

2014 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 Onondaga County Waste-to-Energy (WTE) Facility.**

Q: How do the 2014 stack test results look?

A: The results from the 2014 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 emissions monitoring system (CEMS) that measures combustion efficiency, air pollution control equipment performance, and certain stack emissions, specifically 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: NYSDEC renewed the Facility's Air Permit, effective August 8, 2011 through August 7, 2016. The permit can be **accessed on NYSDEC's website** at the following webpage:
http://www.dec.ny.gov/dardata/boss/afs/permits/731420002800009_r1.pdf.

Q: Who can I contact for more information?

A: For more detailed information on the test results please contact OCRRA's Environmental Engineer, Amy Miller, at 453.2866 or amiller@ocrra.org. For additional questions of OCRRA's Public Information Officer, please contact Kristen Lawton at **295.0733** or klawton@ocrra.org.

2014 ANNUAL STACK TEST RESULTS

	Constituent	Average Measured Emissions ¹			Permit Limit ²	Pass/Fail? P/F	3-Boiler Average ³	% permit limit ⁴	
		Unit 1	Unit 2	Unit 3					
TESTED ANNUALLY	FEDERAL	Cadmium (mg/dscm @ 7% O ₂)	2.5E-04	< 1.7E-04	3.6E-04	3.5E-02	P	2.6E-04	0.7%
		Cadmium (lb/hr)	3.8E-05	< 2.8E-05	6.1E-05	1.9E-03	P	4.2E-05	2.2%
		Carbon Monoxide (lb/hr)	1.22E+00	1.75E+00	1.37E+00	8.04E+00	P	1.45E+00	18.0%
		Dioxins/Furans (ng/dscm @ 7% O ₂)	2.9E+00	1.0E+01	3.3E+00	3.0E+01	P	5.4E+00	18.0%
		Hydrogen Chloride (ppmdv @ 7% O ₂)	3.4E+00	3.0E+00	7.1E+00	2.5E+01	P	4.5E+00	18.0%
		Hydrogen Chloride (lb/hr)	8.05E-01	7.71E-01	1.80E+00	5.24E+00	P	1.13E+00	21.5%
		Hydrogen Chloride Removal Efficiency (%)	99.5	99.6	98.8	>=95	P	99.3	-
		Lead (mg/dscm @ 7% O ₂)	3.13E-03	1.46E-03	5.52E-03	4.00E-01	P	3.37E-03	0.8%
		Lead (lb/hr)	4.84E-04	2.42E-04	9.28E-04	3.81E-02	P	5.51E-04	1.4%
		Mercury (lb/hr)	1E-04	2E-04	1E-04	4E-03	P	1E-04	3.3%
		Nitrogen Oxides (lb/hr)	5.1E+01	5.3E+01	5.2E+01	5.8E+01	P	5.2E+01	90.2%
		Particulates (gr/dscf @ 7% O ₂)	3.2E-04	5.2E-04	6.0E-04	1.0E-02	P	4.8E-04	4.8%
		PM ₁₀ (gr/dscf @ 7% O ₂)	2.7E-04	2.1E-04	2.2E-04	1.0E-02	P	2.3E-04	2.3%
		PM ₁₀ (lb/hr)	9.50E-02	7.67E-02	8.06E-02	3.16E+00	P	8.41E-02	2.7%
		Sulfur Dioxide (lb/hr)	6.90E-02	5.00E-02	5.44E-01	1.62E+01	P	2.21E-01	1.4%
STATE	Ammonia (ppmdv @ 7% O ₂)	4.6E+00	4.8E+00	5.7E+00	5.0E+01	P	5.0E+00	10.0%	
	Ammonia (lb/hr)	5.09E-01	5.74E-01	6.71E-01	4.88E+00	P	5.85E-01	12.0%	
	Dioxins/Furans-2,3,7,8 TCDD TEQ (ng/dscm @ 7% O ₂)	4E-02	1E-01	5E-02	4E-01	P	7E-02	17.4%	
	Dioxins/Furans-2,3,7,8 TCDD TEQ (lb/hr)	6.45E-09	1.99E-08	8.28E-09	1.29E-07	P	1.15E-08	8.9%	
	Mercury (µg/dscm @ 7% O ₂)	7.8E-01	1.0E+00	6.6E-01	2.8E+01	P	8.1E-01	2.9%	
	Mercury Removal Efficiency (%)	99	98	99	>=85	P	99	-	
	PAH (µg/dscm @ 7% O ₂)	< 3.2E-01	2.0E-01	2.8E-01	1.0E+00	P	2.6E-01	26.4%	
	Zinc (lb/hr)	3.79E-03	2.50E-03	5.88E-03	6.45E-02	P	4.06E-03	6.3%	

NOTES:

¹ Based on three test runs; used for compliance with permit limit.

² NYSDEC Title V Permit #7-3142-00028

³ Average provided for informational purposes only; not used for compliance.

⁴ 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

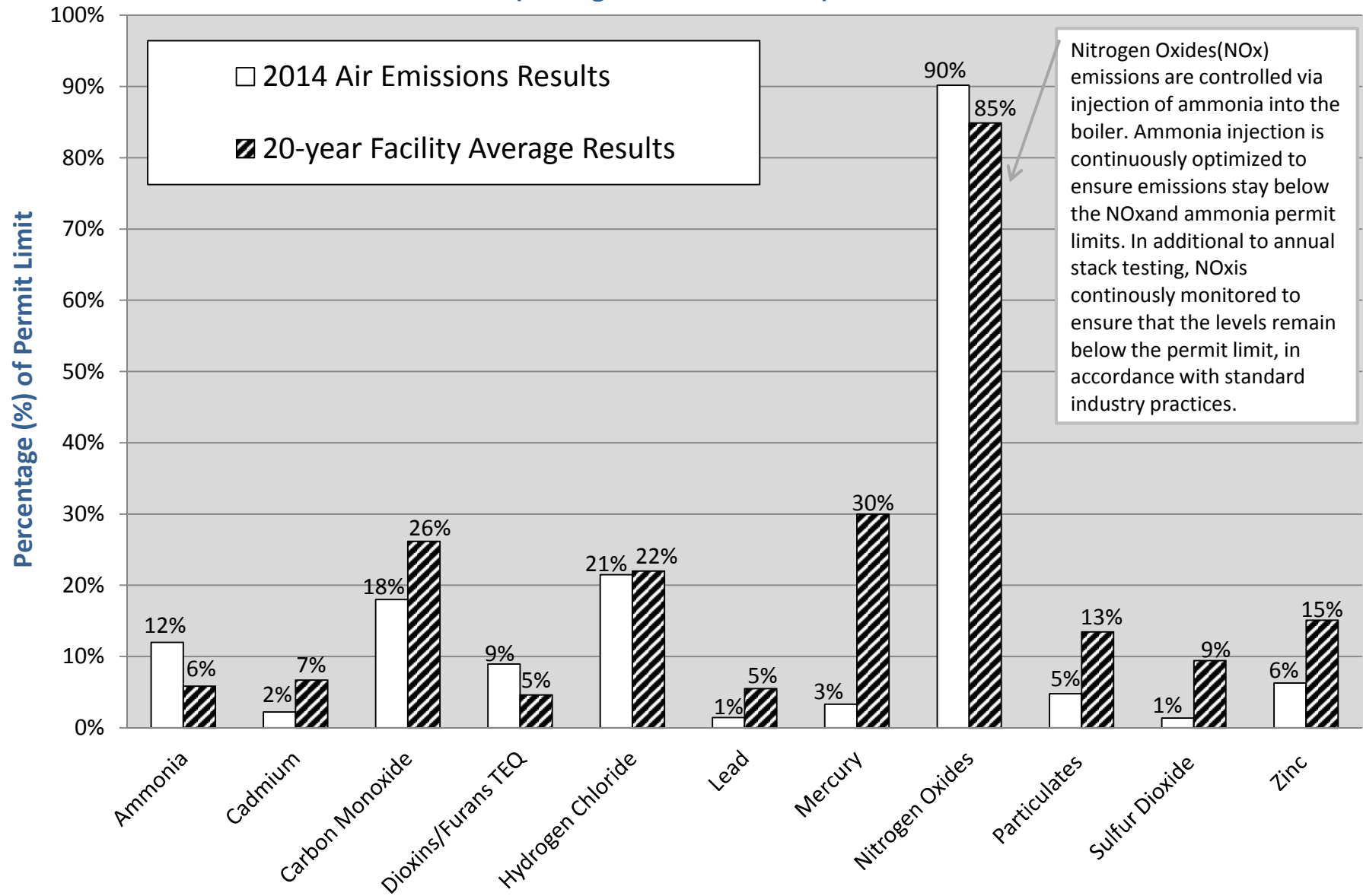
@ 7% O₂ = concentration corrected to 7% oxygen

ng = nanograms

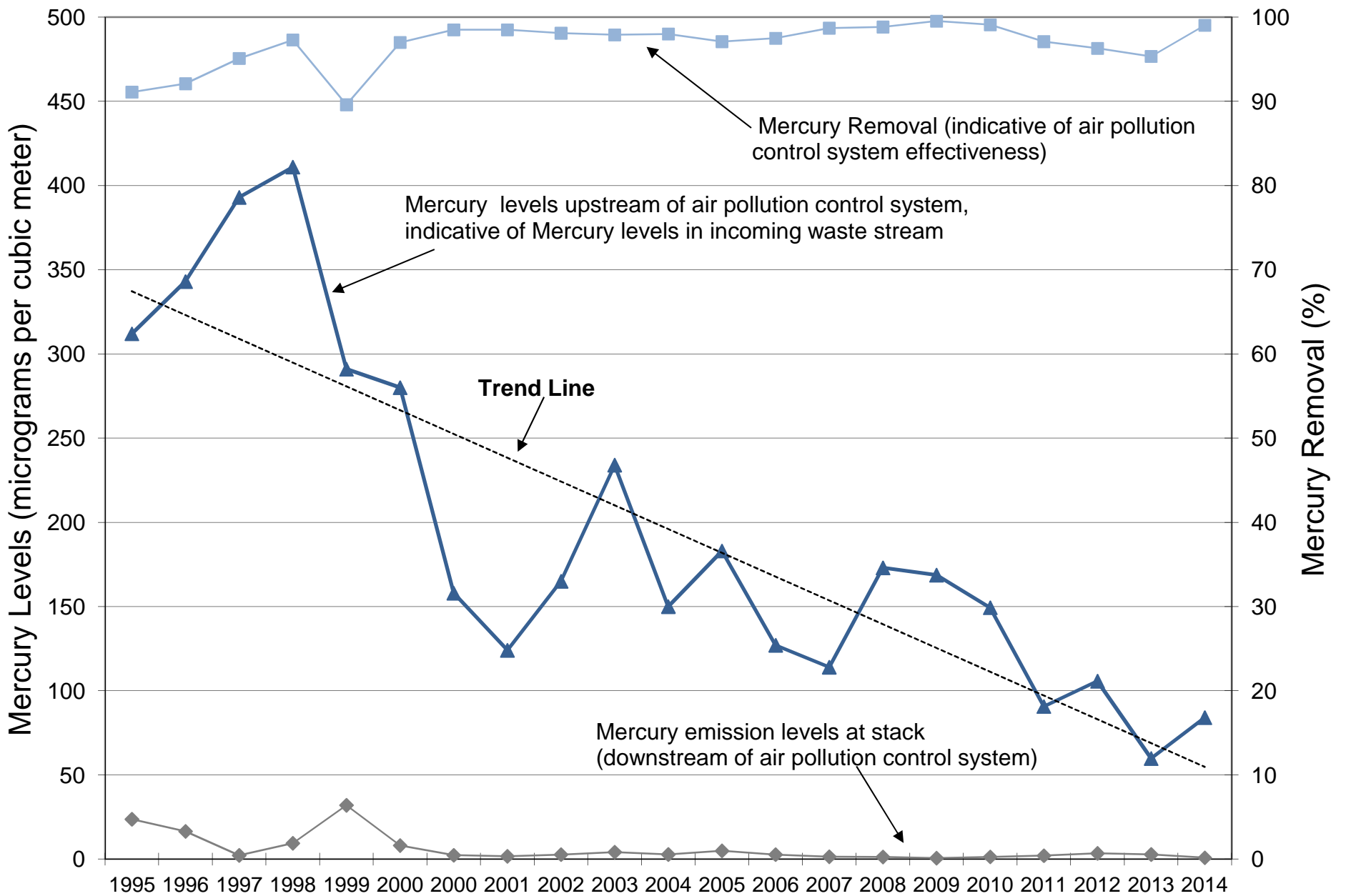
µg = micrograms

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



2014 Ash Residue Testing FAQs

Q: What is the purpose of the semi-annual ash residue testing and how do the 2014 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 2014 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, Amy Miller, at **453.2866** or amiller@ocrra.org. For additional questions of OCRRA's Public Information Officer, please contact Kristen Lawton at **295.0733** or klawton@ocrra.org.

2014 ASH RESIDUE CHARACTERIZATION TEST RESULTS			
Semi-Annual Test Results - June 2014			
<i>Constituent</i>	<i>Test Result</i>	<i>Permit Limit</i>	<i>Pass or Fail</i>
Cadmium	0.12 mg/L	1 mg/L	Pass
Lead	0.50 mg/L	5 mg/L	Pass
Semi-Annual Test Results - November 2014			
<i>Constituent</i>	<i>Test Result</i>	<i>Permit Limit</i>	<i>Pass or Fail</i>
Cadmium	0.21 mg/L	1 mg/L	Pass
Lead	0.25 mg/L	5 mg/L	Pass
<u>CONCLUSION</u>			
<i>Ash residue does NOT exhibit a hazardous characteristic. As such, it should continue to be managed as a non-hazardous solid waste.</i>			