

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY AIR QUALITY DIVISION

SEMIANNUAL COMPLIANCE REPORT

**NESHAP for Iron and Steel Foundry Area Sources** 

40 CFR Part 63, Subpart ZZZZZ (40 CFR 63.10880 - 40 CFR 63.10906)

## Instructions

## 1. Who Must Complete This Form?

On January 2, 2008, the United States Environmental Protection Agency (USEPA) promulgated a National Emissions Standard for Hazardous Air Pollutants (NESHAP) for iron and steel foundries. Iron and steel foundries that meet the definition of an area source are required to submit Semiannual Compliance Reports to the USEPA and the Michigan Department of Environment, Great Lakes, and Energy (EGLE).

## 2. Definitions

An **iron and steel foundry** is a facility or a portion of a facility that melts scrap, ingot, and/or other forms of iron and/or steel, and pours the resulting molten metal into molds to produce final or near final shape products for sale. Research and development facilities, operations that only produce non-commercial castings, and operations associated with nonferrous metal production are not included in this definition.

An **area source** has the potential to emit less than 10 tons per year of a single hazardous air pollutant (HAP) and less than 25 tons per year of any combination of HAPs. If a facility emits more than these amounts, they are "*major sources*" and not subject to this Rule.

An **existing source** means that the foundry startup or reconstruction occurred *on or before* September 17, 2007.

A **new source** means the initial startup of the foundry or reconstruction occurred *after* September 17, 2007.

**Reconstruction** means that the fixed capital costs exceed 50 percent of the fixed capital cost that would be required to construct a comparable new foundry.

**Small and Large Foundries**. If your foundry is an existing source, determine your metal melt production for the calendar year 2008. If the production is equal to or less than 20,000 tons, then your foundry is considered *small*. If production is more than 20,000 tons, it is considered *large*. If your foundry is a new source and the annual melt capacity is equal to or less than 10,000 tons, then your foundry is considered *small*. If it is more than 10,000 tons, then your foundry is considered *large*.

<u>Annual metal melt production</u> means the total quantity of metal charged to all metal melting furnaces at the foundry in a given calendar year.

<u>Annual metal melt capacity</u> depends on whether or not the furnace(s) are permitted by EGLE, Air Quality Division. If not, then the capacity is determined by assuming the furnaces are operating at 8,760 hours per year. If they are permitted, then the capacity is determined by the maximum permitted production rate calculated on an annual basis. If the permit limits the operating hours of the furnaces, then the permitted hours are used in annualizing the maximum permitted metal production rate.

## 3. What Sections of the Form Must Be Completed and When?

All small and large foundries must complete the Semiannual Compliance Report, including the facility section, Parts A, B, and C, and the certification section of this form. The Excess Emissions and Continuous Monitoring System (CMS) performance report and summary report (pages 8-14) must be submitted by large new foundries or the large existing foundries that have installed a bag leak detection system to a baghouse as an alternative to the baghouse inspection requirements in 40 CFR 63.10897(a)(1). For your convenience, the relevant sections of the Code of Federal Regulations (CFR) are referenced through out the form. To obtain copies of the CFRs, go to www.michigan.gov/air, select "Clean Air Assistance" and then "Iron and Steel Foundry Area Sources" under "Federal Regulations." There is also a fact sheet entitled "Federal Hazardous Air Pollutant Standard: Iron and Steel Foundry Area Sources" at this web page which provides an overview of the regulation.

Existing small and large foundries must submit semiannual annual reports every six months (by July 30 for the calendar half January 1 through June 30, and by January 30 for the calendar half July 1 through December 31). New small and large foundries are required to submit their first report six months after startup. Semiannual reports are then submitted every six months after the initial submittal according to the same schedule for existing foundries.

## 4. Where Do I Send the Completed Form?

In accordance with the September 10, 2020 technology review, beginning on March 9, 2021, you must submit all subsequent compliance, notification and semiannual reports to the USEPA via the Compliance and Emissions Data Reporting Interface (CEDRI). You must also submit reports to the appropriate Michigan Department of Environment, Great Lakes, and Energy, Air Quality Division district office (see Attachment A). Send the form to the attention of the "AQD District Supervisor."

# ATTACHMENT A

### Air Quality Division District Office Contact Information

#### **Bay City District**

(Central East Michigan) 401 Ketchum Street, Suite B Bay City, MI 48708-5430 989-894-6200 Fax: 989-891-9237

Counties: Arenac, Bay, Clare, Gladwin, Huron, losco, Isabella, Midland, Ogemaw, Saginaw, Sanilac, and Tuscola

#### **Detroit District**

(Wayne County) Cadillac Place 3058 West Grand Boulevard, Suite 2-300 Detroit, MI 48202-6058 313-456-4700 Fax: 313-456-4692

County: Wayne

#### **Grand Rapids District**

(Central West Michigan) 350 Ottawa Avenue NW, Unit 10 Grand Rapids, MI 49503-2316 616-356-0500 Fax: 616-356-0201

Counties: Barry, Ionia, Kent, Mecosta, Montcalm, Muskegon, Newaygo, Oceana, and Ottawa

#### Kalamazoo District

(Southwest Michigan) 7953 Adobe Road Kalamazoo, MI 49009-5026 269-567-3500 Fax: 269-567-3555

Counties: Allegan, Berrien, Branch, Calhoun, Cass, Kalamazoo, St. Joseph, and Van Buren

#### Marquette District

(Entire Upper Peninsula) 1504 West Washington Street Marquette, MI 49855-3118 906-228-4853 Fax: 906-228-4940

Counties: All counties in the Upper Peninsula

#### Cadillac District

(Northwest Lower Peninsula) 120 West Chapin Street Cadillac, MI 49601-2158 231-775-3960 Fax: 231-775-4050

Counties: Benzie, Grand Traverse, Kalkaska, Lake, Leelanau, Manistee, Mason, Missaukee, Osceola, and Wexford

#### Gaylord District

(Northeast Lower Peninsula) 2100 West M-32 Gaylord, MI 49735-9282 989-731-4920 Fax: 989-731-6181

Counties: Alcona, Alpena, Antrim, Charlevoix, Cheboygan, Crawford, Emmet, Montmorency, Oscoda, Otsego, Presque Isle, and Roscommon

#### Jackson District

(South Central Michigan) State Office Building, 4th Floor 301 East Louis Glick Highway Jackson, MI 49201-1535 517-780-7690 Fax: 517-780-7855

Counties: Hillsdale, Jackson, Lenawee, Monroe, and Washtenaw

#### Lansing District

(Central Michigan) P.O. Box 30242 Lansing, MI 48909-7742 517-284-6651 Fax: 517-241-3571

Counties: Clinton, Eaton, Genesee, Gratiot, Ingham, Lapeer, Livingston, and Shiawassee

#### Warren District

(Southeast Michigan) 27700 Donald Court Warren, MI 48092-2793 586-753-3700 Fax: 586-753-3731

Counties: Macomb, Oakland, and St. Clair

## SEMIANNUAL COMPLIANCE REPORT NESHAP for Iron and Steel Foundry Area Sources

40 CFR Part 63, Subpart ZZZZZ (40 CFR 63.10880 – 40 CFR 63.10906)

Please review the instructions before completing this form. Please print or type all information.

## FACILITY INFORMATION

#### Please print or type all information.

Company Name	Company Telephone Area Code & Number		
Mailing Address	City State Zip Coo		

Owner/Operator Contact Name and Title	Owner Telephone Area Code & Number			
Owner Mailing Address (if different than company)	nny) City State Zip Code			
Owner/Operator E-Mail Address				

Facility Name (if different than company)	Facility Telephone Area Code & Number			
Facility Address (if different than company)	City	State	Zip Code	
State Registration Number (SRN) (if known)				

Please check whether the person listed above is owner or operator of the area source:

Identify the beginning and ending dates of the six-month reporting period (Either January 1 through June 30, or July 1 through December 31.)

Beginning: Ending:

Please check whether the area source is a new or existing source (see instructions for definitions):

	New Source	(Date of Startup:	)
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Existing Source

If an existing source, metal melt production for the previous calendar year: (tons)

Check one:	Small Foundry (≤20,000)	Large Foundry (>20,000)
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If a New Source, annual metal melt capacity at startup:	(tons)
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Check one:  $\Box$  Small Foundry (<10,000)  $\Box$  Large Foundry (>10,000)

#### PART A – MANAGEMENT PRACTICES FOR METALLIC SCRAP

1. During the reporting period, were there any periods during which the facility operated out of compliance with the metallic scrap management requirements? [40 CFR 63.10885(a)]

No
Yes

Yes. Summarize the deviation(s) and indicate the dates and times when the facility operated out of compliance with the metallic scrap management requirements and explain what corrective actions were taken.

#### PART B - MANAGEMENT PRACTICES FOR MERCURY SCRAP

1. During the reporting period, were there any periods during which the facility operated out of compliance with the mercury scrap management requirements? [40 CFR 63.10885(b)]

No

Yes. Summarize the deviation(s) and indicate the dates and times when the facility operated out of compliance with the mercury scrap management requirements and corrective actions taken.

2. Indicate below which mercury management option(s) the facility is using.

Site-specific plan for mercury switches

Approved mercury program

Specialty metal scrap

Scrap that does not contain motor vehicle scrap

3. During the reporting period did the facility conduct periodic inspections or take other actions of corroboration as required under [40 CFR 63.10885(b)(1)(ii)(c) or 40 CFR 63.10885(b)(2)(iv)(C)]?

] Yes. Indicate the dates and times when the facility conducted inspections or other actions of corroboration.

NA. Facility does not melt motor vehicle scrap.

- 4. If using a site-specific plan for mercury switches, please complete the following:
  - A) Provide the following information for the reporting period: number of switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed an estimate of the percent of mercury switches recovered, and identify which mercury management option applies to each scrap provider, contact, or shipment (Attach records as needed).
  - B) Were all removed mercury switches recycled at an RCRA permitted facility as required under [40 CFR 63.10885(b)(1)(iv)]?

🗌 No		
🗌 Yes	3	
🗌 NA	The facility does not operate under a site-specific plan for mercury switch	es.

#### PART C - MANAGEMENT PRACTICES FOR BINDER FORMULATIONS

1. During the reporting period, were there any periods during which the facility operated out of compliance with the management practices for binder formulations? According to Subpart ZZZZZ, the facility shall not use a binder formulation that contains methanol as a specific ingredient of the catalyst formulation for a furfuryl alcohol warm box mold or core making line. [40 CFR 63.10886]

	No
_	

] Yes. Summarize the deviation(s) and indicate the dates and times when the facility operated out of compliance with the management practices for binder formulations and corrective actions taken.

## CERTIFICATION

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this report and the supporting enclosures are true, accurate and complete.

#### Print or type the name and title of the "Responsible Official\*" for the plant:

Signature of "Responsible Official"*	Date
Printed Name of "Responsible Official"	Title

\*A "Responsible Official" can be:

- The president, vice-president, secretary, or treasurer of the company who owns the facility.
- The owner of the facility.
- The facility engineer or supervisor.
- A government official if the plant is owned by the federal, state city or county government.
- A ranking military officer if the plant is located on a military base.

In accordance with the September 10, 2020 technology review, beginning on March 9, 2021, you must submit all subsequent compliance, notification and semiannual reports to the USEPA via the Compliance and Emissions Data Reporting Interface (CEDRI). You must also submit reports to the appropriate Michigan Department of Environment, Great Lakes, and Energy, Air Quality Division district office (see Attachment A). Send the form to the attention of the "AQD District Supervisor."

## EXCESS EMISSIONS AND CONTINUOUS MONITORING SYSTEM (CMS) PERFORMANCE REPORT AND SUMMARY REPORT

## A. Excess Emissions

- 1. Have any excess emissions or exceedances of a monitored parameter occurred during this reporting period? Yes No *(If no, go to B.1.)* [40 CFR 63.10(e)(3)(v)]
- 2. If you answered yes, complete Table 1 *for each period* of excess emissions and/or parameter monitoring exceedances, as defined in the relevant standard(s), that occurred *during* startups, shutdowns, and/or malfunctions of your affected source, *or during periods other than* startups, shutdowns, and/or malfunctions of your affected source. *(Go to B.1.)* [40 CFR 63.10(c)(7)-(11)]

#### Table 1 – Excess Emissions and/or Parameter Monitoring Exceedances

Note: Use a separate line for each period of excess emissions and/or parameter monitoring exceedances of your affected source.

	of Event or oblem	Excess	Emissions and Exceedan	d/or Parameter ces Occurred:	Monitoring				
Excess Emissions	Parameter Monitoring Exceedance	During Startup	During Shutdown	During Malfunction	During Another Period	Start Date (mm/dd/yyyy)	Completion Date (mm/dd/yyyy)	Nature and Cause of any Malfunction (if known)	Corrective Action Taken or Preventive Measures Adopted

#### B. Continuous Monitoring System Performance

Has a CMS been inoperative (except for zero/low-level and high-level checks), out of control (as defined in [40 CFR 63.8(c)(7)(i)], repaired, or adjusted during this reporting period?
Yes No (*If no, go to B.3.*) 40 CFR 63.10(e)(3)(v)

Note: A CMS is out of control if (a) the zero (low-level), mid-level (if applicable), or high-level calibration drift (CD) exceeds two times the applicable CD specification in the applicable performance specification or in the relevant standard; or (b) the CMS fails a performance test audit (e.g., cylinder gas audit), relative accuracy audit, relative accuracy test audit, or linearity test audit; or (c) the COMMS CD exceeds two times the limit in the applicable performance specification in the relevant standard. (40 CFR 63.8(c)(7(i))

When the CMS is out of control, the owner or operator of the affected source shall take the necessary corrective action and shall repeat all necessary tests which indicate that the system is out-of-control. The owner or operator shall take corrective action and conduct retesting until the performance requirements are below the applicable limits. The beginning of the out-of-control period is the hour the owner or operator conducts a performance check (e.g., calibration drift) that indicates an exceedance of the performance requirements established under this part. The end of the out-of-control period is the hour following the completion of corrective action and successful demonstration that the system is within the allowable limits. During the period the CMS is out-of-control, recorded data shall not be used in data averages and calculations, or to meet any data availability requirement established under this part. (40 CFR 63.8(c)(7(ii))

- 2. If you answered yes, complete Table 2 *for each period* a CMS was out of control, repaired, or adjusted: (40 CFR 63.10(c)(5)-(6), (10)-(12), 40 CFR 63.8(c)(8))
- 3. Indicate the total process operating time during the reporting period. (40 CFR 63.10(c)(13))

Total process operating time (days)

#### Table 2 - Continuous Monitoring System Performance Reporting.

Note: Use a separate line for each period a CMS was out of control, repaired, or adjusted.

CMS Type	Manufacturer	Process ID Number	Start Date (mm/dd/yyyy)	Completion Date (mm/dd/yyyy)	Nature and Cause of Any Malfunction (if known)	Corrective Action Taken or Preventive Measures Adopted	Nature of the Repairs or Adjustments Made to the CMS that was Inoperative or Out of Control

# SUMMARY REPORT: GASEOUS AND OPACITY EXCESS EMISSION AND CONTINUOUS MONITORING SYSTEM PERFORMANCE

Note: One summary report shall be submitted for the hazardous air pollutants monitored at each affected source (unless the relevant standard specifies that more than one summary report is required, e.g., one summary report for each hazardous air pollutant monitored). (40 CFR 63.10(e)(3)(vi))

## A. Report Date and Submittal Reporting Period

Indicate the reporting period covered by this submittal and the date of this summary report. [40 CFR 63.10(e)(3)(vi)(C), and (M)]

Reporting period beginning	Reporting period ending date	Summary report date
date (mm/dd/yyyy)	(mm/dd/yyyy)	(mm/dd/yyyy)

#### **B.** Process Description and Monitoring Equipment Information

Complete the following process description and monitoring equipment information table for each affected source process unit: (40 CFR 63.10(e)(3)(vi)(B), (D), (E), (F), (G), and (H))

Total operating time of affected source during the reporting period (days)

Process unit name

Process unit description

Emission and/or operating parameter limitations specified in the relevant standard(s)

#### Monitoring Equipment Information

Туре	Latest Certification or Audit Date (mm/dd/yyyy)	Manufacturer	Model	HAPs Monitored	



#### C. Emission Data Summary

Complete the following emission data summary table *for each affected source*: [40 CFR 63.10(e)(3)(vi)(I)]

Total duration of excess emissions/parameter exceedances (minutes for opacity, hours for gases)

Opacity (minutes):

Gases (hours):

Total operating time of affected source during the reporting period (days)

Percent of total source operating time during which excess emissions/parameter exceedances occurred (percent)

Summary of causes of excess emissions/parameter exceedances (percent of total duration by cause)

Startup/shutdown	%
Control equipment problems	%
Process problems	%
Other known causes	%
Other unknown causes	%
TOTAL	100%

#### D. CMS Performance Summary

Complete the following CMS performance summary table *for each affected source*: (40 CFR 63.10(e)(3)(vi)(J))

Total duration of CMS downtime (minutes for opacity, hours for gases)

Opacity (minutes):	Gases (hours):
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Total operating time of affected source during the reporting period (days)

Percent of total source operating time during which CMS were down (percent)

#### Summary of causes of CMS downtime (percent of downtime by cause)

Monitoring equipment malfunctions	%
Nonmonitoring equipment malfunctions	%
Quality assurance/quality control calibrations	%

# EGLE

Other known causes	%
Other unknown causes	%
TOTAL	100%

## E. CMS, Process, or Control Changes

- 1. Have you made any changes in CMS, processes, or controls since the last reporting period? Yes No *(If no, go to CERTIFICATION)* (40 CFR 63.10(e)(3)(vi)(K))
- 2. If you answered yes, please describe the changes below, and then go to CERTIFICATION:

Changes in CMS, processes, or controls since the last reporting period

## CERTIFICATION

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this report and the supporting enclosures are true, accurate and complete.

#### Print or type the name and title of the "Responsible Official\*" for the plant:

Signature of "Responsible Official"*	Date	
Printed Name of "Responsible Official"	Title	

\*A "Responsible Official" can be:

- The president, vice-president, secretary, or treasurer of the company who owns the facility.
- The owner of the facility.
- The facility engineer or supervisor.
- A government official if the plant is owned by the federal, state city or county government.
- A ranking military officer if the plant is located on a military base.

In accordance with the September 10, 2020 technology review, beginning on March 9, 2021, you must submit all subsequent compliance, notification and semiannual reports to the USEPA via the Compliance and Emissions Data Reporting Interface (CEDRI). You must also submit reports to the appropriate Michigan Department of Environment, Great Lakes, and Energy, Air Quality Division district office (see Attachment A). Send the form to the attention of the "AQD District Supervisor."

For information or assistance on this publication, please contact the Air Quality Division, through EGLE Environmental Assistance Center at 800-662-9278. This publication is available in alternative formats upon request.

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This form and its contents are subject to the Freedom of Information Act and may be released to the public.