

**NOTIFICATION OF COMPLIANCE (NOC)
WITH THE
REQUIREMENTS OF 40 CFR 63 SUBPART EEE
FOR THE
FIXED BOX INCINERATOR #2**



Prepared for:

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Revision 0

NOTIFICATION OF COMPLIANCE CERTIFICATION

Through this Notification of Compliance (NOC) and Comprehensive Performance Test (CPT) Report, Momentive Performance Materials, located in Waterford, New York, certifies that:

The requirements of a Notification of Compliance as listed in 40 CFR §63.1207(j), §63.1210(d) and 40 CFR §63.9(h)(2)(i)(A) - §63.9(h)(2)(i)(G) have been identified and Momentive is in compliance with these requirements with respect to the Fixed Box Incinerator #2.

Emissions from the Fixed Box Incinerator #2 are in compliance with the emissions standards of 40 CFR Subpart EEE, and the limits on operating parameters as listed and set forth in this Notification of Compliance ensure compliance with the emissions standards of 40 CFR Subpart EEE.



Signature of Responsible Official

12/22/2011

Date

E. JOSHUA SPAIN

Printed Name

WATERFORD PLANT OPERATIONS MANAGER

Title

EXECUTIVE SUMMARY

Momentive Performance Materials (Momentive) operates a hazardous waste incinerator at its facility in Waterford, New York designated as the Fixed Box Incinerator #2 (FBI #2). The FBI #2 is subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Hazardous Waste Combustors (HWC), codified as 40 CFR, Part 63, Subpart EEE. The NESHAP specifies emissions standards that reflect emissions performance of Maximum Achievable Control Technologies (MACT), and is commonly referred to as the HWC MACT. Ongoing compliance with the HWC MACT standards must be demonstrated by conducting a Comprehensive Performance Test (CPT) according to 40 CFR §63.1207(d).

A CPT for the FBI #2 Maximum Temperature Condition was performed September 28 and 29, 2011. This document is submitted to fulfill the requirements of the United States Environmental Protection Agency (US EPA) 40 CFR, Part 63, Subpart EEE, for a Notice of Compliance (NOC). Stack gas emissions were sampled for particulate matter, hydrogen chloride/chlorine, metals, and carbon monoxide. All emissions were below the respective HWC MACT limits for existing incinerators that burn hazardous waste. Momentive previously demonstrated compliance with the dioxin/furan emission standard and with the requirement for the Destruction and Removal Efficiency of Principal Hazardous Organic Constituents from the previous CPT conducted in October and December 2010. A continuous emissions monitoring system is used to demonstrate ongoing compliance with the HWC MACT standard for carbon monoxide.

The waste feedstreams were sampled and analyzed for regulated constituents (ash, chlorine, and metals). Metals spiking streams were also fed during the CPT. Operating parameter limits were established based on data collected during this Maximum Temperature Condition CPT, process and operating knowledge, operational testing, and the Minimum Temperature Condition data collected during the previous CPT.

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LIST OF ACRONYMS

APCE	Air Pollution Control Equipment
AWFCO	Automatic Waste Feed Cut Off
CEMS	Continuous Emissions Monitoring System
CFR	Code of Federal Regulations
CMS	Continuous Monitoring System
CPT	Comprehensive Performance Test
DRE	Destruction and Removal Efficiency
FBI #2	Fixed Box Incinerator #2
HAP	Hazardous Air Pollutant
HRA	Hourly Rolling Average
HWC MACT	Hazardous Waste Combustor Maximum Achievable Control Technology
LVM	Low Volatile Metals
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NOC	Notification of Compliance
NYSDEC	New York State Department of Environmental Conservation
OPL	Operating Parameter Limit
PM	Particulate Matter
RCRA	Resource Conservation and Recovery Act
SVM	Semi-Volatile Metals
TEQ	Toxic Equivalent Quotient
THC	Total Hydrocarbons (as propane)
US EPA	United States Environmental Protection Agency

LIST OF UNITS AND MEASUREMENTS

acfm	Actual cubic feet per minute
dscm	Dry standard cubic meter
°C	Degrees Centigrade
°F	Degrees Fahrenheit
gpm	Gallons per minute
gr/dscf	Grains per dry standard cubic foot
in of H ₂ O	Inches of water column gauge
lb/hr	Pounds per hour
µg	Micrograms
µg/dscm	Micrograms per dry standard cubic meter
ng/dscm	Nanograms per dry standard cubic meter
%	Percent
ppmv	Parts per million by volume
psig	Pounds per square inch gauge

LIST OF CHEMICAL SYMBOLS AND FORMULAS

As	Arsenic
Be	Beryllium
Cd	Cadmium
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
Cl ₂	Chlorine Gas
Cr	Chromium
HCl	Hydrogen Chloride
Hg	Mercury
O ₂	Oxygen
Pb	Lead
SiO ₂	Silicon Dioxide

1.0 INTRODUCTION

1.1 Facility and Regulatory Overview

Momentive Performance Materials (Momentive) operates a hazardous waste incinerator at its facility in Waterford, New York designated as the Fixed Box Incinerator #2 (FBI #2). The FBI #2 is subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Hazardous Waste Combustors (HWC), codified as 40 CFR, Part 63, Subpart EEE. The NESHAP specifies emissions standards that reflect emissions performance of Maximum Achievable Control Technologies (MACT), and is commonly referred to as the HWC MACT. Ongoing compliance with the HWC MACT standards must be demonstrated by conducting a Comprehensive Performance Test (CPT) according to 40 CFR §63.1207(d). The incinerator is also subject to a Resource Conservation and Recovery Act (RCRA) permit issued by the New York State Department of Environmental Conservation (NYSDEC).

Momentive submitted a CPT Plan to the NYSDEC in August 2010. A CPT for the FBI #2 was conducted on October 13-18, 2010 and December 7-9, 2010. A Notification of Compliance (NOC) was submitted on March 9, 2011 in accordance with 40 CFR §63.1210(d).

The lead emission results obtained from one of the two exhaust stacks from the FBI #2 during the December 2010 CPT were above the HWC MACT emission limit for semi-volatile metals during the Maximum Temperature Condition. Analysis of the field blank sample collected at the North FBI #2 stack location indicated that the cause of the high lead emissions was contamination of the sample train. In order to demonstrate that emissions from the FBI #2 are in compliance with the HWC MACT standard, Momentive repeated the Maximum Temperature Condition of the CPT. An *Addendum to the Comprehensive Performance Test Plan for the Fixed Box Incinerator #2* was submitted to the agency on August 9, 2011 and Revision 2 of the CPT Plan Addendum was approved on September 13, 2011.

The CPT was conducted on September 28 and 29, 2011. The data from the September 28-29, 2011 CPT will replace the data from the December 2010 Maximum Temperature Condition. As such, this test is called the Maximum Temperature Condition CPT in this report. This CPT Report (submitted under separate cover) documents that Momentive's FBI #2 is in compliance with the emissions standards specified in 40 CFR §63.1219.

The objectives of the CPT were to demonstrate compliance with the HWC MACT emissions standards specified in 40 CFR Part 63 Subpart EEE and to establish operating parameter limits (OPLs) specified in 40 CFR §63.1209. The CPT consisted of one Maximum Temperature test condition and stack gas emissions were sampled and analyzed for:

- Particulate matter (PM)
- Hydrogen chloride/chlorine (HCl/Cl₂)
- Low volatile metals (LVM)
- Semi-volatile metals (SVM)
- Mercury, and
- Carbon monoxide (CO)

The performance of the incinerator and associated air pollution control systems during the CPT established that emissions were sufficiently controlled to levels required by the HWC MACT standard. The emissions results from the September 2011 Maximum Temperature Condition CPT are presented in Table 1-1. Emissions results for the Minimum Temperature Condition and Maintenance Mode of Operation are presented in Tables 1-2 and 1-3, respectively. These results demonstrate that emissions from the incinerator will be less than those required by the HWC MACT standard, provided it is operated within the OPLs proposed in this report.

Momentive had previously complied with the alternative to the particulate matter standard specified in 40 CFR §63.1219(e), which allows compliance with the RCRA particulate matter emission limit (0.08 gr/dscf corrected to 7% O₂) and expands the list of regulated low volatile and semi-volatile metals (i.e., non-enumerated metals) subject to HWC MACT emissions and feedrate limits. Because the emissions of particulate matter from the FBI #2 were well below the HWC MACT emission limit of 0.013 gr/dscf corrected to 7% O₂, Momentive has chosen to comply with the HWC MACT particulate matter emissions limit and to comply with the emission and feedrate limits for the “enumerated metals” (i.e., only arsenic, beryllium, cadmium, chromium, and lead).

The Maximum Temperature Condition CPT did not include demonstration of compliance with the Destruction and Removal Efficiency (DRE) standard or the dioxin/furan standard. Compliance with those parameters was demonstrated during the October and December 2010 CPT. Likewise, the CPT does not include demonstration of compliance with the Total Hydrocarbon (THC) standard because THC testing is only required in conjunction with a DRE test. Momentive will continuously monitor carbon monoxide on an hourly rolling average (HRA) to ensure compliance with both the CO and THC emission limits as specified in 40 CFR §63.1219(a)(5)(i).

All Continuous Monitoring System (CMS) instruments were calibrated prior to conducting the CPT. Calibration results for the CMS instruments were submitted to the NYSDEC under separate cover prior to the CPT, as were the results of a Relative Accuracy Test Audit of the

Continuous Emissions Monitoring System (CEMS). All instruments were within calibration specifications prior to and during testing.

1.2 Scope and Purpose of the Notification of Compliance

The CPT Report, which is under separate cover, includes:

- The results of the CPT;
- A description of the activities associated with the CPT, including emissions and feedstream sampling and analysis, and process operating conditions;
- A discussion of the impact of any non-standard CPT activities or deviations from the approved plan and the impact of those activities on data quality
- Proposed OPLs for the FBI #2 based on the results of the Maximum Temperature Condition CPT, and
- Appendices containing the sampling and analysis reports, the spiking report, operating parameter data, and example calculations

Detailed discussion of the CPT execution and results are not included in this NOC. The purpose of this NOC is to present:

- A Notification of Compliance Certification signed by a Responsible Official
- The emissions results from the CPT showing compliance with the emission standards
- A summary of operating parameter limits (OPLs) that will assure ongoing compliance with the emission standards

This NOC is organized as follows:

Section 1.0	Introduction
Section 2.0	Proposed Operating Parameter Limits
Section 3.0	Other NOC requirements

**Table 1-1
Maximum Temperature Condition CPT Emissions Results**

Maximum Temperature Condition			
Compound	CPT	MACT	Units
	South Stack	Limit	
Dioxins/Furans	-	0.4	ng TEQ/dscm (7% O ₂)
Mercury	<2.09	130	µg/dscm (7% O ₂)
Semi-Volatile Metals ^a	<2.00	230	µg/dscm (7% O ₂)
Low Volatile Metals ^b	<1.70	92	µg/dscm (7% O ₂)
Carbon Monoxide ^c	3	100	ppmv (7% O ₂)
DRE of Toluene ^d	-	99.99	%
	-	99.99	%
	-	99.99	%
DRE of Chlorobenzene ^d	-	99.99	%
	-	99.99	%
	-	99.99	%
DRE of Napthalene ^d	-	99.99	%
	-	99.99	%
	-	99.99	%
Hydrocarbons	-	10	ppmv (7% O ₂)
HCl + Cl ₂	<0.061	32	ppmv (7% O ₂)
Particulate Matter	<0.0020	0.013	gr/dscf (7% O ₂)

Maximum Temperature Condition			
Compound	CPT	MACT	Units
	North Stack	Limit	
Dioxins/Furans	-	0.4	ng TEQ/dscm (7% O ₂)
Mercury	<2.02	130	µg/dscm (7% O ₂)
Semi-Volatile Metals ^a	<1.10	230	µg/dscm (7% O ₂)
Low Volatile Metals ^b	<1.28	92	µg/dscm (7% O ₂)
Carbon Monoxide ^c	3	100	ppmv (7% O ₂)
DRE of Toluene ^d	-	99.99	%
	-	99.99	%
	-	99.99	%
DRE of Chlorobenzene ^d	-	99.99	%
	-	99.99	%
	-	99.99	%
DRE of Napthalene ^d	-	99.99	%
	-	99.99	%
	-	99.99	%
Hydrocarbons	-	10	ppmv (7% O ₂)
HCl + Cl ₂	<0.050	32	ppmv (7% O ₂)
Particulate Matter	0.0018	0.013	gr/dscf (7% O ₂)

Notes:

- ^a Semi-volatile Metals is the sum of cadmium and lead.
- ^b Low Volatile Metals is the sum of arsenic, beryllium, and chromium.
- ^c CO is measured at the South Stack.
- ^d DRE data represent the combined mass emissions from both stacks.

Table 1-2
Minimum Temperature Condition CPT Emissions Results

Minimum Temperature Condition			
	CPT	MACT	
Compound	South Stack	Limit	Units
Dioxins/Furans	0.004	0.4	ng TEQ/dscm (7% O ₂)
Mercury	-	130	µg/dscm (7% O ₂)
Semi-Volatile Metals ^a	-	230	µg/dscm (7% O ₂)
Low Volatile Metals ^b	-	92	µg/dscm (7% O ₂)
Carbon Monoxide ^c	3	100	ppmv (7% O ₂)
DRE of Toluene ^d	99.9999	99.99	%
	99.9997	99.99	%
	99.9999	99.99	%
DRE of Chlorobenzene ^d	>99.9995	99.99	%
	>99.9981	99.99	%
	>99.9994	99.99	%
DRE of Napthalene ^d	99.9999	99.99	%
	99.9998	99.99	%
	99.9998	99.99	%
Hydrocarbons	1.50	10	ppmv (7% O ₂)
HCl + Cl ₂	<1.280	32	ppmv (7% O ₂)
Particulate Matter	0.004	0.013	gr/dscf (7% O ₂)

Minimum Temperature Condition			
	CPT	MACT	
Compound	North Stack	Limit	Units
Dioxins/Furans	0.004	0.4	ng TEQ/dscm (7% O ₂)
Mercury	-	130	µg/dscm (7% O ₂)
Semi-Volatile Metals ^a	-	230	µg/dscm (7% O ₂)
Low Volatile Metals ^b	-	92	µg/dscm (7% O ₂)
Carbon Monoxide ^c	3	100	ppmv (7% O ₂)
DRE of Toluene ^d	99.9999	99.99	%
	99.9997	99.99	%
	99.9999	99.99	%
DRE of Chlorobenzene ^d	>99.9995	99.99	%
	>99.9981	99.99	%
	>99.9994	99.99	%
DRE of Napthalene ^d	99.9999	99.99	%
	99.9998	99.99	%
	99.9998	99.99	%
Hydrocarbons	0.22	10	ppmv (7% O ₂)
HCl + Cl ₂	<1.112	32	ppmv (7% O ₂)
Particulate Matter	0.002	0.013	gr/dscf (7% O ₂)

Notes:

- ^a Semi-volatile Metals is the sum of cadmium and lead.
- ^b Low Volatile Metals is the sum of arsenic, beryllium, and chromium.
- ^c CO is measured at the South Stack.
- ^d DRE data represent the combined mass emissions from both stacks.

**Table 1-1
Maintenance Mode CPT Emissions Results**

Maintenance Mode Condition			
	CPT	MACT	
Compound	Result	Limit	Units
Dioxins/Furans	-	0.4	ng TEQ/dscm (7% O ₂)
Mercury	<1.75	130	μg/dscm (7% O ₂)
Semi-Volatile Metals ^a	<4.64	230	μg/dscm (7% O ₂)
Low Volatile Metals ^b	<7.98	92	μg/dscm (7% O ₂)
Carbon Monoxide ^c	1	100	ppmv (7% O ₂)
DRE of Toluene ^d	-	99.99	%
	-	99.99	%
	-	99.99	%
DRE of Chlorobenzene ^d	-	99.99	%
	-	99.99	%
	-	99.99	%
DRE of Napthalene ^d	-	99.99	%
	-	99.99	%
	-	99.99	%
Hydrocarbons	0.74	10	ppmv (7% O ₂)
HCl + Cl ₂	<1.053	32	ppmv (7% O ₂)
Particulate Matter	0.006	0.013	gr/dscf (7% O ₂)

Notes:

- ^a Semi-volatile Metals is the sum of cadmium and lead.
- ^b Low Volatile Metals is the sum of arsenic, beryllium, and chromium.
- ^c CO is measured at the South Stack.
- ^d DRE data represent the combined mass emissions from both stacks.

**Table 1-2
Regulatory Requirements for the Notification of Compliance**

40 CFR Subpart EEE Citation	Description	Report Section
§63.7(g)(1)	Submit results of a performance test that include: analysis of samples, determination of emissions, and raw data.	<u>CPT Report</u> ^a : Sections 4.0 and 5.0 Appendices I, II, III, and IV
§63.9(h)(2)(i)	NOC must be signed by the responsible official. The NOC shall list §63.9 (h)(2)(i)(A) - §63.9 (h)(2)(i)(G)	<u>NOC</u> : Page ii
§63.9(h)(2)(i)(A)	Methods used to determine compliance	<u>CPT Report</u> : Tables 4-1, 4-2, and 4-3
§63.9(h)(2)(i)(B)	Performance test results, opacity or visible emissions observations, CMS Performance Evaluations, and/or monitoring procedures or methods used	<u>NOC</u> : Tables 1-1, 1-2, and 1-3 <u>CPT Report</u> : Section 5.0 Appendices I, II, and III CMS calibration records ^a CEMS RATA ^a
§63.9(h)(2)(i)(C)	Methods for determining continuing compliance, & description of monitoring & reporting requirements & test methods	<u>NOC</u> : Section 2.0 Tables 2-1 and 2-2
§63.9(h)(2)(i)(D)	Type and quantity of Hazardous Air Pollutants (HAPs) emitted by the source reported in appropriate units and averaging times	<u>NOC</u> : Tables 1-1, 1-2, and 1-3
§63.9(h)(2)(i)(E)	Analysis demonstrating whether the affected source is a major source (using emissions data generated for this notification)	Momentive's facility is permitted as a major source of HAP
§63.9(h)(2)(i)(F)	Description of Air Pollution Control Equipment (APCE) (or method) for each emissions point, including each control device (or method) for each HAP and the control efficiency (%) for each control device (or method)	<u>CPT Report</u> : Section 2.0 Table 5-12
§63.9(h)(2)(i)(G)	Statement by owner or operator of whether source has complied with the relevant standard or other requirements	<u>NOC</u> : Page ii

Notes:

^a Submitted under separate cover.

**Table 1-2
Regulatory Requirements for the Notification of Compliance (continued)**

40 CFR Subpart EEE Citation	Description	Report Section
§63.10(d)(2)	Performance test results	<u>NOC:</u> Tables 1-1, 1-2, and 1-3
§63.10(e)(2)(i)	Submit CMS Performance Evaluation Report simultaneously with Performance Test Results	CMS calibration records ^a CEMS RATA ^a
§63.1206(b)(11)	Calculation of Hazardous Waste Residence Time	<u>CPT Report:</u> Table 2-1
§63.1206(c)(1)(ii)	Operating Requirements of §63.1206(c) and §63.1209	<u>NOC</u> Tables 2-1 and 2-2 Section 3.0
§63.1206(c)(5)(ii)	Specify method to control combustion system leaks, and if applicable, specify monitoring and recording frequency of the pressure monitor, and its Automatic Waste Feed Cut Off (AWFCO) integration.	<u>NOC:</u> Table 2-1 and 2-2
§63.1207(j)(1)(i)	Within 90 days of completion of the CPT, or by the compliance date (whichever is later), the NOC must be postmarked documenting compliance with the emission standards and CMS requirements, and identifying OPLs under §63.1209.	<u>NOC:</u> Page ii
§63.1207(m)	Mercury Maximum Theoretical Emission Concentration (MTEC)	N/A
§63.1209(q)(1)(ii)	Specify the otherwise applicable requirements as a mode of operation	<u>NOC:</u> Tables 2-1 and 2-2

2.0 PROPOSED OPERATING PARAMETER LIMITS

The purpose of this section is to summarize the use of OPLs that apply to the FBI #2. Operating the incinerator within the proposed OPLs presented in this NOC will assure ongoing compliance with the HWC MACT standard. This is supported by the emission performance results, the worst-case operating conditions under which this CPT was conducted, and the site-specific considerations for setting OPLs, as presented in the CPT Plan and CPT Plan Addendum.

There are several methods by which the OPLs in this NOC are established. The first type of OPL is established solely on the results of the September 2011 Maximum Temperature Condition CPT. For this CPT, all of those values will replace the previously established values and are based on the particulate matter/hydrogen chloride and metals sampling train timeframes.

The second category is OPLs that were established based on the results of both the Minimum and Maximum Temperature Conditions under the Normal Mode of operation. For those OPLs, the value is typically set as either the average of the Minimum and Maximum Temperature Condition test runs or on the more restrictive value from either test condition.

The third type of OPL is one that is established solely based on the Minimum Temperature Condition.

The fourth type of OPL is one that is established solely based on the Maintenance Mode Test Condition, performed in December 2010. These OPLs only apply to the Maintenance Mode operating condition.

The last type of OPL is not set based on test conditions, but instead is set by the HWC MACT standard, such as the limit on CO emissions, previous permit conditions, or on manufacturer's specifications, such as the minimum pressure drop across a scrubber.

Table 2-1 presents a comprehensive, overall summary of the proposed HWC MACT OPL values for the Normal Mode of Operation. Table 2-2 presents the proposed HWC MACT OPL values for the Maintenance Mode of Operation.

Based on the successful completion of the CPT, the completeness of data over the testing period, and the quality assurance procedures utilized for sampling and analysis, Momentive proposes that the OPLs specified in Tables 2-1 and 2-2 are adequate to ensure on-going compliance with the HWC MACT standard. All of the OPLs will be interlocked with the AWFCO system.

AWFCO trip limits will be set at the OPL or at a value more conservative than the OPL in the attached tables. For ongoing compliance, the constituent (ash, chlorine, mercury, LVM, and SVM) concentrations in each waste feedstream will be determined by analysis of waste samples per the HWC MACT Feedstream Analysis Plan (FAP). The constituent feedrates are then determined by multiplying each waste stream feedrate by its respective constituent concentrations.

**Table 2-1
Operating Parameter Limits for Normal Mode**

Citation	Permit Condition	Monitoring Requirement	Monitoring Method	Operating Parameter Limit	Monitoring Units	Monitoring Frequency	Monitoring Averaging Period	Method to set limit
63.1209(a)	407	Continuously monitor CO using CEMS	CO CEMS	100	ppmv @ 7% O ₂	Continuous	Hourly-Rolling	Per Regulation
63.1209(c)	325	Feedstream analysis per Feedstream Analysis Plan	Per Feedstream Analysis Plan	-	-	-	-	
63.1209(j)(1) 63.1209(k)(2)	329	Minimum box temperature	Monitor box temperature	980	Degrees C	Continuous	Hourly-Rolling	Average of Minimum Temperature Condition Run Averages
		Maximum box temperature	Monitor box temperature	1215	Degrees C	Continuous	Hourly-Rolling	Average of Maximum Temperature Condition Run Averages
63.1209(j)(2) 63.1209(k)(3) 63.1209(m)(2) 63.1209(n)(5) 63.1209(o)(2) 63.1209(o)(3)(v)	1-37	Maximum flue gas flowrate - #1 stack	Monitor stack gas flowrate	6422	acfm	Continuous	Hourly-Rolling	Lesser of the maximum hourly average for all Normal Mode runs.
63.1209(j)(2) 63.1209(k)(3) 63.1209(m)(2) 63.1209(n)(5) 63.1209(o)(2) 63.1209(o)(3)(v)	1-33	Maximum flue gas flowrate - #1 stack	Monitor stack gas flowrate during soot blow	9246	acfm	Continuous	10-minute Rolling During Soot Blow	Previous Limit
63.1209(j)(2) 63.1209(k)(3) 63.1209(m)(2) 63.1209(n)(5) 63.1209(o)(2) 63.1209(o)(3)(v)	1-38	Maximum flue gas flowrate - #2 stack	Monitor stack gas flowrate	5087	acfm	Continuous	Hourly-Rolling	Lesser of the maximum hourly average for all Normal Mode runs.
63.1209(j)(2) 63.1209(k)(3) 63.1209(m)(2) 63.1209(n)(5) 63.1209(o)(2) 63.1209(o)(3)(v)	1-36	Maximum flue gas flowrate - #2 stack	Monitor stack gas flowrate during soot blow	9429	acfm	Continuous	10-minute Rolling During Soot Blow	Previous Limit
63.1209(j)(3) 63.1209(k)(4)	341	Maximum hazardous waste feedrate	Monitor APS feedrate	46	lb/min	Continuous	Hourly-Rolling	Average of the maximum hourly rolling average values for the Minimum Temperature Condition runs of the combined water and APS flows
63.1209(j)(3) 63.1209(k)(4)	338	Maximum hazardous waste feedrate	Monitor total Group II feedrate	35	lb/min	Continuous	Hourly-Rolling	Average of the maximum hourly rolling average values for the Maximum Temperature Condition runs

**Table 2-1
Operating Parameter Limits for Normal Mode (continued)**

Citation	Permit Condition	Monitoring Requirement	Monitoring Method	Operating Parameter Limit	Monitoring Units	Monitoring Frequency	Monitoring Averaging Period	Method to set limit
63.1209(j)(3) 63.1209(k)(4)	340	Maximum hazardous waste feedrate	Monitor total Group I and II feedrate	51	lb/min	Continuous	Hourly-Rolling	Average of the maximum hourly rolling average values for the Minimum Temperature Condition runs
63.1209(j)(4)	not in permit	Minimum steam atomization pressure	Monitor steam atomization pressure	50	psig	Continuous	Hourly-Rolling	Average of Minimum Temperature Condition Run Averages
63.1209(j)(4)	346	Minimum air atomization pressure	Monitor air atomization pressure	59	psig	Continuous	Hourly-Rolling	Average of Minimum Temperature Condition Run Averages
63.1209(l)(1)	348	Maximum mercury feedrate	Monitor mercury feedrate based on sampling analysis and hazardous waste feedrate	0.0076	lb/hr	Continuous	12-Hour-Rolling*	Extrapolation of 130% of the average of the Maximum Temperature Condition run averages.
63.1209(l)(2)	not in permit	Monitor wet scrubbers	Monitoring wet scrubbers per 63.1209(o)	-	-	-	-	
63.1209(m)(1)	362	Monitor IWS system	Monitor IWS makeup water flowrate 1-1	35	gpm	Continuous	Hourly-Rolling	Average of the run averages for Minimum and Maximum Temperature Condition runs
63.1209(m)(1)		Monitor IWS system	Monitor IWS makeup water flowrate 1-2	40	gpm	Continuous	Hourly-Rolling	Average of the run averages for Minimum and Maximum Temperature Condition runs
63.1209(m)(1)	350	Monitor IWS system	Monitor IWS makeup water flowrate 2-1	35	gpm	Continuous	Hourly-Rolling	Average of the run averages for Minimum and Maximum Temperature Condition runs
63.1209(m)(1)		Monitor IWS system	Monitor IWS makeup water flowrate 2-2	37	gpm	Continuous	Hourly-Rolling	Average of the run averages for Minimum and Maximum Temperature Condition runs
63.1209(m)(1)	354	Monitor IWS system	Monitor IWS crossflow scrubber flowrate - IWS Unit 1-1	221	gpm	Continuous	Hourly-Rolling	Average of the run averages for Minimum and Maximum Temperature Condition runs
63.1209(m)(1)	355	Monitor IWS system	Monitor IWS crossflow scrubber flowrate - IWS Unit 1-2	309	gpm	Continuous	Hourly-Rolling	Average of the run averages for Minimum and Maximum Temperature Condition runs
63.1209(m)(1)	352	Monitor IWS system	Monitor IWS crossflow scrubber flowrate - IWS Unit 2-1	218	gpm	Continuous	Hourly-Rolling	Average of the run averages for Minimum and Maximum Temperature Condition runs
63.1209(m)(1)	351	Monitor IWS system	Monitor IWS crossflow scrubber flowrate - IWS Unit 2-2	321	gpm	Continuous	Hourly-Rolling	Average of the run averages for Minimum and Maximum Temperature Condition runs

Notes:

^a Although the MACT constituent feed rate limits are 12-hour rolling averages, Momentive currently complies using a more conservative 1-hour average.

**Table 2-1
Operating Parameter Limits for Normal Mode (continued)**

Citation	Permit Condition	Monitoring Requirement	Monitoring Method	Operating Parameter Limit	Monitoring Units	Monitoring Frequency	Monitoring Averaging Period	Method to set limit
63.1209(m)(1)	364	Monitor IWS system	Monitor IWS 1-2 Power	3.6	kW	Continuous	Hourly-Rolling	Average of the run averages for the Maximum Temperature Condition runs
63.1209(m)(1)		Monitor IWS system	Monitor 1 Side Total Power	5.3	kW	Continuous	Hourly-Rolling	Average of the run averages for the Maximum Temperature Condition runs
63.1209(m)(1)		Monitor IWS system	Monitor IWS 2-2 Power	3.4	kW	Continuous	Hourly-Rolling	Average of the run averages for the Maximum Temperature Condition runs
63.1209(m)(1)		Monitor IWS system	Monitor 2 Side Total Power	5.6	kW	Continuous	Hourly-Rolling	Average of the run averages for the Maximum Temperature Condition runs
63.1209(m)(3)	371	Maximum Ash Feedrate	Monitor silica feedrate	935	lb/hr	Continuous	12-Hour-Rolling*	Average of the run averages for the Maximum Temperature Condition runs
63.1209(n)(2)	372	Maximum SVM feedrate	Monitor SVM feedrate	0.34	lb/hr	Continuous	12-Hour-Rolling*	Extrapolation of 130% of the average of the Maximum Temperature Condition run averages.
63.1209(n)(2)	not in permit	Maximum LVM feedrate	Monitor LVM feedrate	0.36	lb/hr	Continuous	12-Hour-Rolling*	Extrapolation of 130% of the average of the Maximum Temperature Condition run averages.
63.1209(n)(3)	not in permit		Monitor operating parameters in 63.1209(m)(1)	-	-	-	-	
63.1209(n)(4) 63.1209(o)(1)	376	Maximum HCl feedrate	Monitor HCl feedrate	896	lb/hr	Continuous	12-Hour-Rolling*	Average of the run averages for Minimum Temperature Condition runs
63.1209(o)(3)(ii)	379	Minimum pressure drop across CCS scrubber	Monitor pressure drop across CCS scrubber #1	0.15	in H ₂ O	Continuous	Hourly-Rolling	Manufacturer Recommendation
63.1209(o)(3)(ii)	379	Minimum pressure drop across CCS scrubber	Monitor pressure drop across CCS scrubber #2	0.15	in H ₂ O	Continuous	Hourly-Rolling	Manufacturer Recommendation
63.1209(o)(3)(iii)	not in permit	Monitor scrubber inlet pressure	Monitor scrubber inlet pressure	-	-	Once per shift	-	
63.1209(o)(3)(v)	383	Minimum CCS water flowrate	Monitor CCS water flowrate - stack 1	1017	gpm	Continuous	Hourly-Rolling	Average of the run averages for Minimum and Maximum Temperature Condition runs
63.1209(o)(3)(v)	387	Minimum CCS water flowrate	Monitor CCS water flowrate - stack 2	1178	gpm	Continuous	Hourly-Rolling	Average of the run averages for Minimum and Maximum Temperature Condition runs
63.1209(o)(3)(v)	1-44	Minimum quench water flowrate	Monitor quench water flowrate	153	gpm	Continuous	Hourly-Rolling	Average of the run averages for Minimum and Maximum Temperature Condition runs

Notes:

^a Although the MACT constituent feed rate limits are 12-hour rolling averages, Momentive currently complies using a more conservative 1-hour average.

**Table 2-1
Operating Parameter Limits for Normal Mode (continued)**

Citation	Permit Condition	Monitoring Requirement	Monitoring Method	Operating Parameter Limit	Monitoring Units	Monitoring Frequency	Monitoring Averaging Period	Method to set limit
63.1209 (o)(3)(iv)	381	Minimum IWS scrubber pH	Monitor IWS scrubber pH 1-1	9.1	pH units	Continuous	Hourly-Rolling	Average of the run averages for Minimum and Maximum Temperature Condition runs
63.1209 (o)(3)(iv)		Minimum IWS scrubber pH	Monitor IWS scrubber pH 1-2	9.0	pH units	Continuous	Hourly-Rolling	Average of the run averages for Minimum and Maximum Temperature Condition runs
63.1209 (o)(3)(iv)		Minimum IWS scrubber pH	Monitor IWS scrubber pH 2-1	9.0	pH units	Continuous	Hourly-Rolling	Average of the run averages for Minimum and Maximum Temperature Condition runs
63.1209 (o)(3)(iv)		Minimum IWS scrubber pH	Monitor IWS scrubber pH 2-2	9.0	pH units	Continuous	Hourly-Rolling	Average of the run averages for Minimum and Maximum Temperature Condition runs
63.1209 (p)	388	Maximum combustion chamber pressure	Monitor combustion chamber pressure	-0.08	in H ₂ O	Continuous	Instantaneous	Previous Limit

**Table 2-1
Operating Parameter Limits for Normal Mode (continued)**

PROCESS VENT-RELATED LIMITS

Citation	Permit Condition	Monitoring Requirement	Monitoring Method	Operating Parameter Limit	Monitoring Units	Monitoring Frequency	Monitoring Averaging Period	Method to set limit
63.114(a)(1)(i) Subpart G	1-21	Lower Temperature Limit for Incinerator	Monitor Kiln Temperature	970	Degrees C		24-Hour Block	Previous Limit
40 CFR 63.114(a)(4)(i) Subpart G	160	Minimum IWS scrubber pH	Monitor IWS pH	8.4	pH Units		24-Hour Block	Previous Limit
40 CFR 63.114(a)(4)(ii) Subpart G	169	Minimum CCS water flowrate	Monitor CCS water flowrate - stack 1	1017	gpm		24-Hour Block	Average of Minimum Temperature Condition and Maximum Temperature Condition run averages
40 CFR 63.114(a)(4)(ii) Subpart G	169	Minimum CCS water flowrate	Monitor CCS water flowrate - stack 2	1178	gpm		24-Hour Block	Average of Minimum Temperature Condition and Maximum Temperature Condition run averages
63.114(a)(4)(ii) Subpart G	162	Stack Gas Flow Rate (EP 97001)	Monitor stack gas flow rate	6630	acfm		24-Hour Block	Average of Minimum Temperature Condition run averages
63.114(a)(4)(ii) Subpart G	164	Stack Gas Flow Rate (EP 97002)	Monitor stack gas flow rate	6832	acfm		24-Hour Block	Average of Minimum Temperature Condition run averages

**Table 2-2
Operating Parameter Limits for Maintenance Mode**

Citation	Permit Condition	Monitoring Requirement	Monitoring Method	Operating Parameter Limit	Monitoring Units	Monitoring Frequency	Monitoring Averaging Period	Method to set limit
63.1209(a)	407	Continuously monitor CO using CEMS	CO CEMS	100	ppmv @ 7% O ₂	Continuous	Hourly-Rolling	Per Regulation
63.1209(c)	325	Feedstream analysis per Feedstream Analysis Plan	Per Feedstream Analysis Plan	-	-	-	-	
63.1209(j)(1) 63.1209(k)(2)	329	Minimum box temperature	Monitor box temperature	980	Degrees C	Continuous	Hourly-Rolling	Average of Minimum Temperature Condition Run Averages
	not in permit	Maximum box temperature	Monitor box temperature	1215	Degrees C	Continuous	Hourly-Rolling	Average of Maximum Temperature Condition Run Averages
63.1209(j)(2) 63.1209(k)(3) 63.1209(m)(2) 63.1209(n)(5) 63.1209(o)(2) 63.1209(o)(3)(v)	1-35	Maximum flue gas flowrate - #2 stack	Monitor stack gas flowrate	6770	acfm	Continuous	Hourly-Rolling	Average of the maximum hourly averages for the Maintenance Mode runs
63.1209(j)(2) 63.1209(k)(3) 63.1209(m)(2) 63.1209(n)(5) 63.1209(o)(2) 63.1209(o)(3)(v)	1-34	Maximum flue gas flowrate - #2 stack	Monitor stack gas flowrate during soot blow	7020	acfm	Continuous	10-minute Rolling During Soot Blow	Previous Limit
63.1209(j)(3) 63.1209(k)(4)	341	Maximum hazardous waste feedrate	Monitor APS feedrate	46	lb/min	Continuous	Hourly-Rolling	Average of the maximum hourly rolling average values for the Minimum Temperature Condition runs of the combined water and APS flows
63.1209(j)(3) 63.1209(k)(4)	338	Maximum hazardous waste feedrate	Monitor total Group II feedrate	35	lb/min	Continuous	Hourly-Rolling	Average of the maximum hourly rolling average values for the Maximum Temperature Condition runs
63.1209(j)(3) 63.1209(k)(4)	340	Maximum hazardous waste feedrate	Monitor total Group I and II feedrate	51	lb/min	Continuous	Hourly-Rolling	Average of the maximum hourly rolling average values for the Minimum Temperature Condition runs
63.1209(j)(4)	not in permit	Minimum steam atomization pressure	Monitor steam atomization pressure	50	psig	Continuous	Hourly-Rolling	Average of Minimum Temperature Condition Run Averages
63.1209(j)(4)	346	Minimum air atomization pressure	Monitor air atomization pressure	59	psig	Continuous	Hourly-Rolling	Average of Minimum Temperature Condition Run Averages
63.1209(l)(1)	not in permit	Maximum mercury feedrate	Monitor mercury feedrate based on sampling analysis and hazardous waste feedrate	0.0047	lb/hr	Continuous	12-Hour-Rolling ^a	Extrapolation of 130% of the average of the Maintenance Mode run averages.
63.1209(l)(2)	not in permit	Monitor wet scrubbers	Monitoring wet scrubbers per 63.1209(o)	-	-	-	-	

NOTES:

^a Although the MACT constituent feed rate limits are 12-hour rolling averages, Momentive currently complies using a more conservative 1-hour average.

**Table 2-2
Operating Parameter Limits for Maintenance Mode (continued)**

Citation	Permit Condition	Monitoring Requirement	Monitoring Method	Operating Parameter Limit	Monitoring Units	Monitoring Frequency	Monitoring Averaging Period	Method to set limit
63.1209(m)(1)	350	Monitor IWS system	Monitor IWS makeup water flowrate 2-1	35	gpm	Continuous	Hourly-Rolling	Average of the run averages for Minimum and Maximum Temperature Condition runs
63.1209(m)(1)		Monitor IWS system	Monitor IWS makeup water flowrate 2-2	37	gpm	Continuous	Hourly-Rolling	Average of the run averages for Minimum and Maximum Temperature Condition runs
63.1209(m)(1)	352	Monitor IWS system	Monitor IWS crossflow scrubber flowrate - IWS Unit 2-1	218	gpm	Continuous	Hourly-Rolling	Average of the run averages for Minimum and Maximum Temperature Condition runs
63.1209(m)(1)	351	Monitor IWS system	Monitor IWS crossflow scrubber flowrate - IWS Unit 2-2	321	gpm	Continuous	Hourly-Rolling	Average of the run averages for Minimum and Maximum Temperature Condition runs
63.1209(m)(1)		Monitor IWS system	Monitor IWS 2-2 Power	3.4	kW	Continuous	Hourly-Rolling	Average of the run averages for the Maintenance Mode runs
63.1209(m)(1)		Monitor IWS system	Monitor 2 Side Total Power	4.1	kW	Continuous	Hourly-Rolling	Average of the run averages for the Maintenance Mode runs
63.1209(m)(3)	368	Maximum Ash Feedrate	Monitor silica feedrate	561	lb/hr	Continuous	12-Hour-Rolling ^a	Average of the run averages for the Maintenance Mode runs
63.1209(n)(2)	not in permit	Maximum SVM feedrate	Monitor SVM feedrate	0.23	lb/hr	Continuous	12-Hour-Rolling ^a	Extrapolation of 130% of the average of the Maintenance Mode run averages for the sum of cadmium and lead.
63.1209(n)(2)	not in permit	Maximum LVM feedrate	Monitor LVM feedrate	0.19	lb/hr	Continuous	12-Hour-Rolling ^a	Extrapolation of 130% of the average of the Maintenance Mode run averages for the sum of arsenic, beryllium and chromium.
63.1209(n)(3)	not in permit		Monitor operating parameters in 63.1209(m)(1)	-	-	-	-	
63.1209(n)(4) 63.1209(o)(1)	374	Maximum HCl feedrate	Monitor HCl feedrate	416	lb/hr	Continuous	12-Hour-Rolling ^a	Average of the run averages for the Maintenance Mode runs
63.1209(o)(3)(ii)	379	Minimum pressure drop across CCS scrubber	Monitor pressure drop across CCS scrubber #2	0.15	in H ₂ O	Continuous	Hourly-Rolling	Manufacturer Recommendation
63.1209(o)(3)(iii)	not in permit	Monitor scrubber inlet pressure	Monitor scrubber inlet pressure	-	-	Once per shift	-	
63.1209(o)(3)(v)	387	Minimum CCS water flowrate	Monitor CCS water flowrate - stack 2	1178	gpm	Continuous	Hourly-Rolling	Average of the run averages for Minimum and Maximum Temperature Condition runs
63.1209(o)(3)(v)	1-44	Minimum quench water flowrate	Monitor quench water flowrate	153	gpm	Continuous	Hourly-Rolling	Average of the run averages for Minimum and Maximum Temperature Condition runs
63.1209 (o)(3)(iv)		Minimum IWS scrubber pH	Monitor IWS scrubber pH 2-1	9.0	pH units	Continuous	Hourly-Rolling	Average of the run averages for Minimum and Maximum Temperature Condition runs
63.1209 (o)(3)(iv)		Minimum IWS scrubber pH	Monitor IWS scrubber pH 2-2	9.0	pH units	Continuous	Hourly-Rolling	Average of the run averages for Minimum and Maximum Temperature Condition runs
63.1209 (p)	388	Maximum combustion chamber pressure	Monitor combustion chamber pressure	-0.08	in H ₂ O	Continuous	Instantaneous	Previous Limit

NOTES:

^a Although the MACT constituent feed rate limits are 12-hour rolling averages, Momentive currently complies using a more conservative 1-hour average.

**Table 2-2
Operating Parameter Limits for Maintenance Mode**

PROCESS VENT-RELATED LIMITS

Citation	Permit Condition	Monitoring Requirement	Monitoring Method	Operating Parameter Limit	Monitoring Units	Monitoring Frequency	Monitoring Averaging Period	Method to set limit
63.114(a)(1)(i) Subpart G	1-21	Lower Temperature Limit for Incinerator	Monitor Kiln Temperature	970	Degrees C		24-Hour Block	Previous Limit
40 CFR 63.114(a)(4)(i) Subpart G	160	Minimum IWS scrubber pH	Monitor IWS pH	8.4	pH Units		24-Hour Block	Previous Limit
40 CFR 63.114(a)(4)(ii) Subpart G	169	Minimum CCS water flowrate	Monitor CCS water flowrate - stack 2	1178	gpm		24-Hour Block	Average of Minimum Temperature Condition and Maximum Temperature Condition run averages
63.114(a)(4)(ii) Subpart G	164	Stack Gas Flow Rate (EP 97002)	Monitor stack gas flow rate	6832	acfm		24-Hour Block	Average of Minimum Temperature Condition run averages

3.0 OTHER OPERATING REQUIREMENTS

As noted in the previous sections, Momentive has established operating parameter limits as required by 40 CFR §63.1209. Other operating requirements applicable to the operation of the incinerator are found in 40 CFR §63.1206(c) and are summarized in this section.

3.1 General

Per §63.1206(c)(1), Momentive must operate under the NOC operating requirements except during startups, shutdowns, and malfunctions and during performance tests. Failure to comply with the operating requirements is failure to ensure compliance with the emission standards.

3.2 Startup, Shutdown, and Malfunction Plan (SSMP)

Per §63.1206(c)(2), Momentive complies with the requirements to:

- (1) Have a Startup, Shutdown, and Malfunction Plan in place,
- (2) Follow the AWFCO requirements during malfunctions,
- (3) When there are more than 10 excessive exceedances during malfunctions within a 60 day period, Momentive must conduct an investigation within 45 days, revise the SSMP as warranted, and report the results to the agency.

Momentive does not burn hazardous wastes during startup and shutdown.

3.3 Automatic Waste Feed Cutoff (AWFCO)

Per §63.1206(c)(3), Momentive has a functioning AWFCO system that meets the requirements to:

- (1) Cut off hazardous waste under certain conditions,
- (2) Duct gases to the air pollution control system during the AWFCO,
- (3) Not restart hazardous waste feeds until OPLs are met,
- (4) Cease hazardous waste feeds as quickly as possible if the AWFCO system fails,
- (5) Investigate, record findings, and take corrective measures to minimize future AWFCOs,
- (6) Report excessive exceedances, and
- (7) Conduct weekly testing of the AWFCO system.

3.4 Emergency Safety Vent (ESV) Openings

Per §63.1206(c)(4), Momentive operates under an ESV operating plan which details procedures to stop feeds, shut down the combustor and maintain temperature and negative pressure, if

possible, if the ESV opens. Momentive investigates ESV openings and takes appropriate corrective actions.

3.5 Combustion System Leaks

Per §63.1206(c)(5), Momentive complies with this requirement by complying with the OPL for maximum combustion chamber pressure shown in Table 2-1 and Table 2-2.

3.6 Operator Training and Certification

Per §63.1206(c)(6), Momentive has established training programs for all categories of personnel whose activities may reasonably expect to directly affect emissions of hazardous air pollutants.

3.7 Operation and Maintenance Plan

Per §63.1206(c)(7), Momentive complies with the requirements to prepare, record, and operate according to a plan that describes in detail procedures for operation, inspection, maintenance, and corrective measures for all components of the combustor that could affect emissions of hazardous air pollutants.