2021 Air Emissions Testing FAQs

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 2021 stack test results look?

A: The results from **the 2021 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. The CEMS is being expanded over the next year to monitor mercury and hydrogen chloride.

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

A**: The WTE Facility's Air Permit was most recently issued on January 25, 2021 and expires January 24, 2026.** The permit can be **accessed on NYSDEC's website** at this webpage,

Q: Who can I contact for more information?

A: For more detailed information on the test results please contact OCRRA's Agency Engineer, Cristina Albunio, at 315.295.0743 or calbunio@ocrra.org. For additional questions of OCRRA's Public Information Officer, please contact Kristen Lawton at 315.295.0733 or klawton@ocrra.org.

2021 Ash Residue Testing FAQs

Q: What is the purpose of the semi-annual ash testing and how do the 2021 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 Albunio, at 315.295.0743 or calbunio@ocrra.org. For additional questions of OCRRA's Public Information Officer, please contact Kristen Lawton at 315.295.0733 or klawton@ocrra.org.

ASH RESIDUE CHARACTERIZATION TEST RESULTS

Semi-Annual Test Results - April 2021

Constituent	*Test Result (mg/L)*	*Permit Limit (mg/L*	*Pass or Fail*
Chromium	None Detected	5	Pass
Arsenic	None Detected	5	Pass
Selenium	None Detected	1	Pass
Silver	None Detected	5	Pass
Cadmium	0.058	1	Pass
Barium	0.965	100	Pass
Lead	0.088	5	Pass
Mercury	None Detected	0.2	Pass

Semi-Annual Test Results - October 2020

Constituent	*Test Result (mg/L)*	*Permit Limit (mg/L*	*Pass or Fail*
Chromium	None Detected	5	Pass
Arsenic	None Detected	5	Pass
Selenium	0.059	1	Pass
Silver	None Detected	5	Pass
Cadmium	None Detected	1	Pass
Barium	0.875	100	Pass
Lead	0.21	5	Pass
Mercury	None Detected	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.

2021 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)	0.000203	0.000251	0.000281	0.035	P	0.000245	1%
		Cadmium (lb/hr)	0.0000286	0.0000362	0.0000469	0.0019	P	0.0000372	2%
		Carbon Monoxide (lb/hr)	1.32	1.22	1.85	8.04	P	1.46	18%
		Dioxins/Furans (ng/dscm @ 7% O_2)	0.347	0.262	0.524	30	P	0.38	1%
		Hydrogen Chloride (ppmdv @ 7% O_2)	13.70	2.42	1.85	25	P	5.99	24%
		Hydrogen Chloride (lb/hr)	2.780	0.514	0.471	5.24	P	1.255	24%
		Hydrogen Chloride Removal Efficiency (%)	97.9	99.6	99.7	≥ 95	P	99.1	--
		Lead (mg/dscm @ 7% O_2)	0.00209	0.00230	0.00293	0.400	P	0.002440	1%
		Lead (lb/hr)	0.000291	0.000334	0.000486	0.0381	P	0.0003703	1%
		Mercury (lb/hr)	0.0000767	< 0.0000691	< 0.0000830	0.004	P	0.0000763	2%
		Nitrogen Oxides (lb/hr)	44.5	46.8	49.4	58	P	46.9	81%
		Particulate (gr/dscf @ 7% O_2)	0.001150	0.000290	0.000401	0.010	P	0.000614	6%
		PM_{10} (gr/dscf @ 7% O_2)	0.000245	0.0000	0.000398	0.010	P	0.000214	2%
		PM_{10}, Filterable (lb/hr)	0.0866	0.000	0.140	3.16	P	0.076	2%
		Sulfur Dioxide (lb/hr)	3.23	0.0487	0.00244	16.2	P	1.0937	7%
	STATE	Ammonia (ppmdv @ 7% O_2)	< 0.625	< 0.633	< 0.597	50	P	0.618	1%
		Ammonia (lb/hr)	< 0.0591	< 0.0621	< 0.0711	4.88	P	0.0641	1%
		Dioxins/Furans-2,3,7,8 TCDD TEQ (ng/dscm @ 7% O_2)	0.00332	0.00169	0.00612	0.4	P	0.003710	1%
		Dioxins/Furans-2,3,7,8 TCDD TEQ (lb/hr)	0.000000000534	0.000000000249	0.000000000987	0.000000129	P	0.00000000059	0%
		Mercury (µg/dscm @ 7% O_2)	0.541	< 0.485	< 0.503	28	P	0.510	2%
		Mercury Removal Efficiency (%)	99.2	> 98.9	> 98.6	≥ 85	P	98.9	--

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

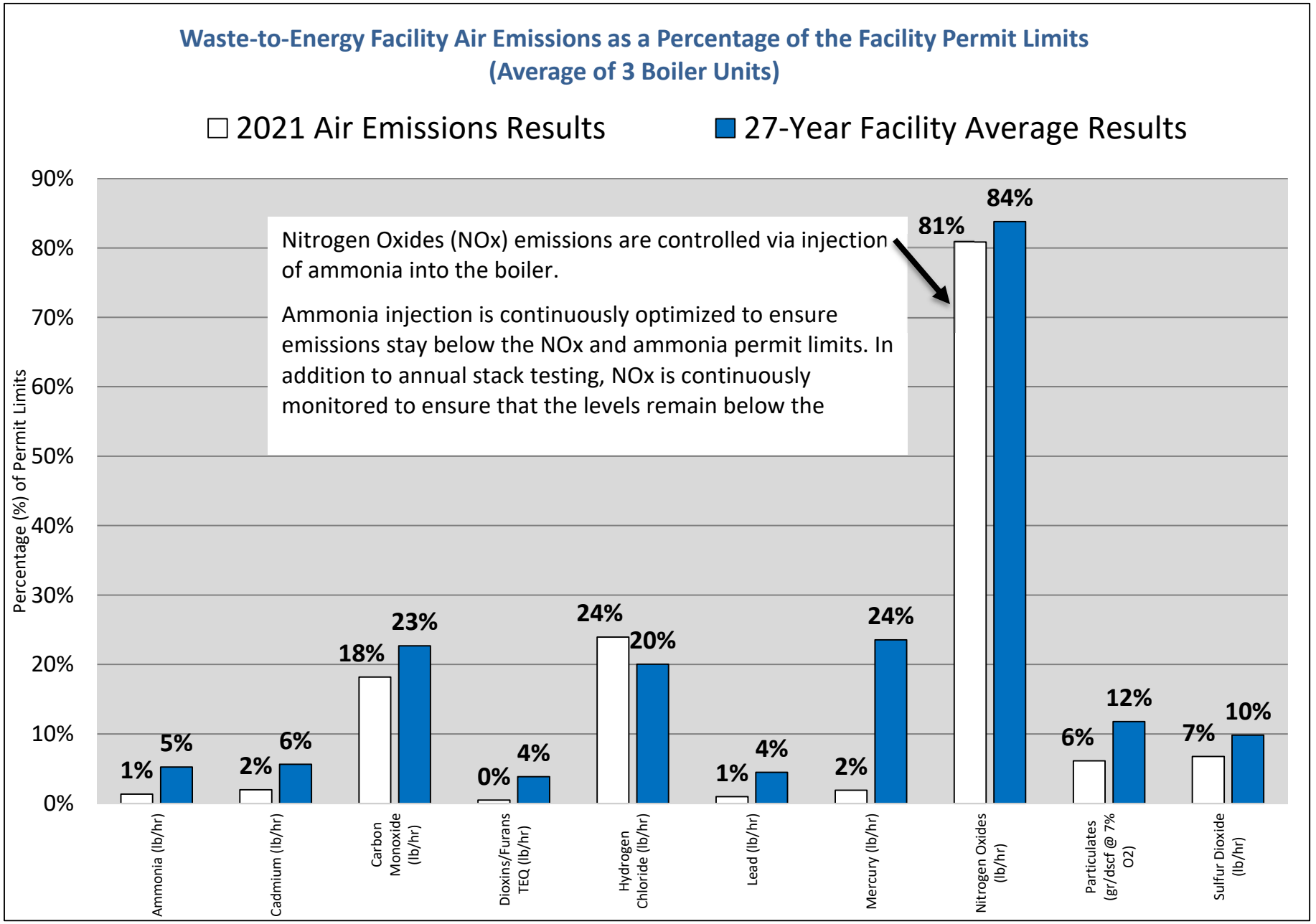
@ 7% O2 = concentration corrected to 7% oxygen

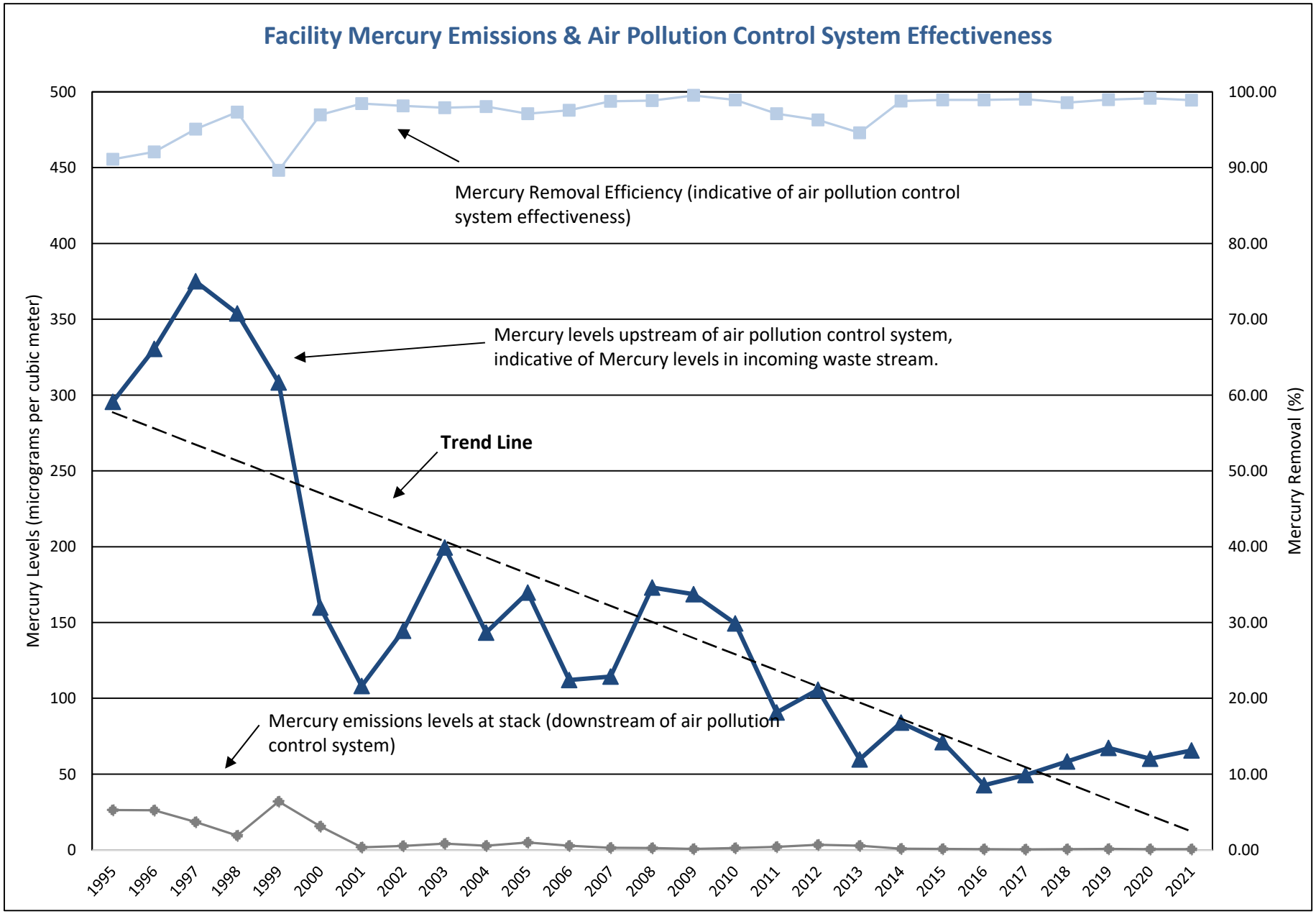
ng = nanograms

µg = micrograms

mg = milligrams

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




Facility Mercury Emissions & Air Pollution Control System Effectiveness
Mercury Levels (micrograms per cubic meter)
Mercury Removal (%)
500
450
400
350
300
250
200
150
100
50
0
100.00
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
Mercury Removal Efficiency (indicative of air pollution control system effectiveness)
Mercury levels upstream of air pollution control system, indicative of Mercury levels in incoming waste stream.
Trend Line
Mercury emissions levels at stack (downstream of air pollution control system)
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021