

## 2018 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 2018 stack test results look?**

**A: The results from the 2018 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](http://www.tinyurl.com/WTEpermit).

**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](mailto:calbunio@ocrra.org). For additional questions of OCRRA’s Public Information Officer, please contact Kristen Lawton at 315.295.0733 or [klawton@ocrra.org](mailto:klawton@ocrra.org).**

## 2018 ANNUAL STACK TEST RESULTS

	Constituent	Average Measured Emissions			Permit	Pass/Fail?	3-Boiler	% Permit	
		Unit 1	Unit 2	Unit 3	Limit	P/F	Average	Limit	
TESTED ANNUALLY	FEDERAL	Cadmium (mg/dscm @ 7% O <sub>2</sub> )	< 2.31E-04	2.09E-04	2.98E-04	3.50E-02	P	2.46E-04	0.70%
		Cadmium (lb/hr)	< 3.40E-05	3.22E-05	4.67E-05	1.90E-03	P	3.76E-05	1.98%
		Carbon Monoxide (lb/hr)	1.07E+00	1.30E+00	1.28E+00	8.04E+00	P	1.22E+00	15.13%
		Dioxins/Furans (ng/dscm @ 7% O <sub>2</sub> )	3.09E-01	4.44E-01	5.87E-01	3.00E+01	P	4.47E-01	1.49%
		Hydrogen Chloride (ppmdv @ 7% O <sub>2</sub> )	2.50E+00	2.36E+00	2.53E+00	2.50E+01	P	2.46E+00	9.85%
		Hydrogen Chloride (lb/hr)	5.71E-01	5.53E-01	5.97E-01	5.24E+00	P	5.74E-01	10.95%
		Hydrogen Chloride Removal Efficiency (%)	99.70	99.60	99.60	>= 95.00	P	99.63	--
		Lead (mg/dscm @ 7% O <sub>2</sub> )	1.71E-03	1.37E-03	1.82E-03	4.00E-01	P	1.63E-03	0.41%
		Lead (lb/hr)	2.54E-04	2.11E-04	2.86E-04	3.81E-02	P	2.50E-04	0.66%
		Mercury (lb/hr)	< 6.12E-05	< 1.10E-04	< 5.76E-05	4.00E-03	P	7.63E-05	1.91%
	STATE	Nitrogen Oxides (lb/hr)	4.52E+01	4.62E+01	5.35E+01	5.80E+01	P	4.83E+01	83.28%
		Particulate (gr/dscf @ 7% O <sub>2</sub> )	9.76E-04	9.17E-04	1.19E-03	1.00E-02	P	1.03E-03	10.28%
		PM <sub>10</sub> (gr/dscf @ 7% O <sub>2</sub> )	3.70E-04	2.64E-04	1.08E-03	1.00E-02	P	5.71E-04	5.71%
		PM <sub>10</sub> Filterable (lb/hr)	1.25E-01	8.99E-02	3.73E-01	3.16E+00	P	1.96E-01	6.20%
		Sulfur Dioxide (lb/hr)	3.48E-01	2.90E+00	4.09E-01	1.62E+01	P	1.22E+00	7.52%
		Ammonia (ppmdv @ 7% O <sub>2</sub> )	< 5.53E-01	7.60E-01	5.99E-01	5.00E+01	P	6.37E-01	1.27%
		Ammonia (lb/hr)	< 5.92E-02	8.31E-02	6.61E-02	4.88E+00	P	6.95E-02	1.42%
		Dioxins/Furans-2,3,7,8 TCDD TEQ (ng/dscm @ 7% O <sub>2</sub> )	3.67E-03	3.22E-03	6.62E-03	4.00E-01	P	4.50E-03	1.13%
		Dioxins/Furans-2,3,7,8 TCDD TEQ (lb/hr)	5.51E-10	4.92E-10	1.03E-09	1.29E-07	P	6.91E-10	0.54%
		Mercury (µg/dscm @ 7% O <sub>2</sub> )	< 4.13E-01	< 7.14E-01	< 3.68E-01	2.80E+01	P	4.98E-01	1.78%
Mercury Removal Efficiency (%)	> 99.10	> 97.10	> 99.50	>= 85.00	P	9.86E+01	--		
PAH (µg/dscm @ 7% O <sub>2</sub> )	< 1.31E-01	< 1.32E-01	< 8.35E-03	1.00E+00	P	9.05E-02	9.05%		
Zinc (lb/hr)	4.44E-03	4.13E-03	5.69E-03	6.45E-02	P	4.75E-03	7.37%		
TESTED EVERY 5 YEARS	FEDERAL	Arsenic (lb/hr)	< 1.91E-05	< 1.94E-05	< 1.93E-05	7.80E-04	P	1.93E-05	2.47%
		Beryllium (lb/hr)	< 4.77E-06	< 4.85E-06	< 4.80E-06	1.15E-05	P	4.81E-06	41.80%
		Hydrogen Fluoride (lb/hr)	< 2.02E-02	< 2.52E-02	< 2.40E-02	1.65E-01	P	2.31E-02	14.02%
		VOCs - Total Hydrocarbons (ppmdv @ 7% O <sub>2</sub> )	0.49	1.13	0.86	3.00E+01	P	8.26E-01	2.75%
		VOCs - Total Hydrocarbons (lb/hr)	4.83E-02	1.13E-01	9.37E-02	2.76E+00	P	8.50E-02	3.08%
		Chromium (lb/hr)	1.76E-04	2.22E-04	2.34E-04	1.93E-03	P	2.11E-04	10.92%
	STATE	Copper (lb/hr)	1.93E-04	1.62E-04	2.55E-04	4.00E-03	P	2.03E-04	5.08%
		Formaldehyde (µg/dscm @ 7% O <sub>2</sub> )	< 11.30	< 11.50	< 11.30	5.00E+01	P	1.14E+01	22.73%
		Hexavalent Chromium - Cr <sup>+6</sup> (lb/hr)	1.76E-04	2.10E-04	1.57E-04	3.00E-04	P	1.81E-04	60.33%
		Manganese (lb/hr)	3.92E-04	3.68E-04	6.53E-04	2.30E-03	P	4.71E-04	20.48%
		Nickel (lb/hr)	2.27E-04	2.49E-04	4.81E-04	4.00E-03	P	3.19E-04	7.98%
		PAHs (µg/dscm @ 7% O <sub>2</sub> )	< 1.31E-01	< 1.32E-01	< 8.35E-03	1.00E+00	P	9.05E-02	9.05%
		PCBs (µg/dscm @ 7% O <sub>2</sub> )	< 2.85E-03	< 5.71E-03	< 7.57E-03	5.30E-02	P	5.38E-03	10.14%
		Vanadium (lb/hr)	< 1.91E-05	< 1.94E-05	< 1.92E-05	6.00E-04	P	1.92E-05	3.21%
Zinc (lb/hr)	4.44E-03	4.13E-03	5.69E-03	6.45E-02	P	4.75E-03	7.37%		

### NOTES:

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

### UNITS:

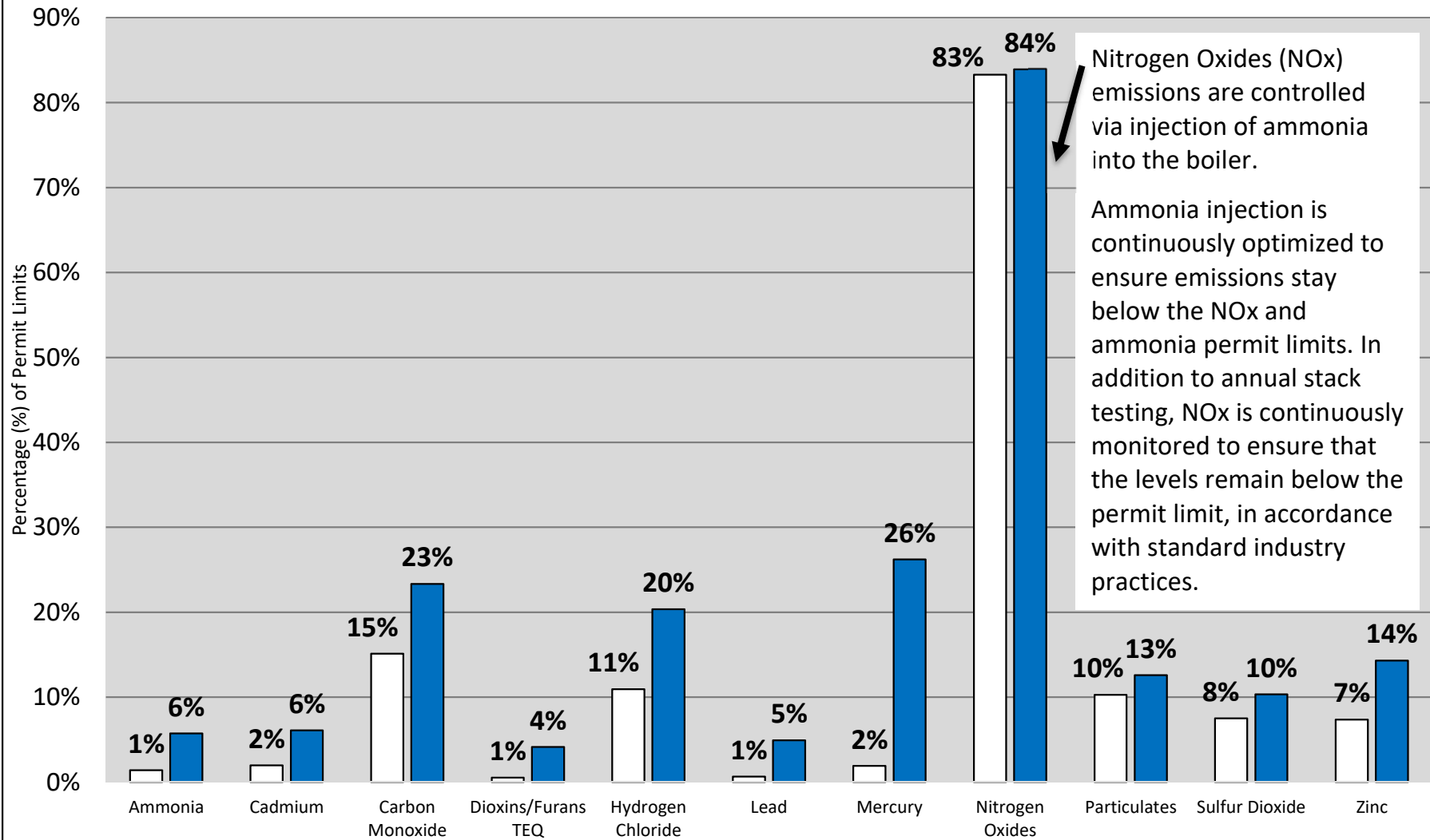
gr/dscf = grains per dry standard cubic foot  
 ppmdv = parts per million dry volume  
 lb/hr = pounds per hour  
 dscm = dry standard cubic meter  
 @ 7% O<sub>2</sub> = concentration corrected to 7% oxygen

ng = nanograms  
 µg = micrograms  
 mg = milligrams

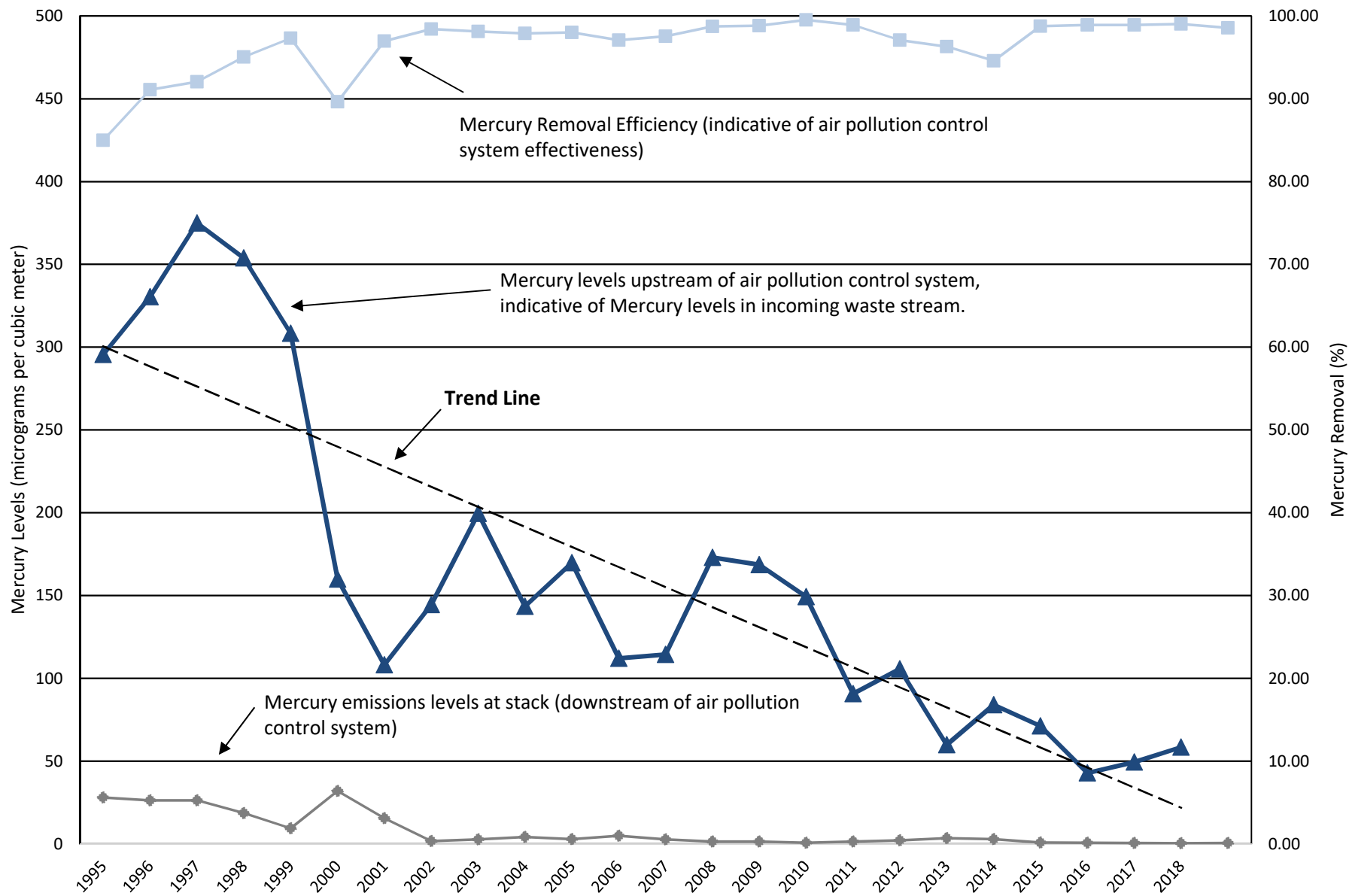
### Waste-to-Energy Facility Air Emissions as a Percentage of the Facility Permit Limits (Average of 3 Boiler Units)

□ 2018 Air Emissions Results

■ 24-Year Facility Average Results



## Facility Mercury Emissions & Air Pollution Control System Effectiveness



## 2018 Ash Residue Testing FAQs

**Q: What is the purpose of the semi-annual ash testing and how do the 2018 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 2018 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. For additional questions of OCRRA’s Public Information Officer, please contact Kristen Lawton at 315.295.0733 or klawton@ocrra.org.

<b>2018 ASH RESIDUE CHARACTERIZATION TEST RESULTS</b>			
<b>Semi-Annual Test Results - April 2018</b>			
<i>Constituent</i>	<i>Test Result (mg/L)</i>	<i>Permit Limit (mg/L)</i>	<i>Pass or Fail</i>
Cadmium	0.05	1	Pass
Lead	0.47	5	Pass
<b>Semi-Annual Test Results - October 2018</b>			
<i>Constituent</i>	<i>Test Result (mg/L)</i>	<i>Permit Limit (mg/L)</i>	<i>Pass or Fail</i>
Cadmium	0.05	1	Pass
Lead	0.35	5	Pass
<b>CONCLUSION</b>			
<i>Ash residue does NOT exhibit a hazardous characteristic. As such, it should continue to be managed as a non-hazardous solid waste.</i>			