)	29 ppmV or 20% of potential emissions	9 88.9%	2 99.6%	7 96.6%

Table 2. Summary of Operating Parameter Limit Data				
Operating Parameter	Limit	1	2	3
Steam Load	212.0 klbs/hr	194.5 klbs/hr	177.3 klbs/hr	193.3 klbs/hr
Sorbent Feed Rate	26 lbs/hr	26 lbs/hr	26 lbs/hr	26 lbs/hr
Carbon Feed Rate	18.0 lbs/hr	20.0 lbs/hr	20.0 lbs/hr	20.0 lbs/hr
Inlet Temperature	329 °F	305 °F	306 °F	304 °F

Photos and/or Videos: were not taken during this inspection.

Field Measurements: were not taken during this inspection.

RECORDS REVIEW

Covanta provided a summary of the 2018 performance tests for cadmium, dioxin/furan, hydrogen chloride, lead, mercury and particulate matter. Table 3 summarizes the results of the 2018 performance tests.

Table 3. Summary of 2018 Performance Tests.						
Pollutant	Unit of Measure	2018 Performance Test Averages			Emission Standards in 40 C.F.R. Part 60	
		U1	U2	U3	Subpart Cb	Subpart Eb
Cadmium	µg/dscm @ 7% O ₂	1.57	0.39	0.64	35	10
Dioxin/Furan ¹	ng TEQ/dscm @ 7% O ₂	NT	NT	0.78	30	13
Hydrogen Chloride	ppmV @ 7% O ₂	1.41	3.8	3.64	29	25
Lead	µg/dscm @ 7% O ₂	12.20	3.60	5.50	400	140
Mercury	µg/dscm @ 7% O ₂	0.48	0.50	0.44	50	50
Particulate Matter	mg/dscm @ 7% O ₂	9.82	2.85	6.44	25	20

CLOSING CONFERENCE

Requested Documents:

- Diagram of each MWC Unit and monitoring locations;

¹ NT= Not tested this year due to alternating test schedule.

- Copy of the refresher training manual's table of contents; and
- Results of the most recent performance tests for D/F, Cd, Pb, Hg, opacity PM, CO, HCl, and fugitive emissions from ash handling.

Concerns: The primary concern is whether Covanta has modified, as defined in Section 129(g)(3), any of the MWC units at the Facility since EPA promulgated the Standards of Performance for Large Municipal Waste Combustors for Which Construction is Commenced After September 20, 1994 or for Which Modification or Reconstruction is Commenced After June 19, 1996, 40 C.F.R. Part 60, Subpart Eb.

SIGNATURES

Lead Inspector: Charlie Hall Date: 17 October 2019

Section Chief: Brian Dickson Date: 10/18/19