

2020 Waste-to-Energy Testing

Q: What is the purpose of annual air emissions “stack” testing?

A: Stack testing is an important tool that measures the amount of regulated pollutants being emitted from a facility. Stack testing consists of a series of sampling events, in which a probe is inserted into the stack to collect a representative sample of the gases released, over a defined amount of time. Sampling and laboratory analysis must be conducted in accordance with New York State Department of Environmental Conservation (NYSDEC) and United States Environmental Protection Agency (USEPA) protocols. **NYSDEC oversees, and is generally onsite during stack testing at the WTE Facility.**

Q: How do the 2020 stack test results look?

A: The results from the 2020 stack testing indicate that the Facility is operating acceptably and that the air pollution control devices are functioning properly. As shown by the following graph, many of the tested constituents were considerably below the permit limit.

Q: Does the Facility conduct any other air emissions testing besides the annual stack testing?

A: Yes. The Facility has a continuous emission monitoring system (CEMS) that measures combustion efficiency, air pollution equipment performance and stack emissions. The CEMS monitors carbon monoxide, carbon dioxide, oxygen, sulfur dioxide, and nitrogen oxides (NOx) as well as opacity and combustion temperatures.

Q: What is the status of the WTE Facility’s Air (Title V) Permit?

A: Pursuant to 621.11(L) of the Uniform Procedures Act and Section 401(2) of the State Administrative Procedure Act, an existing permit does not expire until the renewal process is complete. A complete and timely permit renewal application was submitted to NYSDEC. The Facility continues to operate under the NYSDEC air permit that was effective August 8, 2011 through August 7, 2016. The permit can be **accessed on NYSDEC’s website** at the following webpage: www.tinyurl.com/WTEpermit.

Q: What is the purpose of the semi-annual ash testing and how do the 2020 results look?

A: A representative sample of combined bottom and fly ash residue is collected according to NYSDEC protocols. This sample is then analyzed by an independent laboratory for leachable metals, according to EPA’s Toxicity Characteristic Leaching Procedure (TCLP). TCLP analysis simulates landfill conditions (the final disposal site for the ash) and determines whether the ash residue exhibits hazardous characteristics. Over the life of the facility (including the most recent 2020 results), TCLP analysis has always indicated that the ash residue is non-hazardous.

Q: Who can I contact for more information?

A: For more detailed information on the test results please contact OCRRA’s Agency Engineer, Cristina Albuio, at 315.295.0743 or calbuio@ocrra.org.

ASH RESIDUE CHARACTERIZATION TEST RESULTS

Semi-Annual Test Results - April 2020

<i>Constituent</i>	<i>Test Result (mg/L)</i>	<i>Permit Limit (mg/L)</i>	<i>Pass or Fail</i>
Chromium	0.05	5	Pass
Arsenic	0.05	5	Pass
Selenium	0.053	1	Pass
Silver	0.05	5	Pass
Cadmium	0.054	1	Pass
Barium	0.685	100	Pass
Lead	0.054	5	Pass
Mercury	0.0004	0.2	Pass

Semi-Annual Test Results - October 2019

<i>Constituent</i>	<i>Test Result (mg/L)</i>	<i>Permit Limit (mg/L)</i>	<i>Pass or Fail</i>
Chromium	0.05	5	Pass
Arsenic	0.05	5	Pass
Selenium	0.073	1	Pass
Silver	0.05	5	Pass
Cadmium	0.05	1	Pass
Barium	0.955	100	Pass
Lead	0.05	5	Pass
Mercury	0.0004	0.2	Pass

CONCLUSION

Ash residue does NOT exhibit a hazardous characteristic. As such, it should continue to be managed as a non-hazardous solid waste.

2020 ANNUAL STACK TEST RESULTS

	Constituent	Average Measured Emissions ¹			Permit	Pass/Fail?	3-Boiler	% Permit	
		Unit 1	Unit 2	Unit 3	Limit ²	P/F	Average	Limit ³	
TESTED ANNUALLY	FEDERAL	Cadmium (mg/dscm @ 7% O ₂)	0.000266	< 0.000165	0.000260	0.035	P	0.000230	1%
		Cadmium (lb/hr)	0.0000430	< 0.0000256	0.0000443	0.0019	P	0.0000376	2%
		Carbon Monoxide (lb/hr)	1.50	1.66	1.33	8.04	P	1.50	19%
		Dioxins/Furans (ng/dscm @ 7% O ₂)	0.194	1.16	2.49	30	P	1.28	4%
		Hydrogen Chloride (ppmdv @ 7% O ₂)	1.94	4.94	2.40	25	P	3.09	12%
		Hydrogen Chloride (lb/hr)	0.472	1.17	0.607	5.24	P	0.750	14%
		Hydrogen Chloride Removal Efficiency (%)	99.8	99.4	99.7	≥ 95	P	99.6	--
		Lead (mg/dscm @ 7% O ₂)	0.00229	0.00158	0.00236	0.400	P	0.002077	1%
		Lead (lb/hr)	0.000371	0.000244	0.000403	0.0381	P	0.0003393	1%
		Mercury (lb/hr)	0.0000809	0.0000765	< 0.0000715	0.004	P	0.0000763	2%
		Nitrogen Oxides (lb/hr)	50.1	49.8	48.9	58	P	49.6	86%
		Particulate (gr/dscf @ 7% O ₂)	0.000416	0.000492	0.000501	0.010	P	0.000470	5%
		PM ₁₀ (gr/dscf @ 7% O ₂)	0.000318	< 0.000059	< 0.000147	0.010	P	0.000175	2%
		PM ₁₀ , Filterable (lb/hr)	0.0845	< 0.0142	< 0.0386	3.16	P	0.046	1%
		Sulfur Dioxide (lb/hr)	0.992	0.00117	2.68	16.2	P	1.2244	8%
STATE	Ammonia (ppmdv @ 7% O ₂)	< 0.472	0.694	0.624	50	P	0.597	1%	
	Ammonia (lb/hr)	< 0.0536	0.0763	0.0742	4.88	P	0.0680	1%	
	Dioxins/Furans-2,3,7,8 TCDD TEQ (ng/dscm @ 7% O ₂)	0.00764	0.0137	0.0248	0.4	P	0.015380	4%	
	Dioxins/Furans-2,3,7,8 TCDD TEQ (lb/hr)	0.00000000124	0.00000000218	0.00000000428	0.000000129	P	0.00000000257	2%	
	Mercury (µg/dscm @ 7% O ₂)	0.501	0.495	< 0.419	28	P	0.472	2%	
	Mercury Removal Efficiency (%)	99.0	99.2	> 99.2	≥ 85	P	99.1	--	

NOTES:

- ¹ Based on 3 test runs for each unit; used for compliance with permit limit.
- ² NYSDEC Title V Permit #7-3142-00028
- ³ Based on 3-Boiler Average; informational only; not used for compliance.

UNITS:

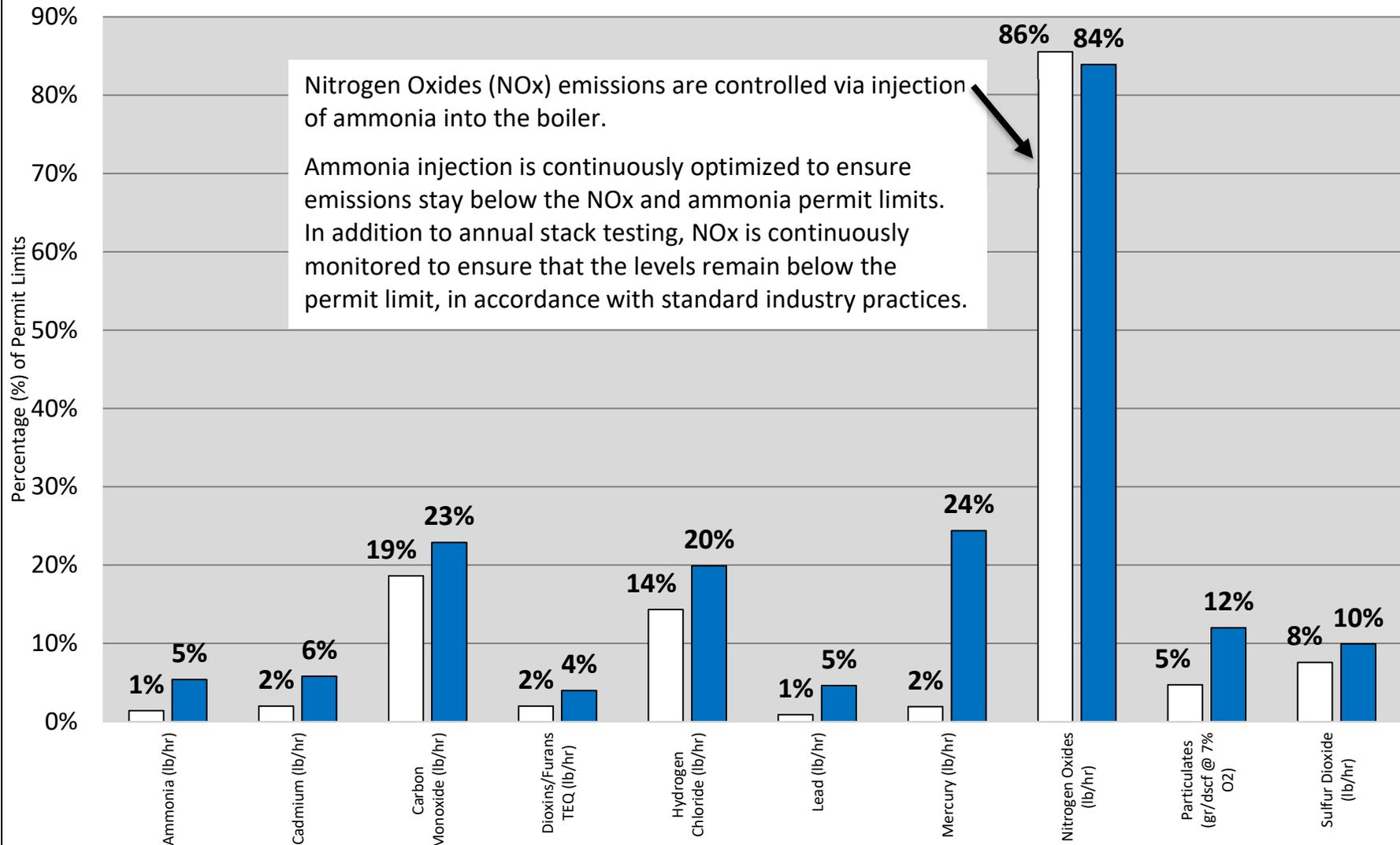
- gr/dscf = grains per dry standard cubic foot
- ppmdv = parts per million dry volume
- lb/hr = pounds per hour
- dscm = dry standard cubic meter
- @ 7% O₂ = concentration corrected to 7% oxygen

- ng = nanograms
- µg = micrograms
- mg = milligrams

Waste-to-Energy Facility Air Emissions as a Percentage of the Facility Permit Limits (Average of 3 Boiler Units)

□ 2020 Air Emissions Results

■ 26-Year Facility Average Results



Facility Mercury Emissions & Air Pollution Control System Effectiveness

