

2009 ANNUAL STACK TEST RESULTS

		Average Measured Emissions ¹			Permit Limit ²	Pass/Fail? P/F	
		Unit 1	Unit 2	Unit 3			
PARAMETERS TESTED ANNUALLY	FEDERAL	Cadmium (mg/dscm @ 7% O ₂)	5.37E-04	5.93E-04	3.55E-04	3.50E-02	P
		Cadmium (lb/hr)	7.95E-05	9.09E-05	5.71E-05	1.90E-03	P
		Carbon Monoxide (lb/hr)	9.40E-01	9.80E-01	1.14E+00	8.04E+00	P
		Dioxins/Furans (ng/dscm @ 7% O ₂)	2.45E-01	1.17E+00	2.96E+00	3.00E+01	P
		Hydrogen Chloride (ppmdv @ 7% O ₂)	1.90E+00	3.60E+00	5.79E+00	2.50E+01	P
		Hydrogen Chloride (lb/hr)	4.14E-01	8.71E-01	1.41E+00	5.24E+00	P
		Hydrogen Chloride Removal Efficiency (%)	99.7	99.5	99.3	>=95	P
		Lead (mg/dscm @ 7% O ₂)	8.72E-03	9.55E-03	4.73E-03	4.00E-01	P
		Lead (lb/hr)	1.30E-03	1.47E-03	7.62E-04	3.81E-02	P
		Mercury (lb/hr)	1.10E-04	< 9.99E-05	< 6.98E-05	4.00E-03	P
		Nitrogen Oxides (lb/hr)	4.91E+01	5.49E+01	5.57E+01	5.80E+01	P
		Particulates (gr/dscf @ 7% O ₂)	1.38E-03	9.59E-04	9.93E-04	1.00E-02	P
		PM ₁₀ (gr/dscf @ 7% O ₂)	2.11E-04	4.08E-04	2.63E-04	1.00E-02	P
		PM ₁₀ (lb/hr)	7.90E-02	1.51E-01	1.03E-01	3.16E+00	P
	Sulfur Dioxide (lb/hr)	1.91E+00	3.85E+00	2.20E+00	1.62E+01	P	
	STATE	Ammonia (ppmdv @ 7% O ₂)	1.00E+00	5.42E-01	2.02E+00	5.00E+01	P
		Ammonia (lb/hr)	1.02E-01	6.09E-02	2.28E-01	4.88E+00	P
		Dioxins/Furans-2,3,7,8 TCDD TEQ (ng/dscm @ 7% O ₂)	2.45E-03	1.09E-02	3.01E-02	4.00E-01	P
		Dioxins/Furans-2,3,7,8 TCDD TEQ (lb/hr)	4.18E-10	1.74E-09	4.86E-09	1.29E-07	P
		Mercury (µg/dscm @ 7% O ₂)	7.42E-01	< 6.28E-01	< 4.34E-01	2.80E+01	P
		Mercury Removal Efficiency (%)	99.5	> 99.5	> 99.6	>=85	P
		Zinc (lb/hr)	8.36E-03	7.53E-03	5.37E-03	1.88E-02	P

NOTES:

¹ Based on three test runs

² NYSDEC Title V Permit #7-3142-00028/00009 - Draft Renewal

UNITS:

gr/dscf = grains per dry standard cubic foot

ppmdv = parts per million dry volume

lb/hr = pounds per hour

ng/dscm = nanograms per dry standard cubic meter

µg/dscm = micrograms per dry standard cubic meter

mg/dscm = milligrams per dry standard cubic meter

@ 7% O₂ = concentration corrected to 7% oxygen

2009 ASH RESIDUE CHARACTERIZATION TEST RESULTS

Semi-Annual Test Results - May 2009

Constituent	Test Result	Permit Limit	Pass or Fail
Cadmium	0.73 mg/L	1 mg/L	Pass
Lead	0.55 mg/L	5 mg/L	Pass

Semi-Annual Test Results - October 2009

Constituent	Test Result	Permit Limit	Pass or Fail
Cadmium	0.05 mg/L	1 mg/L	Pass
Lead	2.91 mg/L	5 mg/L	Pass

CONCLUSION

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

2009 Air Emissions & Ash 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 the facility.** Stack testing consists of a series of sampling events, in which a probe is inserted into the stack gases to collect a representative sample, over a defined amount of time. Sampling and subsequent 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 stack testing at the Onondaga County Waste-to-Energy (WTE) Facility.**

Q: How do the 2009 stack test results look?

A: The results from the 2009 stack testing indicate that **the facility is operating acceptably** and that the **air pollution control devices are functioning properly.** As shown by the summary data, many of the parameters 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 equipment performance and stack emissions.** The CEMS monitors carbon monoxide, carbon dioxide, oxygen, sulfur dioxide, and nitrogen oxides (NOx) as well as ammonia, opacity, and combustion temperatures.

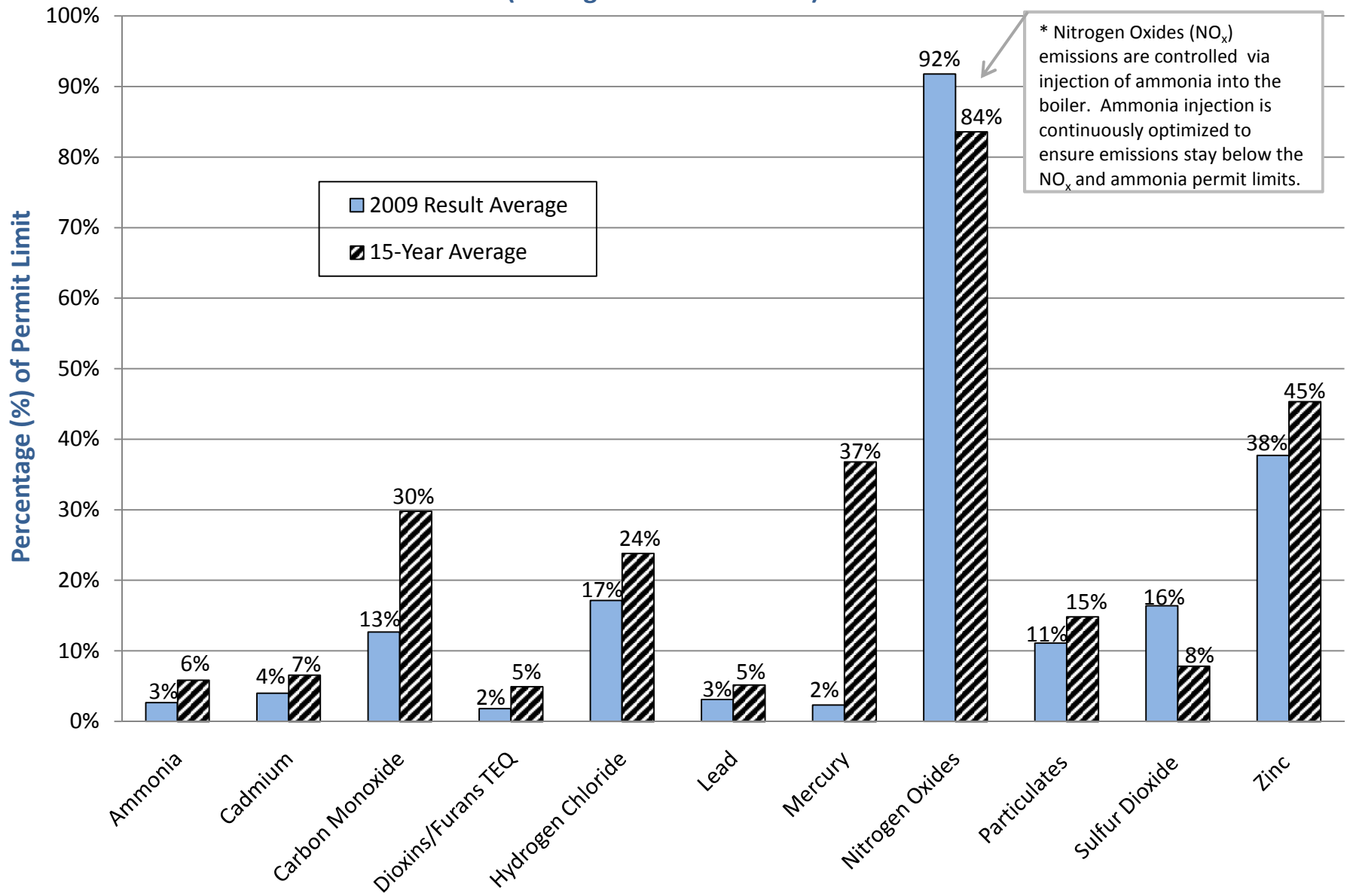
Q: What is the purpose of the semi-annual ash testing and how do the 2009 results look?

A: A representative sample of combined bottom and fly ash 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 exhibits hazardous characteristics. **Over the life of the facility (including 2009), TCLP analysis has always indicated that the ash 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 Lawrence, at **453.2866** or alawrence@ocrra.org. For additional questions of OCRRA's Public Information Officer, please contact Kristen Lawton at **295.0733** or klawton@ocrra.org.

Comparison of Long-Term Facility Average to 2009 Test Results (Average of 3 Boiler Units)



Facility Mercury Emissions & Air Pollution Control System Effectiveness

