

From: [Meacham, Bob](#)
To: [EGLE-ROP](#)
Subject: B1909 - ROP Renewal Application Part 1
Date: Thursday, June 22, 2023 12:01:04 PM
Attachments: [ROP Renewal Application CWC B1909 - 2023.pdf](#)

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Best regards,

Robert Meacham

Sr. Eng Envir & Facilities CWC

Kautex Textron, CWC Division

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From: [Meacham, Bob](#)
To: [EGLE-ROP](#)
Subject: B1909 - ROP Renewal Application Part Mark-up, Parts 2 and Part 3
Date: Thursday, June 22, 2023 12:16:36 PM
Attachments: [B1909_ROP-MARK-UP.docx](#)
[ROP Renewal Application CWC B1909 - 2023 Part 2.pdf](#)
[ROP Renewal Application CWC B1909 - 2023 part 3.pdf](#)

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RENEWABLE OPERATING PERMIT RENEWAL APPLICATION FORM

This information is required by Article II, Chapter 1, Part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Refer to instructions for additional information to complete the Renewable Operating Permit Renewal Application Form.

GENERAL INSTRUCTIONS

This application form should be submitted as part of an administratively complete application package for renewal of a Renewable Operating Permit (ROP). This application form consists of nine parts. Parts A – H must be completed for all applications and must also be completed for each section of a sectioned ROP. Answer all questions in all parts of the form unless directed otherwise. Detailed instructions for this application form can be found at <http://michigan.gov/air> (select the Permits Tab, "Renewable Operating Permits (ROP)/Title V", then "ROP Forms & Templates").

PART A: GENERAL INFORMATION

Enter information about the source, owner, contact person and the responsible official.

SOURCE INFORMATION

SRN B1909	SIC Code 3321	NAICS Code 331511	Existing ROP Number MI-ROP-B1909-2019	Section Number (if applicable)
Source Name CWC TEXTRON				
Street Address 1085 WEST SHERMAN BOULEVARD				
City MUSKEGON	State MI	ZIP Code 49441	County MUSKEGON	
Section/Town/Range (if address not available)				
Source Description GRAY AND DUCTILE IRON FOUNDRY PRODUCING OEM AND AFTERMARKET PARTS FOR INTERNAL COMBUSTION ENGINES				
<input type="checkbox"/> Check here if any of the above information is different than what appears in the existing ROP. Identify any changes on the marked-up copy of your existing ROP.				

OWNER INFORMATION

Owner Name CWC TEXTRON	Section Number (if applicable)			
Mailing address (<input checked="" type="checkbox"/> check if same as source address)				
City	State	ZIP Code	County	Country

Check here if any information in this ROP renewal application is confidential. Confidential information should be identified on an Additional Information (AI-001) Form.

SRN: B1909

Section Number (if applicable):

PART A: GENERAL INFORMATION (continued)

At least one contact and responsible official must be identified. Additional contacts and responsible officials may be included if necessary.

CONTACT INFORMATION

Contact 1 Name ROBERT MEACHAM		Title SR. ENVIRONMENTAL & FACILITY ENGINEER		
Company Name & Mailing address (<input checked="" type="checkbox"/> check if same as source address)				
City	State	ZIP Code	County	Country
Phone number 231-739-2794		E-mail address BOB.MEACHAM@KAUTEX.TEXTRON.COM		

Contact 2 Name (optional)		Title		
Company Name & Mailing address (<input type="checkbox"/> check if same as source address)				
City	State	ZIP Code	County	Country
Phone number		E-mail address		

RESPONSIBLE OFFICIAL INFORMATION

Responsible Official 1 Name JAMES WRIGHT		Title V.P. CWC		
Company Name & Mailing address (<input checked="" type="checkbox"/> check if same as source address)				
City	State	ZIP Code	County	Country
Phone number 231-739-2761		E-mail address JAMES.WRIGHT@KAUTEX.TEXTRON.COM		

Responsible Official 2 Name (optional) ROBERT MEACHAM		Title SR. ENVIRONMENTAL & FACILITY ENGINEER		
Company Name & Mailing address (<input checked="" type="checkbox"/> check if same as source address)				
City	State	ZIP Code	County	Country
Phone number 231-739-2794		E-mail address BOB.MEACHAM@KAUTEX.TEXTRON.COM		

Check here if an AI-001 Form is attached to provide more information for Part A. Enter AI-001 Form ID:

PART B: APPLICATION SUBMITTAL and CERTIFICATION by Responsible Official

Identify the items that are included as part of your administratively complete application in the checklist below. For your application to be complete, it must include information necessary to evaluate the source and to determine all applicable requirements. Answer the compliance statements as they pertain to all the applicable requirements to which the source is subject. The source's Responsible Official must sign and date this form.

Listing of ROP Application Contents. Check the box for the items included with your application.

<input checked="" type="checkbox"/> Completed ROP Renewal Application Form (and any AI-001 Forms) (required)	<input type="checkbox"/> Compliance Plan/Schedule of Compliance
<input checked="" type="checkbox"/> Mark-up copy of existing ROP using official version from the AQD website (required)	<input type="checkbox"/> Stack information
<input checked="" type="checkbox"/> Copies of all Permit(s) to Install (PTIs) that have not been incorporated into existing ROP (required)	<input type="checkbox"/> Acid Rain Permit Initial/Renewal Application
<input checked="" type="checkbox"/> Criteria Pollutant/Hazardous Air Pollutant (HAP) Potential to Emit Calculations	<input type="checkbox"/> Cross-State Air Pollution Rule (CSAPR) Information
<input type="checkbox"/> MAERS Forms (to report emissions not previously submitted)	<input type="checkbox"/> Confidential Information
<input type="checkbox"/> Copies of all Consent Order/Consent Judgments that have not been incorporated into existing ROP	<input checked="" type="checkbox"/> Paper copy of all documentation provided (required)
<input checked="" type="checkbox"/> Compliance Assurance Monitoring (CAM) Plan	<input type="checkbox"/> Electronic documents provided (optional)
<input checked="" type="checkbox"/> Other Plans (e.g., Malfunction Abatement, Fugitive Dust, Operation and Maintenance, etc.)	<input type="checkbox"/> Other, explain:

Compliance Statement

This source is in compliance with **all** of its applicable requirements, including those contained in the existing ROP, Permits to Install that have not yet been incorporated into that ROP, and other applicable requirements not currently contained in the existing ROP. Yes No

This source will continue to be in compliance with all of its applicable requirements, including those contained in the existing ROP, Permits to Install that have not yet been incorporated into that ROP, and other applicable requirements not currently contained in the existing ROP. Yes No

This source will meet in a timely manner applicable requirements that become effective during the permit term. Yes No

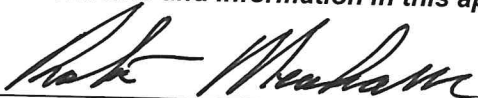
The method(s) used to determine compliance for each applicable requirement is/are the method(s) specified in the existing ROP, Permits to Install that have not yet been incorporated into that ROP, and all other applicable requirements not currently contained in the existing ROP.

If any of the above are checked No, identify the emission unit(s) or flexible group(s) affected and the specific condition number(s) or applicable requirement for which the source is or will be out of compliance at the time of issuance of the ROP renewal on an AI-001 Form. Provide a compliance plan and schedule of compliance on an AI-001 Form.

Name and Title of the Responsible Official (Print or Type)

ROBERT MEACHAM - SR. ENVIRONMENTAL & FACILITY ENGINEER

As a Responsible Official, I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this application are true, accurate, and complete.



Signature of Responsible Official

6/22/2023

Date

PART C: SOURCE REQUIREMENT INFORMATION

Answer the questions below for specific requirements or programs to which the source may be subject.

C1. Actual emissions and associated data from all emission units with applicable requirements (including those identified in the existing ROP, Permits to Install and other equipment that have not yet been incorporated into the ROP) are required to be reported in MAERS. Are there any emissions and associated data that have not been reported in MAERS for the most recent emissions reporting year? If Yes , identify the emission unit(s) that was/were not reported in MAERS on an AI-001 Form. Applicable MAERS form(s) for unreported emission units must be included with this application.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
C2. Is this source subject to the federal regulations on ozone-depleting substances? (40 CFR Part 82)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
C3. Is this source subject to the federal Chemical Accident Prevention Provisions? (Section 112(r) of the Clean Air Act Amendments, 40 CFR Part 68) If Yes , a Risk Management Plan (RMP) and periodic updates must be submitted to the USEPA. Has an updated RMP been submitted to the USEPA?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
C4. Has this stationary source added or modified equipment since the last ROP renewal that changes the potential to emit (PTE) for criteria pollutant (CO, NO _x , PM ₁₀ , PM _{2.5} , SO ₂ , VOC, lead) emissions? If Yes , include potential emission calculations (or the PTI and/or ROP revision application numbers, or other references for the PTE demonstration) for the added or modified equipment on an AI-001 Form. If No , criteria pollutant potential emission calculations do not need to be included.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
C5. Has this stationary source added or modified equipment since the last ROP renewal that changes the PTE for hazardous air pollutants (HAPs) regulated by Section 112 of the federal Clean Air Act? If Yes , include potential emission calculations (or the PTI and/or ROP revision application numbers or other references for the PTE demonstration) for the added or modified equipment on an AI-001 Form. Fugitive emissions must be included in HAP emission calculations. If No , HAP potential emission calculations do not need to be included.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
C6. Are any emission units subject to the Cross-State Air Pollution Rule (CSAPR)? If Yes , identify the specific emission unit(s) subject to CSAPR on an AI-001 Form.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
C7. Are any emission units subject to the federal Acid Rain Program? If Yes , identify the specific emission unit(s) subject to the federal Acid Rain Program on an AI-001 Form. Is an Acid Rain Permit Renewal Application included with this application?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
C8. Are any emission units identified in the existing ROP subject to compliance assurance monitoring (CAM)? If Yes , identify the specific emission unit(s) subject to CAM on an AI-001 Form. If a CAM plan has not been previously submitted to EGLE, one must be included with the ROP renewal application on an AI-001 Form. If the CAM Plan has been updated, include an updated copy. Is a CAM plan included with this application? If a CAM Plan is included, check the type of proposed monitoring included in the Plan: 1. Monitoring proposed by the source based on performance of the control device, or 2. Presumptively Acceptable Monitoring, if eligible	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> <input type="checkbox"/>
C9. Does the source have any plans such as a malfunction abatement plan, fugitive dust plan, operation/maintenance plan, or any other monitoring plan that is referenced in an existing ROP, Permit to Install requirement, or any other applicable requirement? If Yes , then a copy must be submitted as part of the ROP renewal application.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
C10. Are there any specific requirements that the source proposes to be identified in the ROP as non-applicable? If Yes , then a description of the requirement and justification must be submitted as part of the ROP renewal application on an AI-001 Form.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input checked="" type="checkbox"/> Check here if an AI-001 Form is attached to provide more information for Part C. Enter AI-001 Form ID: AI-001	

PART E: EXISTING ROP INFORMATION

Review all emission units and applicable requirements (including any source wide requirements) in the existing ROP and answer the questions below as they pertain to all emission units and all applicable requirements in the existing ROP.

E1. Does the source propose to make any additions, changes or deletions to terms, conditions and underlying applicable requirements as they appear in the existing ROP? Yes No
If Yes, identify changes and additions on Part F, Part G and/or Part H.

E2. For each emission unit(s) identified in the existing ROP, all stacks with applicable requirements are to be reported in MAERS. Are there any stacks with applicable requirements for emission unit(s) identified in the existing ROP that were not reported in the most recent MAERS reporting year? If Yes, identify the stack(s) that was/were not reported on applicable MAERS form(s). Yes No

E3. Have any emission units identified in the existing ROP been modified or reconstructed that required a PTI? Yes No
If Yes, complete Part F with the appropriate information.

E4. Have any emission units identified in the existing ROP been dismantled? If Yes, identify the emission unit(s) and the dismantle date in the comment area below or on an AI-001 Form. Yes No

Comments:

Check here if an AI-001 Form is attached to provide more information for Part E. Enter AI-001 Form ID: AI-

PART F: PERMIT TO INSTALL (PTI) INFORMATION

Review all emission units and applicable requirements at the source and answer the following questions as they pertain to **all** emission units with PTIs. Any PTI(s) identified below must be attached to the application.

F1. Has the source obtained any PTIs where the applicable requirements from the PTI have not been incorporated into the existing ROP? If Yes, complete the following table. Yes No
If No, go to Part G.

Permit to Install Number	Emission Units/Flexible Group ID(s)	Description (Include Process Equipment, Control Devices and Monitoring Devices)	Date Emission Unit was Installed/ Modified/ Reconstructed

F2. Do any of the PTIs listed above change, add, or delete terms/conditions to **established emission units** in the existing ROP? If Yes, identify the emission unit(s) or flexible group(s) affected in the comments area below or on an AI-001 Form and identify all changes, additions, and deletions in a mark-up of the existing ROP. Yes No

F3. Do any of the PTIs listed above identify **new emission units** that need to be incorporated into the ROP? If Yes, submit the PTIs as part of the ROP renewal application on an AI-001 Form, and include the new emission unit(s) or flexible group(s) in the mark-up of the existing ROP. Yes No

F4. Are there any stacks with applicable requirements for emission unit(s) identified in the PTIs listed above that were not reported in MAERS for the most recent emissions reporting year? If Yes, identify the stack(s) that were not reported on the applicable MAERS form(s). Yes No

F5. Are there any proposed administrative changes to any of the emission unit names, descriptions or control devices in the PTIs listed above for any emission units not already incorporated into the ROP? If Yes, describe the changes on an AI-001 Form. Yes No

Comments:

Check here if an AI-001 Form is attached to provide more information for Part F. Enter AI-001 Form ID: AI-

PART G: EMISSION UNITS MEETING THE CRITERIA OF RULES 281(2)(h), 285(2)(r)(iv), 287(2)(c), OR 290

Review all emission units and applicable requirements at the source and answer the following questions.

G1. Does the source have any new and/or existing emission units which do not already appear in the existing ROP and which meet the criteria of Rules 281(2)(h), 285(2)(r)(iv), 287(2)(c), or 290. If Yes, identify the emission units in the table below. If No, go to Part H. Yes No
Note: If several emission units were installed under the same rule above, provide a description of each and an installation/modification/reconstruction date for each.

Origin of Applicable Requirements	Emission Unit Description – Provide Emission Unit ID and a description of Process Equipment, Control Devices and Monitoring Devices	Date Emission Unit was Installed/ Modified/ Reconstructed
<input type="checkbox"/> Rule 281(2)(h) or 285(2)(r)(iv) cleaning operation		
<input type="checkbox"/> Rule 287(2)(c) surface coating line		
<input type="checkbox"/> Rule 290 process with limited emissions		

Comments:

Check here if an AI-001 Form is attached to provide more information for Part G. Enter AI-001 Form ID: AI-

PART H: REQUIREMENTS FOR ADDITION OR CHANGE

Complete this part of the application form for all proposed additions, changes or deletions to the existing ROP. This includes state or federal regulations that the source is subject to and that must be incorporated into the ROP or other proposed changes to the existing ROP. **Do not include additions or changes that have already been identified in Parts F or G of this application form.** If additional space is needed copy and complete an additional Part H.

Complete a separate Part H for each emission unit with proposed additions and/or changes.

H1. Are there changes that need to be incorporated into the ROP that have not been identified in Parts F and G? If <u>Yes</u> , answer the questions below.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
H2. Are there any proposed administrative changes to any of the existing emission unit names, descriptions or control devices in the ROP? If <u>Yes</u> , describe the changes in questions H8 – H16 below and in the affected Emission Unit Table(s) in the mark-up of the ROP.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
H3. Does the source propose to add a new emission unit or flexible group to the ROP not previously identified in Parts F or G? If <u>Yes</u> , identify and describe the emission unit name, process description, control device(s), monitoring device(s) and applicable requirements in questions H8 – H16 below and in a new Emission Unit Table in the mark-up of the ROP. See instructions on how to incorporate a new emission unit/flexible group into the ROP.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
H4. Does the source propose to add new state or federal regulations to the existing ROP? If <u>Yes</u> , on an AI-001 Form, identify each emission unit/flexible group that the new regulation applies to and identify <u>each</u> state or federal regulation that should be added. Also, describe the new requirements in questions H8 – H16 below and add the specific requirements to existing emission units/flexible groups in the mark-up of the ROP, create a new Emission Unit/Flexible Group Table, or add an AQD template table for the specific state or federal requirement.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
H5. Has a Consent Order/Consent Judgment (CO/CJ) been issued where the requirements were not incorporated into the existing ROP? If <u>Yes</u> , list the CO/CJ number(s) below and add or change the conditions and underlying applicable requirements in the appropriate Emission Unit/Flexible Group Tables in the mark-up of the ROP.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
H6. Does the source propose to add, change and/or delete source-wide requirements? If <u>Yes</u> , identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
H7. Are you proposing to streamline any requirements? If <u>Yes</u> , identify the streamlined and subsumed requirements and the EU ID, and provide a justification for streamlining the applicable requirement below.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

PART H: REQUIREMENTS FOR ADDITION OR CHANGE – (continued)

H8. Does the source propose to add, change and/or delete **emission limit** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below. Yes No

H9. Does the source propose to add, change and/or delete **material limit** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below. Yes No

H10. Does the source propose to add, change and/or delete **process/operational restriction** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below. Yes No

H11. Does the source propose to add, change and/or delete **design/equipment parameter** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below. Yes No

CWC now has the ability to monitor water flow at the venturi and wet cap processes for EU-WEST-CUPOLA-1.

H12. Does the source propose to add, change and/or delete **testing/sampling** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below. Yes No

No testing of emissions from EU-POURING as the unit has no control devices and expected results would be the same as the 2023 testing.

H13. Does the source propose to add, change and/or delete **monitoring/recordkeeping** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below. Yes No

Change Manometer range for EU-MP-RBB for DC#13 from 8-12 to 8-13.

H14. Does the source propose to add, change and/or delete **reporting** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below. Yes No

PART H: REQUIREMENTS FOR ADDITION OR CHANGE – (continued)

H15. Does the source propose to add, change and/or delete **stack/vent restrictions**? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below. Yes No

H16. Does the source propose to add, change and/or delete any **other** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below. Yes No

H17. Does the source propose to add terms and conditions for an alternative operating scenario or intra-facility trading of emissions? If Yes, identify the proposed conditions in a mark-up of the corresponding section of the ROP and provide a justification below. Yes No

Check here if an AI-001 Form is attached to provide more information for Part H. Enter AI-001 Form ID: AI-



RENEWABLE OPERATING PERMIT APPLICATION

AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

SRN: B1909	Section Number (if applicable):
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1. Additional Information ID
AI-001 PART B

Additional Information

2. Is This Information Confidential?

Yes No

Stack testing conducted on 4/12/23 to 4/18/23 with test results received on 6/9/23 for EU-POURING show 4 of 6 tested emission sources could be above the current permitted levels and is under review by EGLE air quality division.



RENEWABLE OPERATING PERMIT APPLICATION

AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, Part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

SRN: B1909	Section Number (if applicable):
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1. Additional Information ID AI-001 PART C

Additional Information

2. Is This Information Confidential?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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CAM PLAN UNITS EU-MP-RBB, EU-ACS-SAND, EU-WEST-CUPOLA-1, EU-SHAKEOUT - SEE ATTACHED PLANS



A Textron Company

CWC TEXTRON 1085 W. Sherman Blvd., Muskegon, MI 49441

CWC TEXTRON
1085 W. Sherman Blvd.
Muskegon, MI 49441-3588
Phone: (231) 773-1331
Fax: (231) 739-2649

November 17, 2022

This is intended to serve as our written acknowledgement that (signatory) Mr. Robert R. Meacham Sr. Environmental & Facilities Engineer of CWC-Extron is hereby authorized to sign permit applications and regulatory reporting data reports for all environmental mediums including matters related to Air Emissions, Water Discharges, Waste Hazardous and Non-Hazardous, Storm Sewer Discharges, Sanitary Sewer Discharges, Emergency Response Activities, Spill Plans and any other environmental issues related to permits and regulatory data reports.

Printed Name: JAMES WRIGHT

Date: November 17, 2022

Signature: _____

Title: Vice President CWC Extron

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

EFFECTIVE DATE: January 22, 2019
REVISION DATE: May 3, 2022

ISSUED TO

CWC TEXTRON

State Registration Number (SRN): B1909

LOCATED AT

1085 West Sherman Boulevard, Muskegon, Michigan 49441-3588

RENEWABLE OPERATING PERMIT

Permit Number: MI-ROP-B1909-2019a

Expiration Date: January 22, 2024

Administratively Complete ROP Renewal Application
Due Between July 22, 2022 and July 22, 2023

This Renewable Operating Permit (ROP) is issued in accordance with and subject to Section 5506(3) of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Pursuant to Michigan Air Pollution Control Rule 210(1), this ROP constitutes the permittee's authority to operate the stationary source identified above in accordance with the general conditions, special conditions and attachments contained herein. Operation of the stationary source and all emission units listed in the permit are subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

SOURCE-WIDE PERMIT TO INSTALL

Permit Number: MI-PTI-B1909-2019a

This Permit to Install (PTI) is issued in accordance with and subject to Section 5505(5) of Act 451. Pursuant to Michigan Air Pollution Control Rule 214a, the terms and conditions herein, identified by the underlying applicable requirement citation of Rule 201(1)(a), constitute a federally enforceable PTI. The PTI terms and conditions do not expire and remain in effect unless the criteria of Rule 201(6) are met. Operation of all emission units identified in the PTI is subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

Michigan Department of Environment, Great Lakes, and Energy

Heidi Hollenbach, Grand Rapids District Supervisor

(Rev. 08-22-17)

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ROP No: MI-ROP-B1909-2019a
Expiration Date: January 22, 2024
PTI No: MI-PTI-B1909-2019a

AUTHORITY AND ENFORCEABILITY

For the purpose of this permit, the **permittee** is defined as any person who owns or operates an emission unit at a stationary source for which this permit has been issued. The **department** is defined in Rule 104(d) as the Director of the Michigan Department of Environment, Great Lakes, and Energy (EGLE) or his or her designee.

The permittee shall comply with all specific details in the permit terms and conditions and the cited underlying applicable requirements. All terms and conditions in this ROP are both federally enforceable and state enforceable unless otherwise footnoted. Certain terms and conditions are applicable to most stationary sources for which an ROP has been issued. These general conditions are included in Part A of this ROP. Other terms and conditions may apply to a specific emission unit, several emission units which are represented as a flexible group, or the entire stationary source which is represented as a Source-Wide group. Special conditions are identified in Parts B, C, D and/or the appendices.

In accordance with Rule 213(2)(a), all underlying applicable requirements are identified for each ROP term or condition. All terms and conditions that are included in a PTI are streamlined, subsumed and/or is state-only enforceable will be noted as such.

In accordance with Section 5507 of Act 451, the permittee has included in the ROP application a compliance certification, a schedule of compliance, and a compliance plan. For applicable requirements with which the source is in compliance, the source will continue to comply with these requirements. For applicable requirements with which the source is not in compliance, the source will comply with the detailed schedule of compliance requirements that are incorporated as an appendix in this ROP. Furthermore, for any applicable requirements effective after the date of issuance of this ROP, the stationary source will meet the requirements on a timely basis, unless the underlying applicable requirement requires a more detailed schedule of compliance.

Issuance of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

A. GENERAL CONDITIONS

Permit Enforceability

- All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. **(R 336.1213(5))**
- Those conditions that are hereby incorporated in a state-only enforceable Source-Wide PTI pursuant to Rule 201(2)(d) are designated by footnote one. **(R 336.1213(5)(a), R 336.1214a(5))**
- Those conditions that are hereby incorporated in a federally enforceable Source-Wide PTI pursuant to Rule 201(2)(c) are designated by footnote two. **(R 336.1213(5)(b), R 336.1214a(3))**

General Provisions

1. The permittee shall comply with all conditions of this ROP. Any ROP noncompliance constitutes a violation of Act 451, and is grounds for enforcement action, for ROP revocation or revision, or for denial of the renewal of the ROP. All terms and conditions of this ROP that are designated as federally enforceable are enforceable by the Administrator of the United States Environmental Protection Agency (USEPA) and by citizens under the provisions of the federal Clean Air Act (CAA). Any terms and conditions based on applicable requirements which are designated as "state-only" are not enforceable by the USEPA or citizens pursuant to the CAA. **(R 336.1213(1)(a))**
2. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this ROP. **(R 336.1213(1)(b))**
3. This ROP may be modified, revised, or revoked for cause. The filing of a request by the permittee for a permit modification, revision, or termination, or a notification of planned changes or anticipated noncompliance does not stay any ROP term or condition. This does not supersede or affect the ability of the permittee to make changes, at the permittee's own risk, pursuant to Rule 215 and Rule 216. **(R 336.1213(1)(c))**
4. The permittee shall allow the department, or an authorized representative of the department, upon presentation of credentials and other documents as may be required by law and upon stating the authority for and purpose of the investigation, to perform any of the following activities: **(R 336.1213(1)(d))**
 - a. Enter, at reasonable times, a stationary source or other premises where emissions-related activity is conducted or where records must be kept under the conditions of the ROP.
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the ROP.
 - c. Inspect, at reasonable times, any of the following:
 - i. Any stationary source.
 - ii. Any emission unit.
 - iii. Any equipment, including monitoring and air pollution control equipment.
 - iv. Any work practices or operations regulated or required under the ROP.
 - d. As authorized by Section 5526 of Act 451, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the ROP or applicable requirements.
5. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the ROP or to determine compliance with this ROP. Upon request, the permittee shall also furnish to the department copies of any records that are required to be kept as a term or condition of this ROP. For information which is claimed by the permittee to be confidential, consistent with the requirements of the 1976 PA 442, MCL §15.231 et seq., and known as the Freedom of Information Act, the person may also be required to furnish the records directly to the USEPA together with a claim of confidentiality. **(R 336.1213(1)(e))**

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6. A challenge by any person, the Administrator of the USEPA, or the department to a particular condition or a part of this ROP shall not set aside, delay, stay, or in any way affect the applicability or enforceability of any other condition or part of this ROP. **(R 336.1213(1)(f))**
7. The permittee shall pay fees consistent with the fee schedule and requirements pursuant to Section 5522 of Act 451. **(R 336.1213(1)(g))**
8. This ROP does not convey any property rights or any exclusive privilege. **(R 336.1213(1)(h))**

Equipment & Design

9. Any collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2).² **(R 336.1370)**
10. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. **(R 336.1910)**

Emission Limits

11. Unless otherwise specified in this ROP, the permittee shall comply with Rule 301, which states, in part, "Except as provided in subrules 2, 3, and 4 of this rule, a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of the following:"² **(R 336.1301(1))**
 - a. A 6-minute average of 20% opacity, except for one 6-minute average per hour of not more than 27% opacity.
 - b. A limit specified by an applicable federal new source performance standard.

The grading of visible emissions shall be determined in accordance with Rule 303.
12. The permittee shall not cause or permit the emission of an air contaminant or water vapor in quantities that cause, alone or in reaction with other air contaminants, either of the following:
 - a. Injurious effects to human health or safety, animal life, plant life of significant economic value, or property.¹ **(R 336.1901(a))**
 - b. Unreasonable interference with the comfortable enjoyment of life and property.¹ **(R 336.1901(b))**

Testing/Sampling

13. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner's or operator's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001(1).² **(R 336.2001)**
14. Any required performance testing shall be conducted in accordance with Rule 1001(2), Rule 1001(3) and Rule 1003. **(R 336.2001(2), R 336.2001(3), R 336.2003(1))**
15. Any required test results shall be submitted to the Air Quality Division (AQD) in the format prescribed by the applicable reference test method within 60 days following the last date of the test. **(R 336.2001(5))**

Monitoring/Recordkeeping

16. Records of any periodic emission or parametric monitoring required in this ROP shall include the following information specified in Rule 213(3)(b)(i), where appropriate. **(R 336.1213(3)(b))**
 - a. The date, location, time, and method of sampling or measurements.
 - b. The dates the analyses of the samples were performed.
 - c. The company or entity that performed the analyses of the samples.
 - d. The analytical techniques or methods used.
 - e. The results of the analyses.
 - f. The related process operating conditions or parameters that existed at the time of sampling or measurement.
17. All required monitoring data, support information and all reports, including reports of all instances of deviation from permit requirements, shall be kept and furnished to the department upon request for a period of not less than 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings, or other original data records, for continuous monitoring instrumentation and copies of all reports required by the ROP. **(R 336.1213(1)(e), R 336.1213(3)(b)(ii))**

Certification & Reporting

18. Except for the alternate certification schedule provided in Rule 213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this ROP shall contain an original certification by a Responsible Official which states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. **(R 336.1213(3)(c))**
19. A Responsible Official shall certify to the appropriate AQD District Office and to the USEPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate AQD District Office pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The USEPA address is: USEPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604-3507. **(R 336.1213(4)(c))**
20. The certification of compliance shall be submitted annually for the term of this ROP as detailed in the special conditions, or more frequently if specified in an applicable requirement or in this ROP. **(R 336.1213(4)(c))**
21. The permittee shall promptly report any deviations from ROP requirements and certify the reports. The prompt reporting of deviations from ROP requirements is defined in Rule 213(3)(c)(ii) as follows, unless otherwise described in this ROP. **(R 336.1213(3)(c))**
 - a. For deviations that exceed the emissions allowed under the ROP, prompt reporting means reporting consistent with the requirements of Rule 912 as detailed in Condition 25. All reports submitted pursuant to this paragraph shall be promptly certified as specified in Rule 213(3)(c)(iii).
 - b. For deviations which exceed the emissions allowed under the ROP and which are not reported pursuant to Rule 912 due to the duration of the deviation, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe reasons for each deviation and the actions taken to minimize or correct each deviation.
 - c. For deviations that do not exceed the emissions allowed under the ROP, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe the reasons for each deviation and the actions taken to minimize or correct each deviation.

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22. For reports required pursuant to Rule 213(3)(c)(ii), prompt certification of the reports is described in Rule 213(3)(c)(iii) as either of the following: **(R 336.1213(3)(c))**
- Submitting a certification by a Responsible Official with each report which states that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
 - Submitting, within 30 days following the end of a calendar month during which one or more prompt reports of deviations from the emissions allowed under the ROP were submitted to the department pursuant to Rule 213(3)(c)(ii), a certification by a Responsible Official which states that; "based on information and belief formed after reasonable inquiry, the statements and information contained in each of the reports submitted during the previous month were true, accurate, and complete." The certification shall include a listing of the reports that are being certified. Any report submitted pursuant to Rule 213(3)(c)(ii) that will be certified on a monthly basis pursuant to this paragraph shall include a statement that certification of the report will be provided within 30 days following the end of the calendar month.
23. Semiannually for the term of the ROP as detailed in the special conditions, or more frequently if specified, the permittee shall submit certified reports of any required monitoring to the appropriate AQD District Office. All instances of deviations from ROP requirements during the reporting period shall be clearly identified in the reports. **(R 336.1213(3)(c)(i))**
24. On an annual basis, the permittee shall report the actual emissions, or the information necessary to determine the actual emissions, of each regulated air pollutant as defined in Rule 212(6) for each emission unit utilizing the emissions inventory forms provided by the department. **(R 336.1212(6))**
25. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the appropriate AQD District Office. The notice shall be provided not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Notice shall be by any reasonable means, including electronic, telephonic, or oral communication. Written reports, if required under Rule 912, must be submitted to the appropriate AQD District Supervisor within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal conditions or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5) and shall be certified by a Responsible Official in a manner consistent with the CAA.² **(R 336.1912)**

Permit Shield

26. Compliance with the conditions of the ROP shall be considered compliance with any applicable requirements as of the date of ROP issuance, if either of the following provisions is satisfied. **(R 336.1213(6)(a)(i), R 336.1213(6)(a)(ii))**
- The applicable requirements are included and are specifically identified in the ROP.
 - The permit includes a determination or concise summary of the determination by the department that other specifically identified requirements are not applicable to the stationary source.
- Any requirements identified in Part E of this ROP have been identified as non-applicable to this ROP and are included in the permit shield.
27. Nothing in this ROP shall alter or affect any of the following:
- The provisions of Section 303 of the CAA, emergency orders, including the authority of the USEPA under Section 303 of the CAA. **(R 336.1213(6)(b)(i))**
 - The liability of the owner or operator of this source for any violation of applicable requirements prior to or at the time of this ROP issuance. **(R 336.1213(6)(b)(ii))**
 - The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA. **(R 336.1213(6)(b)(iii))**

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- d. The ability of the USEPA to obtain information from a source pursuant to Section 114 of the CAA. **(R 336.1213(6)(b)(iv))**
- 28. The permit shield shall not apply to provisions incorporated into this ROP through procedures for any of the following:
 - a. Operational flexibility changes made pursuant to Rule 215. **(R 336.1215(5))**
 - b. Administrative Amendments made pursuant to Rule 216(1)(a)(i)-(iv). **(R 336.1216(1)(b)(iii))**
 - c. Administrative Amendments made pursuant to Rule 216(1)(a)(v) until the amendment has been approved by the department. **(R 336.1216(1)(c)(iii))**
 - d. Minor Permit Modifications made pursuant to Rule 216(2). **(R 336.1216(2)(f))**
 - e. State-Only Modifications made pursuant to Rule 216(4) until the changes have been approved by the department. **(R 336.1216(4)(e))**
- 29. Expiration of this ROP results in the loss of the permit shield. If a timely and administratively complete application for renewal is submitted not more than 18 months, but not less than 6 months, before the expiration date of the ROP, but the department fails to take final action before the end of the ROP term, the existing ROP does not expire until the renewal is issued or denied, and the permit shield shall extend beyond the original ROP term until the department takes final action. **(R 336.1217(1)(c), R 336.1217(1)(a))**

Revisions

- 30. For changes to any process or process equipment covered by this ROP that do not require a revision of the ROP pursuant to Rule 216, the permittee must comply with Rule 215. **(R 336.1215, R 336.1216)**
- 31. A change in ownership or operational control of a stationary source covered by this ROP shall be made pursuant to Rule 216(1). **(R 336.1219(2))**
- 32. For revisions to this ROP, an administratively complete application shall be considered timely if it is received by the department in accordance with the time frames specified in Rule 216. **(R 336.1210(10))**
- 33. Pursuant to Rule 216(1)(b)(iii), Rule 216(2)(d) and Rule 216(4)(d), after a change has been made, and until the department takes final action, the permittee shall comply with both the applicable requirements governing the change and the ROP terms and conditions proposed in the application for the modification. During this time period, the permittee may choose to not comply with the existing ROP terms and conditions that the application seeks to change. However, if the permittee fails to comply with the ROP terms and conditions proposed in the application during this time period, the terms and conditions in the ROP are enforceable. **(R 336.1216(1)(c)(iii), R 336.1216(2)(d), R 336.1216(4)(d))**

Reopenings

- 34. A ROP shall be reopened by the department prior to the expiration date and revised by the department under any of the following circumstances:
 - a. If additional requirements become applicable to this stationary source with three or more years remaining in the term of the ROP, but not if the effective date of the new applicable requirement is later than the ROP expiration date. **(R 336.1217(2)(a)(i))**
 - b. If additional requirements pursuant to Title IV of the CAA become applicable to this stationary source. **(R 336.1217(2)(a)(ii))**
 - c. If the department determines that the ROP contains a material mistake, information required by any applicable requirement was omitted, or inaccurate statements were made in establishing emission limits or the terms or conditions of the ROP. **(R 336.1217(2)(a)(iii))**
 - d. If the department determines that the ROP must be revised to ensure compliance with the applicable requirements. **(R 336.1217(2)(a)(iv))**

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Renewals

35. For renewal of this ROP, an administratively complete application shall be considered timely if it is received by the department not more than 18 months, but not less than 6 months, before the expiration date of the ROP. **(R 336.1210(8))**

Stratospheric Ozone Protection

36. If the permittee is subject to Title 40 of the Code of Federal Regulations (CFR), Part 82 and services, maintains, or repairs appliances except for motor vehicle air conditioners (MVAC), or disposes of appliances containing refrigerant, including MVAC and small appliances, or if the permittee is a refrigerant reclaimer, appliance owner or a manufacturer of appliances or recycling and recovery equipment, the permittee shall comply with all applicable standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F.
37. If the permittee is subject to 40 CFR Part 82, and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed by the original equipment manufacturer. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used for refrigerated cargo or an air conditioning system on passenger buses using Hydrochlorofluorocarbon-22 refrigerant.

Risk Management Plan

38. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall register and submit to the USEPA the required data related to the risk management plan for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 40 CFR 68.130. The list of substances, threshold quantities, and accident prevention regulations promulgated under 40 CFR Part 68, do not limit in any way the general duty provisions under Section 112(r)(1).
39. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall comply with the requirements of 40 CFR Part 68, no later than the latest of the following dates as provided in 40 CFR 68.10(a):
- June 21, 1999,
 - Three years after the date on which a regulated substance is first listed under 40 CFR 68.130, or
 - The date on which a regulated substance is first present above a threshold quantity in a process.
40. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR Part 68.
41. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall annually certify compliance with all applicable requirements of Section 112(r) as detailed in Rule 213(4)(c). **(40 CFR Part 68)**

Emission Trading

42. Emission averaging and emission reduction credit trading are allowed pursuant to any applicable interstate or regional emission trading program that has been approved by the Administrator of the USEPA as a part of Michigan's State Implementation Plan. Such activities must comply with Rule 215 and Rule 216. **(R 336.1213(12))**

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Permit to Install (PTI)

43. The process or process equipment included in this permit shall not be reconstructed, relocated, or modified unless a PTI authorizing such action is issued by the department, except to the extent such action is exempt from the PTI requirements by any applicable rule.² **(R 336.1201(1))**
44. The department may, after notice and opportunity for a hearing, revoke PTI terms or conditions if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of the PTI or is violating the department's rules or the CAA.² **(R 336.1201(8), Section 5510 of Act 451)**
45. The terms and conditions of a PTI shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI will be amended to reflect the change of ownership or operational control. The request must include all of the information required by Subrules (1)(a), (b) and (c) of Rule 219. The written request shall be sent to the appropriate AQD District Supervisor, EGLE.² **(R 336.1219)**
46. If the installation, reconstruction, relocation, or modification of the equipment for which PTI terms and conditions have been approved has not commenced within 18 months of the original PTI issuance date, or has been interrupted for 18 months, the applicable terms and conditions from that PTI, as incorporated into the ROP, shall become void unless otherwise authorized by the department. Furthermore, the person to whom that PTI was issued, or the designated authorized agent, shall notify the department via the Supervisor, Permit Section, EGLE, AQD, P. O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, reconstruction, relocation, or modification of the equipment allowed by the terms and conditions from that PTI.² **(R 336.1201(4))**

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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B. SOURCE-WIDE CONDITIONS

Part B outlines the Source-Wide Terms and Conditions that apply to this stationary source. The permittee is subject to these special conditions for the stationary source in addition to the general conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply to this source, NA (not applicable) has been used in the table. If there are no Source-Wide Conditions, this section will be left blank.

SOURCE-WIDE CONDITIONS

DESCRIPTION

All process equipment at the facility including equipment covered by other permits, grand-fathered equipment and exempt equipment.

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Each Individual HAP	Less than 9.0 tpy ²	12-month rolling time period as determined at the end of each calendar month	All process equipment at the facility including equipment covered by other permits, grand-fathered equipment and exempt equipment.	SC VI.1 SC VI.2 SC VI.3 GC 13	R 336.1205(3)
2. Aggregate HAPs	Less than 22.5 tpy ²	12-month rolling time period as determined at the end of each calendar month	All process equipment at the facility including equipment covered by other permits, grand-fathered equipment and exempt equipment.	SC VI.1 SC VI.2 SC VI.3 GC 13	R 336.1205(3)

II. MATERIAL LIMIT(S)

1. The permittee shall not melt more than 129,325 tons per year of iron, based on a 12-month rolling time period, as determined at the end of each calendar month. This condition is necessary to ensure that the facility will not be a major source as defined in Section 112(d) of the Clean Air Act Amendments.² **(R 336.1205(3))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

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VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Monthly records of iron melt quantities to determine compliance with the 12-month rolling limit of 129,325 tons.² (R 336.1205(3))
2. Individual and aggregate HAP emission calculations determining the monthly emission rate of each in tons per calendar month.² (R 336.1205(3))
3. Individual and aggregate HAP emission calculations determining the cumulative emission rate of each during the first 12 months and the annual emission rate of each thereafter, in tons per 12-month rolling time period as determined at the end of each calendar month.² (R 336.1205(3))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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C. EMISSION UNIT CONDITIONS

Part C outlines terms and conditions that are specific to individual emission units listed in the Emission Unit Summary Table. The permittee is subject to the special conditions for each emission unit in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no conditions specific to individual emission units, this section will be left blank.

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-POURING	Iron pouring operation including both manual and automatic pouring operations.	01-01-1964 / 01-06-2015 09-20-2021	FG-PARTICULATE
EU-BULK-BOND	A storage silo and day bin which store bulk bond and have a pneumatic transport system. The silo and bin are each controlled by separate bin vent filters.	01-01-1964	NA
EU-DUCTILE-IRON	Equipment used for preparation of ductile iron which includes magnesium treatment vessels, a desulfurization ladle with fluorspar addition and an Ajax holding furnace. The furnace is also used for regular gray iron. Emissions from ductile treatment are controlled by DC#5.	12-29-1995	NA
EU-NEW-SAND	A bin which stores new sand. The bin is controlled by a bin vent filter.	03-07-1980	NA
EU-WEST-CUPOLA-1	Cupola #1, which is the west cupola. The emissions are controlled by two 5 MMBtu direct flame afterburners, wet cap, a high energy venturi scrubber and a high velocity mist eliminator. Emission unit includes charging operations.	07-27-1977	FG-MACT-ZZZZZ
EU-MP-RBB	Knockoff operation #227, Spiral Elevator #228 and Rocker Barrel Blast (finish blast). Baghouse collectors DC#13 and DC#1.	11-30-1998 / 01-05-2004	NA
EU-ACS-SAND	The ACS sand handling system. The system includes: New DC#19 which controls emissions from the sand cooler #16, the sand muller, the sand distribution tower, sand elevators #18 and #23 and from the sand basement.	01-01-1964 / 10-17-2011	NA

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Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-CLEAN	Metal cleaning operations which include hand grinders, cut-off saw, stand grinders and the West tumblast shotblaster. Emissions from the metal cleaning operations and the West tumblast shotblast are controlled by Wheelabrator DC#1 and the East tumblast shotblast is controlled by Wheelabrator DC#5.	01-01-1964	FG-PARTICULATE
EU-FINISHING	Metal finishing operations including milling, drilling, stand grinders, and finishing machines. Emissions from the metal finishing operations are controlled by DC#2.	03-25-1983	FG-PARTICULATE
EU-SHAKEOUT	Foundry shakeout includes the Vibra Drum #212, Shakeout #213 and the degating conveyor #225. Emissions are controlled by baghouses DC#17 and DC#6. Mold Dump #211 is controlled by DC#12.	01-01-1964 / 01-05-2004	FG-PARTICULATE
EU-AJAX-FURN	The East and West Ajax holding furnaces.	01-01-1964	FG-PARTICULATE
EU-COOLING	Cast cooling operation.	01-01-1964	FG-PARTICULATE

**EU-POURING
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Iron pouring operation including both manual and automatic pouring operations.

Flexible Group ID: FG-PARTICULATE

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.27 lb/ton of metal ²	Hourly	EU-POURING	SC V.1, VI.2 SC VI.3	R 336.2804 40 CFR 52.21(d)
2. PM10	0.15 lb/ton of metal² 0.27	Hourly	EU-POURING	SC V.1, VI.2 SC VI.3	R 336.2804 40 CFR 52.21(d)
3. PM2.5	0.08 lb/ton of metal² 0.27	Hourly	EU-POURING	SC V.1, VI.2 SC VI.3	R 336.2804 40 CFR 52.21(d)
4. CO	2.597 lb/ton of metal ²	Hourly	EU-POURING	SC V.1, VI.2 SC VI.3	R 336.2804 40 CFR 52.21(d)
5. NOx	0.04 lb/ton of metal² 0.04	Hourly	EU-POURING	SC V.1, VI.2 SC VI.3	R 336.2804 40 CFR 52.21(d)
6. VOC	0.14 lb/ton of metal² 0.475	Hourly	EU-POURING	SC V.1, VI.2 SC VI.3	R 336.2804 40 CFR 52.21(d)

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II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Metal melted	576 tons per day ¹	Daily	EU-POURING	SC VI.3	R 336.1225

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. ~~(R 336.1213(3)(b)(ii))~~

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- The permittee shall verify particulate matter (PM, PM10, and PM2.5), volatile organic compounds (VOC), nitrogen oxide (NOx) and carbon monoxide(CO) emission rates from EU-POURING by testing at owner's expense, in accordance with the Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM, PM10, PM2.5	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
NOx	40 CFR Part 60, Appendix A
VOC	40 CFR Part 60, Appendix A
CO	40 CFR Part 60, Appendix A

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An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days of the time and place before performance tests are conducted. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² ~~(R 336.2001, R 336.2003, R 336.2004)~~

- ~~The permittee shall verify the PM, PM10, PM2.5, VOC, nitrogen oxide and carbon monoxide emission rates from EU-POURING, at a minimum, one time prior to the expiration of this permit. Alternative test schedules may be used upon approval of the AQD District Supervisor. ~~(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)~~~~

See Appendix 5

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

- Verification of visible emissions from the three EU-POURING vents SV-POUR1, SV-POUR2, and SV-POUR3 shall be performed and documented once daily by non-certified visible emissions readings while the emission unit is operating, per Appendix 3.² **(R 336.1301(1)(c))**
- The permittee shall calculate and maintain monthly records, in a format acceptable to the AQD District Supervisor, of 12-month rolling emission rates of PM, PM-10, PM-2.5, CO, NOx, and VOC calculated in the appropriate units and using emission factors approved by the AQD District Supervisor.² **(R 336.1205(3))**
- The permittee shall monitor and record, in a satisfactory manner, the tons of metal melted per calendar day. The permittee shall keep all records on file at the facility and make them available to the Department upon request.¹ **(R 336.1225)**

See Appendix 3

VII. REPORTING

- Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
- Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
- Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

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VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-POUR1	84 ²	49 ²	R 336.1225 40 CFR 52.21(c) & (d)
2. SV-POUR2	36 ²	47 ²	R 336.1225 40 CFR 52.21(c) & (d)
3. SV-POUR3	84 ²	49 ²	R 336.1225 40 CFR 52.21(c) & (d)
4. SV-POUR4	36 ²	47 ²	R 336.1225 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU-BULK-BOND
EMISSION UNIT CONDITIONS**

DESCRIPTION

Storage silo and day storage bin which store bulk bond and have a pneumatic transport system. The silo and bin are each controlled by separate bin vent collectors.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

The silo and day storage bin are controlled by separate bin vent collectors.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.010 lb. per 1,000 lbs. exhaust gas, on a dry gas basis ²	Hourly	Day Storage Bin	SC III.2 SC V.1 SC VI.1 SC VI.2	R 336.1331(1)(c)
2. PM	0.10 lb. per 1,000 lbs. exhaust gas, on a dry gas basis ²	Hourly	Storage Silo	SC V.1 SC VI.1 SC VI.2	R 336.1331(1)(a), Table 31(J)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate the bond storage silo or day bin, unless the respective filter collectors are installed and operating properly.² (R 336.1910)
2. The permittee shall not operate the process unless the Preventative Maintenance Plan is implemented and maintained. Acceptable plans and any modifications shall be submitted to the AQD District Supervisor. (R 336.1213(3))

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

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VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Verification of visible emissions from EU-BULK-BOND shall be performed and documented once weekly by non-certified visible emissions readings while the emission unit is operating, per Appendix 3. (R 336.1213(3))
2. The permittee shall keep records demonstrating compliance with the Preventative Maintenance Plan requirements. (R 336.1213(3))

See Appendix 3

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. (R 336.1213(3)(c), R 336.2001(5))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU-DUCTILE-IRON
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Equipment used for preparation of ductile iron which includes magnesium treatment vessels, a desulfurization ladle with fluorspar addition and an Ajax holding furnace. The furnace is also used for regular gray iron.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Dust Collector (DC)#5

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.01 lb. per 1,000 lbs. exhaust gas, on a dry gas basis ²	Hourly	EU-DUCTILE-IRON	SC V.1 SC VI.3 SC VI.4 SC VI.5	R 336.1331(1)(c)
2. PM	2.25 lbs. per hour ²	Daily average	EU-DUCTILE-IRON	SC VI.3 SC VI.4 SC VI.5	R 336.1331(1)(c)
3. PM	9.855 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU-DUCTILE-IRON	SC III.2 SC VI.3 SC VI.4 SC VI.5	R 336.1331(1)(c)
4. Visible Emissions	10% opacity ²	6-minute average	EU-DUCTILE-IRON	SC VI.4	R 336.1301(1)(c)
5. Fluorides	1.40 milligrams per cubic meter, corrected to 70 degrees Fahrenheit and 29.92 inches ²	8-hour average	EU-DUCTILE-IRON	SC VI.1	R 336.1201(3)
6. Fluorides	0.263 lb. per hour ²	8-hour average	EU-DUCTILE-IRON	SC VI.1	R 336.1201(3)
7. Fluorides	1.15 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU-DUCTILE-IRON	SC VI.1	R 336.1201(3)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Fluorspar	54 lbs. per hour ²	Daily average	EU-DUCTILE-IRON	SC VI.1	R 336.1201(3)

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Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
2. Ductile Iron	Shall not inoculate more than 24 tons per hour ²	8-hour average	EU-DUCTILE-IRON	SC VI.2	R 336.1201(3)

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate the process without a properly installed and operating dust collector.² **(R 336.1910)**
2. The permittee shall not operate the process unless the Preventative Maintenance Plan specified is implemented and maintained. Acceptable plans and any modifications shall be submitted to the AQD District Supervisor. **(R 336.1213(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain the dust collector, DC#5, with instrumentation to continuously measure the pressure drop across the dust collector.² **(R 336.1910)**
2. The permittee shall equip and maintain the dust collector, DC#5, with a particle sensor device. **(R 336.1213(3))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall monitor and record once per quarter, the actual fluorspar feed rate that is going into the process in a manner and with instrumentation acceptable to the Air Quality Division. The permittee shall keep a record of the total fluorspar used per month.² **(R 336.1201(3))**
2. The permittee shall keep a record of the amount of ductile iron produced.² **(R 336.1201(3))**
3. The permittee shall monitor and record the static pressure drop across the dust collector once per day. **(R 336.1213(3))**
4. Verification of visible emissions from EU-DUCTILE-IRON shall be performed and documented once weekly by non-certified visible emissions readings while the emission unit is operating, per Appendix 3. **(R 336.1213(3))**
5. The permittee shall keep records demonstrating compliance with the Preventative Maintenance Plan requirements. **(R 336.1213(3))**

See Appendix 3

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

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3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-DUCTILE-IRON	48 ²	30 ²	R 336.1201(3)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU-NEW-SAND
EMISSION UNIT CONDITIONS**

DESCRIPTION

A bin which stores new sand. The bin is controlled by a bin vent filter.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

The bin is equipped with a bin vent filter.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.03 lb. per 1,000 lbs. of exhaust gases, calculated on a dry gas basis ²	Hourly	EU-NEW-SAND	SC III.2 SC V.1 SC VI.1	R 336.1331(1)(c)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate the sand handling equipment unless the particulate collector is installed and operating properly.² **(R 336.1910)**
2. The permittee shall not operate the process unless the Preventative Maintenance Plan is implemented and maintained. Acceptable plans and any modifications shall be submitted to the AQD District Supervisor. **(R 336.1213(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Verification of visible emissions from EU-NEW-SAND shall be performed and documented once weekly by non-certified visible emissions readings while the emission unit is operating, per Appendix 3. **(R 336.1213(3))**

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2. The permittee shall keep records demonstrating compliance with the Preventative Maintenance Plan requirements. **(R 336.1213(3))**

See Appendix 3

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU-WEST-CUPOLA-1
EMISSION UNIT CONDITIONS**

DESCRIPTION

Cupola #1, which is the west cupola. The emissions are controlled by two 5 MMBtu direct flame afterburners, wet cap, a high energy venturi scrubber and a high velocity mist eliminator. Emission unit includes charging operations. Emission unit is subject to Compliance Assurance Monitoring (CAM) for particulate emissions.

Flexible Group ID: FG-MACT-ZZZZZ

POLLUTION CONTROL EQUIPMENT

Direct flame afterburner, wet cap, high energy venturi scrubber, high velocity mist eliminator.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.15 lb. per 1,000 lbs. of exhaust gases, calculated on a dry gas basis ²	Hourly	EU-WEST-CUPOLA-1	SC III.2 SC V.2 SC VI.1 SC VI.4 SC VI.5	R 336.1331(1)(a), Table 31(D)(1)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate the cupola unless the afterburner, high energy venturi scrubber and high velocity mist eliminator are installed and operating properly.² (R 336.1910)
2. The permittee shall not operate the process unless the Preventative Maintenance Plan is implemented and maintained. Acceptable plans and any modifications shall be submitted to the AQD District Supervisor. (R 336.1213(3))

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain the water line(s) in the emission control system with a water pressure indicator.² (R 336.1910)
2. The permittee shall equip the high energy venturi scrubber and demister with pressure drop monitors. (R 336.1213(3))

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Opacity observations, utilizing Method 9 when operating, shall be performed and recorded semiannually. (R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)

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2. The permittee shall verify the particulate matter and opacity emission rates from EU-WEST-CUPOLA-1 by testing at owner's expense, in accordance with the Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
Visible Emission	40 CFR Part 51, Appendix M; 40 CFR Part 60, Appendix A and B

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**

3. The permittee shall verify the particulate matter and opacity emission rates from EU-WEST-CUPOLA-1, at a minimum, every five years from the date of the last test. Alternative test schedules may be used upon approval of the AQD District Supervisor. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**
3. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days of the time and place before performance tests are conducted. **(R 336.1213(3))**

See Appendix 5

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Verification of visible emissions from EU-WEST-CUPOLA-1 shall be performed and documented once daily by non-certified visible emissions readings while the emission unit is operating, per Appendix 3. **(R 336.1213(3))**
2. The permittee shall record the number and weight of charges added to the cupola, including a separate record of coke, on a production day basis when the cupola is operating and melting. **(R 336.1213(3))**
3. The permittee shall maintain a monthly record of the hours of cupola operation. **(R 336.1213(3))**
4. The permittee shall record the water pressure rate to the high energy venturi scrubber system once per day. The gauge shall be calibrated according to manufacturer's recommendations. **(R 336.1213(3), 40 CFR 64.6(c)(i), (ii) & (iii))**
5. The permittee shall record the static pressure drop across the high energy venturi scrubber and demister once per day. The gauge shall be calibrated according to manufacturer's recommendations. **(R 336.1213(3), 40 CFR 64.6(c)(i), (ii) & (iii))**
6. An excursion will be any of the following: the water pressure rate to the venturi scrubber deviates from its normal range (46-80 psi, during blasting), or the demister pressure drop deviates from its normal level (3" or less) or the venturi scrubber pressure drop deviates from its normal range (30" – 56"). **(40 CFR 64.6(c)(2))**
7. Upon detecting an excursion or exceedance, the owner or operator shall restore operation of EU-WEST-CUPOLA-1 (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). **(40 CFR 64.7(d))**

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8. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall collect data at all required intervals at all times that EU-WEST-CUPOLA-1 is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, in-frequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. Data recorded during monitoring malfunctions, repair activities and QA/QC operations shall not be used for 40 CFR Part 64 compliance. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
9. The permittee shall properly maintain the monitoring system, including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**
10. The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written Quality Improvement Plan (QIP) and any activities undertaken to implement a QIP, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**

See Appendix 3

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. Each semiannual report of monitoring and deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no excursions and/or exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9(a)(2)(i))**
5. Each semiannual report of monitoring and deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. **(40 CFR 64.9(a)(2)(ii))**
6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed, the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**
7. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

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IX. OTHER REQUIREMENT(S)

1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU-MP-RBB
EMISSION UNIT CONDITIONS**

DESCRIPTION

Knockoff operation #227, Spiral Elevator #228 and Rocker Barrel Blast (finish blast). Emission unit is subject to CAM for particulate emissions.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Dust Collector (DC)#1
Dust Collector (DC)#13
Dust Collector (DC)#6

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.01 lb. per 1,000 lbs. of exhaust gases, calculated on a dry gas basis ²	Hourly	EU-MP-RBB	SC V.1 SC VI.2 SC VI.3	R 336.1331(1)(c)
2. Visible Emissions	10% opacity ²	6-minute average	EU-MP-RBB	SC VI.1	R 336.1301(1)(c)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate the Knockoff operation #227, Spiral Elevator #228 and Rocker Barrel Blast (finish blast) unless the dust collectors are installed and operating properly.² (R 336.1910)
2. The permittee shall not operate the process unless the Preventative Maintenance Plan is implemented and maintained. Acceptable plans and any modifications shall be submitted to the AQD District Supervisor. (R 336.1213(3))

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain the dust collectors with instrumentation to continuously measure the pressure drop across the dust collector. (R 336.1213(3), R 336.1910)
2. The permittee shall equip and maintain dust collectors, DC#1, DC#6 and DC#13, with particle sensor devices. (R 336.1213(3))

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Verification of visible emissions from EU-MP-RBB shall be performed and documented once daily by non-certified visible emissions readings while the emission unit is operating, per Appendix 3. (R 336.1213(3))
2. The permittee shall monitor and record the static pressure drop across the dust collectors once per day. The gauges shall be calibrated according to manufacturer's recommendations. (R 336.1213(3), 40 CFR 64.6(c)(1)(i), (ii) & (iii))
3. The permittee shall record the readings from the particle sensors on each of the dust collectors once per day. The devices shall be calibrated according to manufacturer's recommendations. (R 336.1213(3), 40 CFR 64.6(c)(1)(i) & (ii))
4. An excursion will occur if the pressure drop across the dust collectors deviates from their normal ranges (DC#13: 8" - ~~13~~ ~~12~~"¹², DC#6: 7" - 12", DC#1: 7" - 12"), or if particle sensor readings deviate from the limits established within the Preventative Maintenance Plan. (40 CFR 64.6(c)(2))
5. Upon detecting an excursion or exceedance, the owner or operator shall restore operation of EU-MP-RBB (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))
6. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall collect data at all required intervals at all times that EU-MP-RBB is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, in-frequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. Data recorded during monitoring malfunctions, repair activities and QA/QC operations shall not be used for 40 CFR Part 64 compliance. (40 CFR 64.6(c)(3), 40 CFR 64.7(c))
7. The permittee shall, at all times, maintain the monitoring system, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment. (40 CFR 64.7(b))
8. The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written Quality Improvement Plan (QIP) and any activities undertaken to implement a QIP, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))

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See Appendix 3

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))

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2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. Each semiannual report of monitoring and deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no excursions and/or exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9(a)(2)(i))**
5. Each semiannual report of monitoring and deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. **(40 CFR 64.9(a)(2)(ii))**
6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period, if appropriate. If a QIP has been completed, the report shall include documentation that the QIP has been implemented, and a discussion pertaining to whether the QIP implementation has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**
7. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-DC#13	44 ²	26 ²	R 336.1331
2. SV-DC#1	52 ²	36 ²	R 336.1331

IX. OTHER REQUIREMENT(S)

1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU-ACS-SAND
EMISSION UNIT CONDITIONS**

DESCRIPTION

The ACS sand system includes: Dust Collector (DC)#19 which controls emissions from the sand cooler #16, the sand muller, the sand distribution tower, sand elevators #18 and #23 and the sand basement. Emission unit is subject to CAM for particulate emissions.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Dust Collector (DC)#19

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.10 lb. per 1,000 lbs. of exhaust gas, on a dry gas basis ²	Hourly	EU-ACS-SAND	SC III.1 SC V.1 SC.VI.1 SC.VI.2	R 336.1331(1)(a), Table 31(J)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU-ACS-SAND unless the dust collector, DC#19, is installed and operating properly.² **(R 336.1910)**
2. The permittee shall not operate any of the processes unless the Preventative Maintenance Plan is implemented and maintained. Acceptable plans and any modifications shall be submitted to the AQD District Supervisor. **(R 336.1213(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain the dust collector, DC#19, with instrumentation to continuously measure the pressure drop across the dust collector. **(R 336.1213(3), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Verification of visible emissions from EU-ACS-SAND shall be performed and documented once daily by non-certified visible emissions readings while the emission unit is operating, per Appendix 3. **(R 336.1213(3))**

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2. The permittee shall monitor and record the static pressure drop across the dust collector once per day. The gauge shall be calibrated according to manufacturer's recommendations. **(R 336.1213(3), 40 CFR 64.6(c)(1)(i), (ii) & (iii))**
3. An excursion will occur if the pressure drop across the dust collector deviates from the normal range (DC#19: 3" – 7"). **(40 CFR 64.6(c)(2))**
4. Upon detecting an excursion or exceedance, the permittee shall restore operation of EU-ACS-SAND to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). **(40 CFR 64.7(d))**
5. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall collect data at all required intervals at all times that EU-ACS-SAND is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, in-frequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. Data recorded during monitoring malfunctions, repair activities and QA/QC operations shall not be used for 40 CFR Part 64 compliance. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
6. The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written Quality Improvement Plan (QIP) and any activities undertaken to implement a QIP, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
7. For EU-ACS-SAND, the permittee shall, at all times, maintain the monitoring system, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment. **(40 CFR 64.7(b))**

See Appendix 3

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. Each semiannual report of monitoring and deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no excursions and/or exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9(a)(2)(i))**
5. Each semiannual report of monitoring and deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. **(40 CFR 64.9(a)(2)(ii))**

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6. For EU-ACS-SAND, each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period, if appropriate. If a QIP has been completed, the report shall include documentation that the QIP has been implemented, and a discussion pertaining to whether the QIP implementation has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**
7. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**
2. For EU-ACS-SAND, the permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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D. FLEXIBLE GROUP CONDITIONS

Part D outlines the terms and conditions that apply to more than one emission unit. The permittee is subject to the special conditions for each flexible group in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no special conditions that apply to more than one emission unit, this section will be left blank.

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG-MACT-ZZZZZ	The affected source is an existing iron and/or steel foundry, that is (or is part of) an area source of hazardous air pollutant (HAP) emissions. The affected source is an existing large foundry as defined by 40 CFR Part 63, Subpart ZZZZZ.	EU-WEST-CUPOLA-1
FG-PARTICULATE	Various particulate emission sources.	EU-POURING EU-CLEAN EU-FINISHING EU-SHAKEOUT EU-AJAX-FURN EU-COOLING
FG-RULE290	Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rule 278, Rule 278a and Rule 290. Emission units installed/modified before December 20, 2016, may show compliance with Rule 290 in effect at the time of installation/modification.	NA
FG-COLDCLEANERS	Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278, Rule 278a, and Rule 281(2)(h) or Rule 285(2)(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.	NA

FG-MACT-ZZZZZ
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

The affected source is an existing iron and/or steel foundry, that is (or is part of) an area source of hazardous air pollutant (HAP) emissions. The affected source is an existing large foundry as defined by 40 CFR Part 63, Subpart ZZZZ.

Emission Unit: EU-WEST-CUPOLA-1

POLLUTION CONTROL EQUIPMENT

Two 5 MBTU direct flame afterburner, wet cap, high energy venturi scrubber, high velocity mist eliminator.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Opacity (fugitive)	20% 6-min. average, except for one 6-min. average per hour that does not exceed 30% ²	6-minute average	Each Building or Structure Housing any Iron or Steel Foundry Emission Source	SC III.1 SC III.3 SC III.4 SC V.1	40 CFR 63.10895(e)
2. PM	0.8 pounds per ton of metal charged	Hourly	EU-WEST-CUPOLA-1	SC III.1 SC III.2 SC III.3 SC V.2	40 CFR 63.10895(c)
---OR---	---OR---				
Total Metal HAP	0.06 pound per ton of metal charged ²				

II. MATERIAL LIMIT(S)

1. The permittee shall not utilize a binder chemical formulation that uses methanol as a specific ingredient of the catalyst formulation for a furfuryl alcohol warm box mold or core making line. This requirement does not apply to the resin portion of the binder system.² **(40 CFR 63.10886)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. For each segregated metallic scrap storage area, bin or pile, the permittee must comply with the material acquisition requirements contained in 40 CFR 63.10885(a)(1) or 40 CFR 63.10885(a)(2).² **(40 CFR 63.10885(a))**
2. For scrap containing motor vehicle scrap, the permittee must procure the scrap pursuant to one of the compliance options in 40 CFR 63.10885(b)(1), (2), or (3).² **(40 CFR 63.10885(b))**
3. The permittee shall operate a capture and collection system for each metal melting furnace at a new or existing iron and steel foundry unless that furnace is specifically uncontrolled as part of an emissions averaging group.

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Each capture and collection system must meet accepted engineering standards, such as those published by the American Conference of Governmental Industrial Hygienists.² **(40 CFR 63.10895(b))**

4. The permittee shall prepare and operate at all times according to a written Operation and Maintenance Plan (O&M Plan) for each control device for an emissions source subject to a PM, metal HAP, or opacity emissions limit in 40 CFR 63.10895. At a minimum the plan must contain the information listed in 40 CFR 63.10896(a)(1)-(6)).² **(40 CFR 63.10896)**
5. The permittee shall conduct inspections of each operating particulate matter control device for a metal melting furnace in accordance with 40 CFR 63.10897(a).² **(40 CFR 63.10897(a))**
6. The permittee shall conduct monthly inspections of the equipment important to the performance of the total capture system in accordance with 40 CFR 63.10897(e).² **(40 CFR 63.10897(e))**
7. The permittee shall implement and maintain an approved plan to address the pollution prevention management practices for metallic scrap and mercury switches by the applicable compliance date specified in 40 CFR 63.10881. The plan shall include the following:
 - a. Metallic scrap management program. **(40 CFR 63.10885(a))**
 - b. Mercury requirements. **(40 CFR 63.10885(b))**

The permittee shall revise the plan within 30 days after a change occurs.² **(40 CFR 63.10885)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall conduct a performance test to demonstrate compliance with the opacity limit in 40 CFR 63.10895(e), following the test methods and procedures in 40 CFR 63.6(h)(5) and Table 1 of Subpart ZZZZ. Subsequent compliance testing shall be conducted no less frequently than every 6 months and each time a process change likely to increase fugitive emissions is made.² **(R 336.2001, R 336.2003, R 336.2004, 40 CFR 63.10898(h), 40 CFR 63.10898(i))**
2. The permittee shall conduct performance testing to demonstrate compliance with applicable PM or Total Metal HAP emission rates from EU-WEST-CUPOLA-1 according to the requirements in 40 CFR 63.7(e)(1), and Table 1 of Subpart ZZZZ and paragraphs (d) through (g) of subsection 40 CFR 63.10898. The permittee shall conduct subsequent compliance testing to demonstrate compliance with all applicable emission limits no less frequently than every 5 years and each time the permittee elects to change an operating limit or make a process change likely to increase HAP emissions.² **(R 336.2001, R 336.2003, R 336.2004, 40 CFR 63.10898(b))**
3. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days of the time and place before performance tests are conducted.² **(R 336.2001(4))**
4. In the performance test report, the permittee must certify that the capture system operated normally during the performance test.² **(40 CFR 63.10898(j))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall keep records to document use of any binder chemical formulation that does not contain methanol as a specific ingredient of the catalyst formulation for each furfuryl alcohol warm box mold or core making line as required by 40 CFR 63.10886. These records must be the Safety Data Sheets (provided that it contains appropriate information), a certified product data sheet, or a manufacturer's hazardous air pollutant data sheet.² **(40 CFR 63.10890)**

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2. The permittee shall keep records of the annual quantity and composition of each HAP-containing chemical binder or coating material used to make molds and cores. These records must be copies of purchasing records, Safety Data Sheets, or other documentation that provide information on the binder or coating materials used.² **(40 CFR 63.10899)**
3. The permittee shall keep records of the metal melt production for each calendar month.² **(40 CFR 63.10899(6))**
4. The permittee shall keep records documenting compliance with scrap material specifications in accordance with 40 CFR 63.10899(b)(1),(2) and (3).² **(40 CFR 63.10899(b)(1), (2) and (3))**
5. The permittee shall keep records demonstrating compliance with the O&M Plan requirements.² **(40 CFR 63.10899(7))**
6. The permittee must install, operate, and maintain each CPMS or other measurement device according to the O&M plan. The permittee must record all information needed to document conformance with the requirements of the O&M plan.² **(40 CFR 63.10899(f))**
7. In the event of an exceedance of an established emissions limitation (including an operating limit), the permittee must restore operation of the emissions source and record the corrective action in accordance with 40 CFR 63.10897(g) and 40 CFR 10899(b)(12).² **(40 CFR 63.10897(g), 40 CFR 10899(b)(12))**
8. The permittee shall keep records of periodic inspections as well as any maintenance action on a particulate matter control device for a metal melting furnace. Records shall include, at a minimum, the information specified in 40 CFR 63.1089(b)(13)(i) through (iii).² **(40 CFR 63.10899(b)(13))**
9. The permittee shall keep records of monthly inspections and repairs of equipment important to the performance of the total capture system for the metal melting furnace control equipment.² **(40 CFR 63.10899(b)(10))**
10. The permittee shall keep records of emission information and operating and maintenance information to comply with the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and ZZZZ. The permittee shall keep all source emissions and operating and maintenance information on file at the facility for a period of at least 5 years and make them available to the Department upon request.² **(40 CFR Part 63, Subparts A & ZZZZ)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit semiannual compliance reports to the Administrator according to the requirements in 40 CFR 63.10(e). The reports must include, at a minimum, the following information as applicable:² **(40 CFR 63.10899(c))**
 - a. Summary information on the number, duration, and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective action taken;
 - b. Summary information on the number, duration, and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other calibration checks, if applicable); and

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- c. Summary information on any deviation from the pollution prevention management practices in 40 CFR 63.10885 and 40 CFR 63.10886 and the operation and maintenance requirements 40 CFR 63.10896 and the corrective action taken.
5. If applicable, the permittee shall submit semiannual reports of the number of mercury 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 a certification that the recovered mercury switches were recycled at RCRA-permitted facilities. The semiannual reports must include a certification that the facility has conducted periodic inspections or taken other means of corroboration as required under 40 CFR 63.10885(b)(1)(ii)(C). The permittee shall identify which option in 40 CFR 63.10885(b) applies to each scrap provider, contract, or shipment.² **(40 CFR 63.10899(b)(2)(i))**
6. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD.² **(R 336.2001(5))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subparts A and ZZZZZ for Iron and Steel Foundries by the initial compliance date.² **(40 CFR Part 63, Subparts A and ZZZZZ)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FG-PARTICULATE
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Various particulate sources: EU-SHAKEOUT is subject to CAM for particulate emissions.

Emission Units: EU-POURING, EU-CLEAN, EU-FINISHING, EU-SHAKEOUT, EU-AJAX-FURN, EU-COOLING

POLLUTION CONTROL EQUIPMENT

EU-CLEAN: 50,000 CFM DC#1, 50,000 CFM DC#5

EU-FINISHING: 15,000 CFM DC#2

EU-SHAKEOUT: 60,000 CFM DC#17, 50,000 CFM DC#6, 70,000 CFM DC#20, and 20,000 CFM DC#12

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.10 lb. per 1,000 lbs. of exhaust gas, on a dry gas basis ²	Hourly	FG-PARTICULATE	SC III.2 SC V.1 SC VI.1 SC VI.2 SC VI.3	R336.1331(1)(a), Table 31(J)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate the processes associated with each emission unit unless the appropriate control equipment for the above listed emission units is installed and operating properly.² **(R 336.1910)**
2. The permittee shall not operate any of the processes unless the approved Preventative Maintenance Plan is implemented and maintained. **(R 336.1213(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain the dust collectors with instrumentation to continuously measure the pressure drop across the dust collectors. **(R 336.1213(3))**
2. The permittee shall equip and maintain dust collectors, DC#1 and DC#6, with a particle sensor device. **(R 336.1213(3))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Verification of visible emissions from FG-PARTICULATE, for all emission units with control equipment, shall be performed and documented once daily by non-certified visible emissions readings while the emission unit is operating, per Appendix 3. **(R 336.1213(3))**
2. The permittee shall monitor and record the static pressure drop across the dust collectors once per day when the processes are in operation. The gauges for DC#6, DC#17, and DC#20 shall be calibrated according to manufacturer's recommendations. **(R 336.1213(3), 40 CFR 64.6(c)(1)(i), (ii) & (iii))**
3. The permittee shall monitor and record the particle sensor readings once per day when EU-SHAKEOUT is in operation. The device shall be calibrated according to manufacturer's recommendations. **(R 336.1213(3), 40 CFR 64.6(c)(1)(i), (ii) & (iii))**
4. For EU-SHAKEOUT, an excursion will occur if the pressure drop across the dust collectors deviate from their normal ranges (DC#6: 7" – 12", DC#20: 3" – 7", DC#17: 7" – 12"), or if DC#6 particle sensor readings deviate from the limits established within the Preventative Maintenance Plan. **(40 CFR 64.6(c)(2))**
5. Upon detecting an excursion or exceedance, the permittee shall restore operation of EU-SHAKEOUT to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). **(40 CFR 64.7(d))**
6. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall collect data at all required intervals at all times that EU-SHAKEOUT is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, in-frequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. Data recorded during monitoring malfunctions, repair activities and QA/QC operations shall not be used for 40 CFR Part 64 compliance. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
7. For EU-SHAKEOUT, the permittee shall, at all times, maintain the monitoring system, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment. **(40 CFR 64.7(b))**
8. For EU-SHAKEOUT, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written Quality Improvement Plan (QIP) and any activities undertaken to implement a QIP, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**

See Appendix 3

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

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3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. For EU-SHAKEOUT, each semiannual report of monitoring and deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no excursions and/or exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9(a)(2)(i))**
5. For EU-SHAKEOUT, each semiannual report of monitoring and deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. **(40 CFR 64.9(a)(2)(ii))**
6. For EU-SHAKEOUT, each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period, if appropriate. If a QIP has been completed, the report shall include documentation that the QIP has been implemented, and a discussion pertaining to whether the QIP implementation has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**
7. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. For EU-SHAKEOUT, if the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**
2. For EU-SHAKEOUT, the permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FG-RULE290
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rule 278, Rule 278a and Rule 290. Emission units installed/modified before December 20, 2016, may show compliance with Rule 290 in effect at the time of installation/modification.

Emission Units installed on or after December 20, 2016: NA

Emission Units installed prior to December 20, 2016: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

1. Each emission unit that emits only noncarcinogenic volatile organic compounds or noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, if the total uncontrolled or controlled emissions of air contaminants are not more than 1,000 or 500 pounds per month, respectively. **(R 336.1290(2)(a)(i))**
2. Any emission unit for which CO2 equivalent emissions are not more than 6,250 tons per month and for which the total uncontrolled or controlled emissions of all other air contaminants are not more than 1,000 or 500 pounds per month, respectively, and all the following criteria listed below are met: **(R 336.1290(2)(a)(ii))**
 - a. For toxic air contaminants, excluding noncarcinogenic volatile organic compounds and noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, with initial threshold screening levels greater than or equal to 0.04 micrograms per cubic meter and less than 2.0 micrograms per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively. **(R 336.1290(2)(a)(ii)(A))**
 - b. For toxic air contaminants with initial risk screening levels greater than or equal to 0.04 microgram per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively. **(R 336.1290(2)(a)(ii)(B))**
 - c. The emission unit shall not emit any toxic air contaminants, excluding non-carcinogenic volatile organic compounds and noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, with an initial threshold screening level or initial risk screening level less than 0.04 microgram per cubic meter. **(R 336.1290(2)(a)(ii)(C))**
 - d. For total mercury, the uncontrolled or controlled emissions shall not exceed 0.01 pounds per month from emission units installed on or after December 20, 2016. **(R 336.1290(2)(a)(ii)(D))**
 - e. For lead, the uncontrolled or controlled emissions shall not exceed 16.7 pounds per month from emission units installed on or after December 20, 2016. **(R 336.1290(2)(a)(ii)(E))**
3. Any emission unit that emits only particulate air contaminants without initial risk screening levels and other air contaminants that are exempted under Rule 290(2)(a)(i) or Rule 290(2)(a)(ii), if all of the following provisions are met: **(R 336.1290(2)(a)(iii))**
 - a. The particulate emissions are controlled by an appropriately designed and operated fabric filter collector or an equivalent control system which is designed to control particulate matter to a concentration of less than or equal to 0.01 pound of particulate per 1,000 pounds of exhaust gases and which does not have exhaust gas flow rate more than 30,000 actual cubic feet per minute. **(R 336.1290(2)(a)(iii)(A))**
 - b. The visible emissions from the emission unit are not more than 5% opacity in accordance with the methods contained in Rule 303. **(R 336.1290(2)(a)(iii)(B))**

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- c. The initial threshold screening level for each particulate toxic air contaminant, excluding nuisance particulate, is more than 2.0 micrograms per cubic meter. **(R 336.1290(2)(a)(iii)(C))**

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The provisions of Rule 290 apply to each emission unit that is operating pursuant to Rule 290. **(R 336.1290)**
2. The following requirements apply to emission units installed on or after December 20, 2016, utilizing control equipment:
 - a. An air cleaning device for volatile organic compounds shall be installed, maintained, and operated in accordance with the manufacturer's specifications. Examples include the following: **(R 336.1290(2)(b)(i), R 336.1910)**
 - i. Oxidizers and condensers equipped with a continuously displayed temperature indication device.
 - ii. Wet scrubbers equipped with a liquid flow rate monitor.
 - iii. Dual stage carbon absorption where the first canister is monitored for breakthrough and replaced if breakthrough is detected.
 - b. An air cleaning device for particulate matter shall be installed, maintained, and operated in accordance with the manufacturer's specifications or the permittee shall develop a plan that provides to the extent practicable for the maintenance and operation of the equipment in the manner consistent with good air pollution control practices for minimizing emissions. It shall also be equipped to monitor appropriate indicators of performance, for example, static pressure drop, water pressure, and water flow rate. **(R 336.1290(2)(b)(ii), R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall maintain records of the following information for each emission unit for each calendar month using the methods outlined in EGLE, AQD Rule 290; Permit to Install Exemption Record form (EQP 3558) or in a format that is acceptable to the AQD District Supervisor. **(R 336.1213(3))**
 - a. Records identifying each air contaminant that is emitted. **(R 336.1213(3))**
 - b. Records identifying if each air contaminant is controlled or uncontrolled. **(R 336.1213(3))**
 - c. Records identifying if each air contaminant is either carcinogenic or non-carcinogenic. **(R 336.1213(3))**
 - d. Records identifying the ITSL and IRSL, if established, of each air contaminant that is being emitted under the provisions of Rules 290(2)(a)(ii) and (iii). **(R 336.1213(3))**
 - e. Records of material use and calculations identifying the quality, nature, and quantity of the air contaminant emissions in sufficient detail to demonstrate that the actual emissions of the emission unit meet the emission limits outlined in this table and Rule 290. Volatile organic compound emissions from units installed on or after December 20, 2016, shall be calculated using mass balance, generally accepted engineering calculations, or another method acceptable to the AQD District Supervisor. **(R 336.1213(3), R 336.1290(2)(d))**
 - f. Records are maintained on file for the most recent 2-year period and are made available to the department upon request. **(R 336.1213(3), R 336.1290(2)(e))**

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2. The permittee shall maintain an inventory of each emission unit that is exempt pursuant to Rule 290. This inventory shall include the following information. **(R 336.1213(3))**
 - a. The permittee shall maintain a written description of each emission unit as it is maintained and operated throughout the life of the emission unit. **(R 336.1290(2)(c), R 336.1213(3))**
 - b. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to Rule 290(2)(a)(iii), the permittee shall maintain a written description of the control device, including the designed control efficiency and the designed exhaust gas flow rate. **(R 336.1213(3))**
3. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to Rule 290(2)(a)(iii), the permittee shall perform a monthly visible emission observation of each stack or vent during routine operating conditions. This observation need not be performed using Method 9. The permittee shall keep a written record of the results of each observation. **(R 336.1213(3))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

**FG-COLDCLEANERS
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278, Rule 278a, and Rule 281(2)(h) or Rule 285(2)(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.

Emission Unit: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall not use cleaning solvents containing more than five percent by weight of the following halogenated compounds: methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chloroform, or any combination thereof. **(R 336.1213(2))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Cleaned parts shall be drained for no less than 15 seconds or until dripping ceases. **(R 336.1611(2)(b), R 336.1707(3)(b))**
2. The permittee shall perform routine maintenance on each cold cleaner as recommended by the manufacturer. **(R 336.1213(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The cold cleaner must meet one of the following design requirements:
 - a. The air/vapor interface of the cold cleaner is no more than ten square feet. **(R 336.1281(2)(h))**
 - b. The cold cleaner is used for cleaning metal parts and the emissions are released to the general in-plant environment. **(R 336.1285(2)(r)(iv))**
2. The cold cleaner shall be equipped with a device for draining cleaned parts. **(R 336.1611(2)(b), R 336.1707(3)(b))**
3. All new and existing cold cleaners shall be equipped with a cover and the cover shall be closed whenever parts are not being handled in the cold cleaner. **(R 336.1611(2)(a), R 336.1707(3)(a))**
4. The cover of a new cold cleaner shall be mechanically assisted if the Reid vapor pressure of the solvent is more than 0.3 psia or if the solvent is agitated or heated. **(R 336.1707(3)(a))**
5. If the Reid vapor pressure of any solvent used in a new cold cleaner is greater than 0.6 psia; or, if any solvent used in a new cold cleaner is heated above 120 degrees Fahrenheit, then the cold cleaner must comply with at least one of the following provisions:
 - a. The cold cleaner must be designed such that the ratio of the freeboard height to the width of the cleaner is equal to or greater than 0.7. **(R 336.1707(2)(a))**

- b. The solvent bath must be covered with water if the solvent is insoluble and has a specific gravity of more than 1.0. **(R 336.1707(2)(b))**
- c. The cold cleaner must be controlled by a carbon adsorption system, condensation system, or other method of equivalent control approved by the AQD. **(R 336.1707(2)(c))**

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

- 1. For each new cold cleaner in which the solvent is heated, the solvent temperature shall be monitored and recorded at least once each calendar week during routine operating conditions. **(R 336.1213(3))**
- 2. The permittee shall maintain the following information on file for each cold cleaner: **(R 336.1213(3))**
 - a. A serial number, model number, or other unique identifier for each cold cleaner.
 - b. The date the unit was installed, manufactured or that it commenced operation.
 - c. The air/vapor interface area for any unit claimed to be exempt under Rule 281(2)(h).
 - d. The applicable Rule 201 exemption.
 - e. The Reid vapor pressure of each solvent used.
 - f. If applicable, the option chosen to comply with Rule 707(2).
- 3. The permittee shall maintain written operating procedures for each cold cleaner. These written procedures shall be posted in an accessible, conspicuous location near each cold cleaner. **(R 336.1611(3), R 336.1707(4))**
- 4. As noted in Rule 611(2)(c) and Rule 707(3)(c), if applicable, an initial demonstration that the waste solvent is a safety hazard shall be made prior to storage in non-closed containers. If the waste solvent is a safety hazard and is stored in non-closed containers, verification that the waste solvent is disposed of so that not more than 20 percent, by weight, is allowed to evaporate into the atmosphere shall be made on a monthly basis. **(R 336.1213(3), R 336.1611(2)(c), R 336.1707(3)(c))**

VII. REPORTING

- 1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
- 2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
- 3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

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E. NON-APPLICABLE REQUIREMENTS

At the time of the ROP issuance, the AQD has determined that no non-applicable requirements have been identified for incorporation into the permit shield provision set forth in the General Conditions in Part A pursuant to Rule 213(6)(a)(ii).

APPENDICES

Appendix 1. Acronyms and Abbreviations

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO _{2e}	Carbon Dioxide Equivalent
CFR	Code of Federal Regulations	dscf	Dry standard cubic foot
COM	Continuous Opacity Monitoring	dscm	Dry standard cubic meter
Department/ department	Michigan Department of Environment, Great Lakes, and Energy	°F	Degrees Fahrenheit
EGLE	Michigan Department of Environment, Great Lakes, and Energy	gr	Grains
EU	Emission Unit	HAP	Hazardous Air Pollutant
FG	Flexible Group	Hg	Mercury
GACS	Gallons of Applied Coating Solids	hr	Hour
GC	General Condition	HP	Horsepower
GHGs	Greenhouse Gases	H ₂ S	Hydrogen Sulfide
HVLP	High Volume Low Pressure*	kW	Kilowatt
ID	Identification	lb	Pound
IRSL	Initial Risk Screening Level	m	Meter
ITSL	Initial Threshold Screening Level	mg	Milligram
LAER	Lowest Achievable Emission Rate	mm	Millimeter
MACT	Maximum Achievable Control Technology	MM	Million
MAERS	Michigan Air Emissions Reporting System	MW	Megawatts
MAP	Malfunction Abatement Plan	NMOC	Non-methane Organic Compounds
MSDS	Material Safety Data Sheet	NO _x	Oxides of Nitrogen
NA	Not Applicable	ng	Nanogram
NAAQS	National Ambient Air Quality Standards	PM	Particulate Matter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM10	Particulate Matter equal to or less than 10 microns in diameter
NSPS	New Source Performance Standards	PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
NSR	New Source Review	pph	Pounds per hour
PS	Performance Specification	ppm	Parts per million
PSD	Prevention of Significant Deterioration	ppmv	Parts per million by volume
PTE	Permanent Total Enclosure	ppmw	Parts per million by weight
PTI	Permit to Install	psia	Pounds per square inch absolute
RACT	Reasonable Available Control Technology	psig	Pounds per square inch gauge
ROP	Renewable Operating Permit	scf	Standard cubic feet
SC	Special Condition	sec	Seconds
SCR	Selective Catalytic Reduction	SO ₂	Sulfur Dioxide
SNCR	Selective Non-Catalytic Reduction	TAC	Toxic Air Contaminant
SRN	State Registration Number	Temp	Temperature
TEQ	Toxicity Equivalence Quotient	THC	Total Hydrocarbons
USEPA/EPA	United States Environmental Protection Agency	tpy	Tons per year
VE	Visible Emissions	µg	Microgram
		µm	Micrometer or Micron
		VOC	Volatile Organic Compounds
		yr	Year

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

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Appendix 2. Schedule of Compliance

The permittee certified in the ROP application that this stationary source is in compliance with all applicable requirements and the permittee shall continue to comply with all terms and conditions of this ROP. A Schedule of Compliance is not required. (R 336.1213(4)(a), R 336.1119(a)(ii))

Appendix 3. Monitoring Requirements

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in EU-POURING, EU-BULK-BOND, EU-DUCTILE-IRON, EU-NEW-SAND, EU-WEST-CUPOLA-1, EU-MP-RBB, EU-ACS-SAND and FG-PARTICULATE.

The permittee shall conduct and record the following information during non-certified visual observations for opacity.

1. Visible emissions shall be recorded as "observed" or "not observed."
2. If visible emissions are observed, a description of the color of the emissions
3. If visible emissions are observed, the duration of the emission incident shall be recorded.
4. If visible emissions are observed, the maintenance supervisor shall be notified immediately.
5. A determination of cause and needed repairs and/or maintenance shall be made within 24 hours and recorded.
6. Repair and/or maintenance operations shall be performed within 48 hours of discovery.
7. Routine maintenance shall be performed according to the manufacturer's recommendations

Appendix 4. Recordkeeping

Specific recordkeeping requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 5. Testing Procedures

Specific testing requirement plans, procedures, and averaging times are detailed in the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 6. Permits to Install

The following table lists any PTIs issued or ROP revision applications received since the effective date of the previously issued ROP No. MI-ROP-B1909-2013. Those ROP revision applications that are being issued concurrently with this ROP renewal are identified by an asterisk (*). Those revision applications not listed with an asterisk were processed prior to this renewal.

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Source-Wide PTI No MI-PTI-B1909-2013a is being reissued as Source-Wide PTI No. MI-PTI-B1909-2019a.

Permit to Install Number	ROP Revision Application Number	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
139-14	201600015	Incorporate Permit to Install (PTI) No. 139-14, which decreased the amount of melted metal from 150,000 tons per year to 99,000 tons per year. This was due to the installation of a new automatic pouring line (EU-POURING) that accounted for a previous emission source that was formerly grandfathered equipment, and is now incorporated. The new line was expected to be operational by January 25, 2016.	SOURCE-WIDE EU-POURING FG-PARTICULATE

The following table lists the ROP amendments or modifications issued after the effective date of ROP No. MI-ROP B1909-2019.

Permit to Install Number	ROP Revision Application Number - Issuance Date	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
69-21	202200034 / May 3, 2022	Incorporate PTI No. 69-21 which increased the melted metal from 99,000 tons per year to 129,325 tons per year to account for the use of both manual and automated pouring operations. Additionally, EU-POURING was modified to include the manual pouring line which previously operated under an exemption. Although not modified, other emission units and flexible groups were considered affected sources for the modern PSD applicability review and remain unchanged. This application was not required to go through the public participation process.	SOURCE-WIDE EU-POURING EU-BULK-BOND EU-DUCTILE-IRON EU-NEW-SAND EU-WEST-CUPOLA-1 EU-MP-RBB EU-ACS-SAND EU-CLEAN EU-FINISHING EU-SHAKEOUT EU-AJAX-FURN EU-COOLING FG-MACT-ZZZZZ FG-PARTICULATE

Appendix 7. Emission Calculations

Specific emission calculations to be used with monitoring, testing or recordkeeping data are detailed in the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

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Appendix 8. Reporting

A. Annual, Semiannual, and Deviation Certification Reporting

The permittee shall use the EGLE, AQD, Report Certification form (EQP 5736) and EGLE, AQD, Deviation Report form (EQP 5737) for the annual, semiannual and deviation certification reporting referenced in the Reporting Section of the Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Alternative formats must meet the provisions of Rule 213(4)(c) and Rule 213(3)(c)(i), respectively, and be approved by the AQD District Supervisor.

B. Other Reporting

Specific reporting requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, Part B of this appendix is not applicable.



Emission Systems O&M Preventive Maintenance Program

This is the preventive maintenance program for emission systems at CWC-Extron, 1085 West Sherman Blvd, Muskegon MI 49441.

The use of equipment checklists is the way all information regarding preventative maintenance observations are carried out.

Maintenance equipment checklists contain the following basic identification information:

Equipment number, description of system to be inspected, frequency of inspection, date of inspection, if the item is ok or needs repair, gage readings, comments section, notification to supervisor if problem, completed sheet checked, clock number of sheet checker and doc no.

Checklists are completed on a daily (some each shift) weekly, monthly, quarterly or semi-annual basis.

Blank equipment checklists are available in the maintenance office, and are stored in the EAM electronic maintenance program.

Procedure:

- The maintenance manager shall assign a supervisor to be responsible for carrying out this procedure.
- The maintenance supervisor will assign personnel to make the preventive maintenance inspections.
- The inspector will review all items and mark with a check in the appropriate box.
- The completed form is turned in to the maintenance supervisor, who will assign or schedule corrective action by use of the EAM computer maintenance program where a work order will be generated. The work order will include the date, repair and man-hours required.
- The supervisor in charge will identify any equipment requiring maintenance and give the completed checklist to the maintenance coordinator.
- The repairs will be carried on the open work order until the work has been completed.
- Completed copies of current year equipment checklists are maintained in the maintenance office and prior year records are held in the records storage area.

CWC Textron Emission Systems O & M Program

PM Schedule	Description	Type	WO Type
5000-E-D-TUE	D - 3RD SHIFT - MR1 - PLANT TOUR - EQUIPMENT SHUTDOWN - D2 THRU D5	Duplicate	Preventive Maintenance
5100-003-D3	D - 1ST SHIFT - MW - FOUNDRY DUST COLLECTOR - D3	Variable	Preventive Maintenance
5510MR-2M	Q - 1ST W/E SHIFT - MR - DROP BOTTOM # 1 CUPOLA INSPECTION - WK1	Variable	Preventive Maintenance
5512-009	M - 1ST SHIFT - OIL - GREASE CUPOLA FAN SHAFT BEARINGS - 28 DAYS	Variable	Preventive Maintenance
5512-010	Q - 1ST SHIFT - OIL - GREASE CUPOLA FAN MOTOR - WK1	Variable	Preventive Maintenance
5512-2M	M - 3RD SHIFT - MRS - #1 CUPOLA BLOWER - WK2	Variable	Preventive Maintenance
5513-001	Q - 3RD SHIFT - OIL - DROP BOTTOM # 1 CUPOLA EMISSION FAN BEARINGS - WK1	Variable	Preventive Maintenance
5513-2M	Q - 1ST W/E SHIFT - MR - DROP BOTTOM # 1 CUPOLA EMISSION FAN - WK1	Variable	Preventive Maintenance
5513-003	D - 3RD SHIFT - OIL - #1 CUPOLA EMISSION FAN MOTOR BEARING - D1 THRU D4	Duplicate	Preventive Maintenance
5514-2M	M - 3RD SHIFT - MW - # 1 CUPOLA EMISSION FAN MOTOR INSPECTIONS - WK2	Variable	Preventive Maintenance
5514-001	M - 3RD SHIFT - OIL - CUPOLA ZURN FAN MOTOR GREASING - WK1	Variable	Preventive Maintenance
5515-001	Q - MAINT. / SMF OC - DROP BOTTOM - WET CAP CLEANING - WK1	Variable	Preventive Maintenance
5515-2M	M - 3RD SHIFT - MR5 - # 1 CUPOLA EMISSION DUCT INSPECTIONS - WK2	Variable	Preventive Maintenance
5516-001	BW - 1ST SHIFT - MR - # 1 CUPOLA SCRUBBER INSPECTION - ODD	Variable	Preventive Maintenance
5516-2M	Q - 1ST W/E SHIFT - MR - DROP BOTTOM # 1 CUPOLA SCRUBBER INSPECTION - WK1	Variable	Preventive Maintenance
5516-002	Q - MEACHAM - OC - DROP BOTTOM # 1 CUPOLA - DEMISTER PADS INSPECTION - WK2	Variable	Preventive Maintenance
5516M - 8W	6 - 3RD SHIFT - MR - #1 CUPOLA DEMISTER INSPECTION	Variable	Preventive Maintenance
5517-005	BW - 1ST SHIFT - MR - # 1 CUPOLA SEPARATOR INSPECTION - ODD	Variable	Preventive Maintenance
5517-2M	Q - 3RD SHIFT - MR - #1 CUPOLA SEPARATOR INSPECTION	Variable	Preventive Maintenance
5519-1-2M	M - 3RD SHIFT - EL - #1 CUPOLA STACK BURNER - WK2	Variable	Preventive Maintenance
5600-D	D - 1ST SHIFT - MR - DUST COLLECTORS TOUR - D1 THRU D5	Duplicate	Preventive Maintenance
5765-D-MON	D - 2ND SHIFT - MR - PLANT TOUR EMISSION - D1 THRU D5	Duplicate	Preventive Maintenance
5766-D	W-2ND SHIFT - MR - PLANT TOUR EMISSION	Variable	Preventive Maintenance
5600-010	D - 1ST SHIFT - MR - PLANT TOUR - D1	Variable	Preventive Maintenance
5800-001	M - 1ST SHIFT - OIL - DUST COLLECTORS 1,2,5,6,12,13,17,19,20 GREASING - WK1	Variable	Preventive Maintenance
5819-001	BW - 2ND SHIFT - MW - # 19 DUST COLLECTOR MECHANICAL CHECK - EVEN	Variable	Preventive Maintenance
5819-002	W - 1ST SHIFT - MW - # 19 DUST COLLECTOR MECH. CHECK	Variable	Preventive Maintenance
5819-007	M - BOB MEACHAM - # 19 DUST COLLECTOR PIPE BUILD UP REVIEW	Variable	Autonomous Maintenance
	Updated 1/26/23		

The environmental department will record information daily by using the “Daily Environmental Check Sheet” 811.001 located in our “Power way” document control system and includes:

- Static pressure for venturi scrubber and demister scrubber
- Emission pump pressure
- Magnesium Hydroxide flow rate
- Static pressure readings for dust collectors: #1, #2, #5, #6, #12, #13, #17, #19, #20
- Visible emissions from all sources
- NCC – emission probe readings for #1, #5, #6, #12, #13

And will record on a weekly basis:

- Emission pond visible observations
- Fugitive dust observations

Deviations will be noted and corrective action taken.

Dry collectors #1, #5, #6, #12, #13, #17, #19, #20 will be black light tested on a semi-annual basis at summer shutdown and winter shutdown.

An outside contractor at a minimum of once a year will conduct detailed inspections of dust collectors and the cupola emission systems.

Checklists and Plant Map

The pages that follow contain the checklists mentioned above and a plant dust collector map.

Updated: 1/26/23

By: Robert Meacham

KT-MUSKEGON**%****MKG Plant**

PM Code	Job Type
5000-E-D-TUE	PM

Description

D - 3RD SHIFT - MR1 - PLANT TOUR - EQUIPMENT SHUTDOWN - D2 THRU D5

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
79	M5600	GENERAL PLANT		A	WEEKLY	1	WEEK	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed

Task Instructions

5000-E-D

- A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE
- B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR.
- C) PERFORM THE FOLLOWING TASKS

1) _____ PUT TWO GARNDER DENVER'S COMPRESSOR IN SEQUENCE

MELTING

2) _____ MAKE SURE CHARGE DOORS ARE SUPPORTED CLOSED

SAND SYSTEM: ENSURE HEATER PACKAGES FOR THE FOLLOWING ARE OFF

3) _____ 211 - MOLD DUMP CONVEYOR

4) _____ 212 - VIB DRUM

CUPOLA BLOWER ROOM

5) _____ SHUTDOWN ZURN FAN

6) _____ LEAVE BEARING WATER ON

7) _____ SHUTDOWN MAGNESIUM HYDROXIDE

TUESDAY WEDSNEDAY THURSDAY FRIDAY

KT-MUSKEGON % MKG Foundry

PM Code	Job Type
5100-003 - D3	PM

Description								
D - 1st SHIFT - MW - FOUNDRY DRY DUST COLLECTOR - D3								
Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
01	M5100	SAND SYSTEM		AA-MW	DAILY	1	WEEK	Aug 17, 2011 12:00:00 AM

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed

Task Instructions

Created - Gundy, Michelle (MKG)(MGUNDY) [08/11/2010 10:29]:

A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE

B) PERFORM THE FOLLOWING TASKS

DURING OPERATION VISUALLY INSPECTION FOR DRY DUST COLLECTORS # 1, #2, #5, #6, #12, #13, #17:

- 1) ___ CHECK FOR LOOSE FASTENERS
- 2) ___ CHECK DRIVE CONDITION
- 3) ___ CHECK MOTOR FOR HOT OR NOISEY
- 4) ___ CHECK BELTS - GOOD OR SLIPPING OR MISSING # _____
- 5) ___ CHECK SHEAVE WARE
- 6) ___ CHECK BEARING CONDITION, HOT OR NOISEY
- 7) ___ CHECK FOR EXCESIVE VIBRATION
- 8) ___ CHECK TO SEE IF DUST COLLECTOR IS EMITTING

ANY DISCREPANCIES REPORT TO YOUR SUPERVISOR

REV. 08/10/10

KT-MUSKEGON % MKG Melting

PM Code	Job Type
5510MR-2M	PM

Description

Q - 1ST W/E SHIFT - MR - DROP BOTTOM # 1 CUPOLA INSPECTION - WK1

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
27	M5510	#1 CUPOLA (WEST)		A	QUARTRLY	3	MONTH	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed

Task Instructions

5510MR-2M
 A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE
 B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR.
 C) PERFORM THE FOLLOWING TASKS
 INSTRUCTIONS: These checks and tests need to be completed on the cupola which is ready to go back into service. This document is not complete until all three signatures are present.

CUPOLA (down) WEST (#1) _____
 TUYERE
 ALARM CHECK
 YES NO

- 1) _____
- 2) _____
- 3) _____
- 4) _____
- 5) _____
- 6) _____

=====

WATER SYSTEM CHECK AJAX PIN CHECK
 YES | NO YES | NO
 PANEL ALARM CHECK _____ EAST OK _____ WEST OK _____

=====

CUPOLA GOING INTO SERVICE YES | NO

- 1 CAP OPENING AND CLOSING PROPERLY _____
- 2) ZURN FAN OPERATING PROPERLY _____
- 3) OXYGEN SYSTEM WORKING _____

=====

UPON SUCCESSFUL RE-CERTIFICATION OF THE " OUT-OF-SERVICE" CUPOLA, COMPLETE AND SIGN THIS FORM.

MELTING: _____ MAINTENANCE: _____
 (Melting Supervisors Signature) (Maintenance Supervisors Signature)

 (Skilled Trade Signature)

KT-MUSKEGON**%****MKG Melting**

PM Code	Job Type
5512-009	PM

Description

M - 1ST SHIFT - OIL - GREASE CUPOLA FAN SHAFT BEARINGS - 28 DAYS

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
27	M5512	#1 Cupola Charge Blower		A	MONTHLY	28	DAYS	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed

Task Instructions

5512-009

- A) COMPLETE PROPER LOCKOUT/TAGOUT
- B) IF ANY DISCRPANCIES ARE GOUND IMMEDIATELY CONTACT YOUR SUPERVISOR
- C) PERFORM THE FOLLOWING TASKS

USING THE LUBE EXPERT GREASE (USE OILS000405) THE CUPOLA BLOWER FAN BEARINGS USING THE ROUTE UNDER "MELTING-CUPOLA BLOWER MONTHLY"

- 1) ____ USING CWC#OILS000405 SHELLGADUS S5 V100 GREASE
- 2) ____ GREASE THE 2 FAN SHAFT BEARINGS.

KT-MUSKEGON**%****MKG Melting**

PM Code	Job Type							
5512-010	PM							
Description								
Q - 1ST SHIFT - OIL - GREASE CUPOLA FAN MOTOR - WK1*								
Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
27	M5512	#1 Cupola Charge Blower		A	QUARTRLY	12	WEEK	
Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed		
Task Instructions								
5512-010 A) COMPLETE PROPER LOCKOUT/TAGOUT B) IF ANY DISCRPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR C) PERFORM THE FOLLOWING TASK 1. USING CWC#OILS000405 SHELL GADUS S5 V100 GREASE 2. USING A MANUAL GREASE GUN ON THE VOLUME SETTING INSERT 11 PUMPS FROM THE GUN INTO EACH OF THE MOTOR BEARINGS (2). 3. GREASE IN IAW (SEE ATTACHED DOCUMENT)								

KT-MUSKEGON**%****MKG Melting**

PM Code	Job Type							
5512-2M	PM							
Description								
M - 3RD SHIFT - MR5 - # 1 CUPOLA BLOWER - WK2								
Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
27	M5512	#1 Cupola Charge Blower		A	MONTHLY	1	MONTH	
Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed		
Task Instructions								
5512-2M								
A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE								
B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR.								
C) PERFORM THE FOLLOWING TASKS								
1)___ Check All Dampers For Smooth Opening & Closing								
2)___ Check All Ducting For Excess Wear								
3)___ Check Blower For Excess Vibration								
4)___ Check Damper Cylinder Shaft Clevis & Pin For Excess Wear								
5)___ Check Inlet Damper For Build Up On Screen								
6)___ Check Inlet Damper For Proper Opening & Closeing								
7)___ Check Mounts Bolts For Blower Motor								
8)___ Keep Blower Room Cleaned Out At All Times								
9)___ CHECK EXPANSION RUBBER FOR CRACKS, DEFECTS, TIGHT INSTALLATION								

KT-MUSKEGON % **MKG Melting**

PM Code	Job Type
5513-001	PM

Description

M - 3rd SHIFT - OILER - # 1 CUPOLA EMISSION FAN BEARINGS

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
27	M5513	# 1 Cupola Emission Fan		AA-OIL	MONTHLY	1	MONTH	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed

Task Instructions

- A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE
- B) PERFORM THE FOLLOWING TASKS
 - 1) ___ DRAIN OIL AND FILL WITH NEW, SHOULD BE MID-LEVEL ON SIGHT GLASS

TAKES OILS00046

KT MUSKEGON % MKG Melting

PM Code Job Type
 5513-2M PM

Description

Q - 3rd SHIFT - MR - # 1 CUPOLA EMISSION FAN

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
27	M5513	# 1 Cupola Emission Fan		AA-MR	QUARTRLY	1	N/A	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed

Task Instructions

A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE

B) PERFORM THE FOLLOWING TASKS

NOTE: CUPOLA BOTTOM MUST BE DROPPED FOR THESE TASKS TO BE STARTED.

- 1) ___ Check Boots On Incoming & Out Going Sides Of Fan
- 2) ___ Check Ducting To Staack
- 3) ___ Check Fan Bearings, Mount Bolts
- 4) ___ Check Fan For Vibration
- 5) ___ Check Fan Runner For Build Up On Blades
- 6) ___ Check Guillotine Blades & Guides
- 7) ___ Check Guillotine Cylinder,Hoses.
- 8) ___ Check Louver Coupling, Bearings & Linkage
- 9) ___ Check Louvers & Louver Action
- 10) ___ Check Oil Level & Water Flow
- 11) ___ Check Spray Nozzles To Fan & Drains Are Open

KT-MUSKEGON**%****MKG Melting**

PM Code	Job Type
5513-003	PM

Description

D - 3RD SHIFT - OIL - #1 CUPOLA EMISSION FAN MOTOR BEARING - D1 THRU D4

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
27	M5513	#1 Cupola Emission Fan - ZURN FAN		A	WEEKLY	1	WEEK	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed
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Task Instructions

5513-003

- A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE
- B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR.
- C) PERFORM THE FOLLOWING TASKS
 - 1) ___ CHECK OIL IN SIGHT GLASS FOR 2 BEARINGS, OIL SHOULD BE MID-LEVEL. TAKES "TELLUS S2 M 46" (OILS0046)THERE ARE 4 SIGHT GLASSES IN TOTAL FOR BLOWER BEARINGS.

TAKES "TELLUS S2 M 46" (OILS0046)

MONDAY TUESDAY WEDSNEDAY THURSDAY FRIDAY

KT-MUSKEGON % MKG Melting

PM Code	Job Type
5514-2M	PM

Description

M - 3RD SHIFT - MW - # 1 CUPOLA EMISSION FAN MOTOR INSPECTIONS - WK2

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
27	M5514	#1 Cupola Emission Fan Motor		A	MONTHLY	1	MONTH	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed

Task Instructions

5514-2M

- A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE

- B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR.

- C) PERFORM THE FOLLOWING TASKS
 - 1)___ Check Coupling Bolts & Hub
 - 2)___ Check Motor Mount Bolts

KT-MUSKEGON**%****MKG Melting**

PM Code	Job Type
5514-001	PM

Description

6MTH - 3RD SHIFT - OIL - CUPOLA ZURN FAN MOTOR GREASING - WK1

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
27	M5514	#1 Cupola Emission Fan Motor		A	6-MONTH	6	MONTH	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed
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Task Instructions

5514-001

- A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE
- B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR.
- C) PERFORM THE FOLLOWING TASKS

1) ___ GREASE 1200 HP ZURN FAN MOTOR TAKES 10 PUMPS CWC (USE: OILS8950)

2) ___ MAKE SURE FLOW THROUGH PLUG IS OPEN BEFORE GREASING AND PLUG IS REINSTALLED AFTER GREASING

KT-MUSKEGON % MKG Melting

PM Code Job Type

5515-001 PM

Description

Q - MAINT. / SMF OC - DROP BOTTOM - WET CAP CLEANING - WK1

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
27	M5515	#1 Cupola Emission Duct - VENTURI - WET CAP		A	QUARTRLY	3	MONTH	

Material List Equipment Part Description Bin QTY Available QTY Needed

Task Instructions

5515-001

- A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE
- B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR.
- C) PERFORM THE FOLLOWING TASKS
 - 1) CUPOLA WATER DISCHARGE AT THE STACK CHECK THE PIPING, AIR EMISSION DISCHARGE PIPE, DEMISTER PADS AND VENTURI WATER FLOW

KT-MUSKEGON % MKG Melting

PM Code	Job Type
5515-2M	PM

Description

M - 3RD SHIFT - MR5 - # 1 CUPOLA EMISSION DUCT INSPECTIONS - WK2

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
27	M5515	#1 Cupola Emission Duct - VENTURI - WET CAP		A	MONTHLY	1	MONTH	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed
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Task Instructions

5515-2M

- A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE

- B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR.

- C) PERFORM THE FOLLOWING TASKS
 - 1) ___ CHECK / CLEAN OUT LONG TROUGH OF ANY DEBRIS
 - 2) ___ CHECK DUCTING FOR SIGNS OF HOT SPOTS
 - 3) ___ CHECK DUCTING EXPANSION JOINTS FOR WORN BOOTS = CAP
 - 4) ___ CHECK CAP DRAIN FOR EXCESS WEAR
 - 5) ___ CHECK CAP CABLE & CABLE SHEAVES FOR WEAR
 - 6) ___ CHECK CAP STOPS
 - 7) ___ CHECK CAP PIVOT PINS & BUSHINGS
 - 8) ___ CHECK CAP CYLINDER : ROD END, CLEVIS PINS & BUSHINGS
 - 9) ___ CHECK CAP CYLINDER : FOR BLOW BY & CONDITION OF AIR LINES = CONE
 - 10) ___ WHEN CUPOLA IS DOWN FROM OUTSIDE ONLY DO A VISUAL CHECK AT THE INSPECTION COVER - CHECK CONE UPPER SPRAY NOZZLES FOR WEAR
 - 11) ___ WHEN CUPOLA IS DOWN FROM OUTSIDE ONLY DO A VISUAL CHECK AT THE INSPECTION COVER - CHECK CONE OVERTOP OF CUPOLA & MOUNT STRAPS

Organization KT-MUSKEGON
Job Type PM
Assign To %

WORK ORDER

Location
Report Date Mar 2, 2023
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5516-001

BW - 1ST SHIFT - MR - # 1 CUPOLA SCRUBBER INSPECTION - ODD

PM

M5516 #1 Cupola Scrubber

Scheduled End Date: Mar 18, 2023 12:00:00 AM
Created By: MDONSELAR
Work Order Class: BIWEEKLY
Assigned to code: AA-MR
Assigned to name: Machine Repair

EMP ID _____
DATE _____
HOURS _____

Requested By: _____

Tasks

- A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE
- B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR.
- C) PERFORM THE FOLLOWING TASKS

1) Check All Boots & Ducting For Worn Spots

2) Check Cone For Excess Wear

3) Check Cone For Proper SetTING

4) Check Scrubber For Build Up

5) Check Scrubber For Excess Wear

BW - 1ST SHIFT - MR - # 1 CUPOLA SCRUBBER INSPECTION - ODD

Part	Desc	Materials	Bin	Requested Qty	Qty on-hand
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KT-MUSKEGON

%

MKG Melting

PM Code	Job Type
5516-2M	PM

Description

Q - 3rd SHIFT - MR - # 1 CUPOLA SCRUBBER INSPECTION

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
27	M5516	# 1 Cupola Scrubber		AA-MR	QUARTRLY	1	N/A	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed
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Task Instructions

A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE

B) PERFORM THE FOLLOWING TASKS

NOTE: CUPOLA BOTTOM MUST BE DROPPED FOR THESE TASKS TO BE STARTED.

- 1) ___ Check All Boots & Ducting For Worn Spots
- 2) ___ Check Cone For Excess Wear
- 3) ___ Check Cone For Proper Setting
- 4) ___ Check Scrubber For Build Up
- 5) ___ Check Scrubber For Excess Wear

KT-MUSKEGON % MKG Melting

PM Code Job Type

5516-002 PM

Description

Q - MEACHAM - OC - DROP BOTTOM # 1 CUPOLA - DEMISTER PADS INSPECTION - WK2

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
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27	M5516	#1 Cupola Scrubber		A	QUARTRLY	1	N/A	
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Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed
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Task Instructions

5516-002

- A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE
- B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR.
- C) PERFORM THE FOLLOWING TASKS

1) _____ Check pads are lying down in the grid framework with no gaps larger than 1 inch between pads

2) _____ Check iron angle braces are in good condition

A) _____ Not broken

B) _____ Still attached to the wall

C) _____ Located in the proper position holding down the demister pads from movement.

3) _____ Check the underside of the demister pads

A) _____ Are the water sprays contacting the bottom of the pads

B) _____ Are all spray heads spraying water

4) _____ Any other issues noted about the pads or water system report back to Bob Meacham

KT-MUSKEGON % **MKG Melting**

PM Code	Job Type
5516M-8W	PM

Description

6 - 3rd SHIFT - MR - # 1 CUPOLA DEMISTER INSPECTION

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
27	M5516	# 1 Cupola Scrubber		AA-MR	G-MONTH	6	MONTH	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed

Task Instructions

MANNING : 1 ON BURNER / 1 ON WATCH / 1 ON CLEANING

TO COMPLETE THIS TASK THE FOLLOWING IS REQUIRED:
 RENTAL OF STEAM JENNIE FROM REDI RENTAL, [REF. P.O. # 72387]
 INCLUDE 150 FOOT OF STANDARD HIGH PRESSURE HOSE FROM REDI RENTAL

- A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE
- B) PERFORM THE FOLLOWING TASKS
 - 1) ___ CHECK DEMISTER PADS TO ENSURE THEY ARE SECURLY FASTENED
 - 2) ___ CHECK INSIDE DEMISTER TO ENSURE THERE IS NO DEBRIS - CAREFULLY REMOVE IF FOUND
 - 3) ___ VISUALLY INSPECT NOZZLES FOR DAMAGE

Organization KT-MUSKEGON
Job Type PM
Assign To %

WORK ORDER

Location
Report Date Mar 2, 2023
Page # 18

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5517-005

BW - 1ST SHIFT - MR - # 1 CUPOLA SEPARATOR INSPECTION - ODD

PM

M5517 #1 Cupola Separator - Demister - VENTURI

Scheduled End Date: Mar 18, 2023 12:00:00 AM
Created By: MDONSELAR
Work Order Class: BIWEEKLY
Assigned to code: AA-MR
Assigned to name: Machine Repair

EMP ID _____
DATE _____
HOURS _____

Requested By: _____

Tasks

- A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE
- B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR.
- C) PERFORM THE FOLLOWING TASKS

NOTE: CUPOLA BOTTOM MUST BE DROPPED FOR THESE TASKS TO BE STARTED.

- 1) Check All Boots & Ducting For Worn Spots
- 2) Check All Emission Drain Lines To Pond For Leaks & Worn Sections
- 3) Check Mount Bolts For Motors & Pumps
- 4) Check Packing Glands For Leakage
- 5) Check Pump Pressure Should Be At 55 To 60 P.S.I.
- 6) Check Separator For Plugged Screens
- 7) Check Sheaves, Vee Belts For Wear & Alignment
- 8) Check Sub Pumps
- 9) CHECK DEMISTER PADS TO ENSURE THEY ARE SECURLY FASTENED
- 10) CHECK INSIDE DEMISTER TO ENSURE THERE IS NO DEBRIS - CAREFULLY REMOVE IF FOUND
- 11) VISUALLY INSPECT NOZZLES FOR DAMAGE

BW - 1ST SHIFT - MR - # 1 CUPOLA SEPARATOR INSPECTION - ODD

Part	Desc	Materials	Bin	Requested Qty	Qty on-hand
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KT-MUSKEGON % **MKG Melting**

PM Code Job Type
 5517-2M PM

Description

Q - 3rd SHIFT - MR - # 1 CUPOLA SEPARATOR INSPECTION

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
27	M5517	# 1 Cupola Separator [Demister]		AA-MR	QUARTRLY	1	N/A	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed

Task Instructions

A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE

B) PERFORM THE FOLLOWING TASKS

NOTE: CUPOLA BOTTOM MUST BE DROPPED FOR THESE TASKS TO BE STARTED.

- 1) ___ Check All Boots & Ducting For Worn Spots
- 2) ___ Check All Emission Drain Lines To Pond For Leaks & Worn Sections
- 3) ___ Check Mount Bolts For Motors & Pumps
- 4) ___ Check Packing Glands For Leakage
- 5) ___ Check Pump Pressure Should Be At 55 To 60 P.S.I.
- 6) ___ Check Separator For Plugged Screens
- 7) ___ Check Sheaves, Vee Belts For Wear & Alignment
- 8) ___ Check Sub Pumps

KT-MUSKEGON % MKG Melting

PM Code	Job Type
5519-1-2M	PM

Description

M - 3RD SHIFT - EL - # 1 CUPOLA STACK BURNER - WK2

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
27	M5510	#1 CUPOLA (WEST)		A	MONTHLY	1	MONTH	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed

Task Instructions

5519-1-2M

- A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE

- B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR.

- C) PERFORM THE FOLLOWING TASKS
 - 1) ___ Check All Panel Indicator Lights
 - 2) ___ Check Burner Ignition
 - 3) ___ Check Burner Modulation
 - 4) ___ Check Combustion Blower
 - 5) ___ Check Maxon Valve Operation
 - 6) ___ Check Modulation Of Combustion Air
 - 7) ___ Check Purge Cycle
 - 8) ___ Check Spark Plug Connections
 - 9) ___ Check Thermocouple Signal At Barber Colman Unit
 - 10) ___ Check Vent Valve
 - 11) ___ Check All Wire Connections At Stack Burner And Main Controls

KT-MUSKEGON**%****MKG Maintenance**

PM Code	Job Type
5600-D	PM

Description

D - 1ST SHIFT - MR - DUST COLLECTORS TOUR - D1 THRU D5

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
44	M5800	ENVIRONMENTAL		A	WEEKLY	1	WEEK	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed

Task Instructions

5600-D

A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE

B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR

C) PERFORM THE FOLLOWING TASKS

Cleaning Rm - #1 & #2 DUST COLLECTORS - Visually Check For Stack Emissions And Leaks (If Visible Emissions Contact Your Supervisor)

1) Record #1 Manometer Reading:

Mon____ Tue____ Wed____ Thurs____ Fri____ (If <5.0 - >12.0 Contact Your Supervisor)

2) Check #1 Air Pulse Unit Operation - Record Inlet Air Pressure

Mon____ Tue____ Wed____ Thurs____ Fri____

3) Record #2 Manometer Reading:

Mon____ Tue____ Wed____ Thurs____ Fri____ (If <3.0 - >10.0 Contact Your Supervisor)

4) Check #2 Air Pulse Unit Operation - Record Inlet Air Pressure

Mon____ Tue____ Wed____ Thurs____ Fri____

5) MELT/ CLEANING ROOM - #5 DUST COLLECTOR Manometer Readings: (If <3.0 - >10.0 Contact Your Supervisor)

Mon____ Tue____ Wed____ Thurs____ Fri____

6) KNOCK / OFF - #6 DUST COLLECTOR Visually Check For Stack Emissions And Leaks

Mon____ Tue____ Wed____ Thurs____ Fri____ (If Visible Emissions Contact Your Supervisor)

7) Record #6 Manometer Reading: (If <5.0 - >12.0 Contact Your Supervisor)

Mon____ Tue____ Wed____ Thurs____ Fri____

8) Check #6 Air Pulse Unit Operation - Record Inlet Air Pressure Mon____ Tue____ Wed____ Thurs____ Fri____

9) #7 BOND BIN - SHAKER - NOTE*** DOES NOT HAVE A MANOMETER

Check TO ENSURE SHAKE DOWN OPERATION AND Visually Check For Stack Emissions And Leaks

Mon____ Tue____ Wed____ Thurs____ Fri____ (If Visible Emissions Contact Your Supervisor)

KT-MUSKEGON**%****MKG Maintenance**

Task Instructions

10) #11 BOND RECEIVER - NOTE*** DOES NOT HAVE A MANOMETER

Inspect RECEIVER For Misc. Failures such as Loose Fasteners, Missing Guards, Etc. Check Air Pulse Unit Operation. Visually Check For Stack Emissions And Leaks

Mon ___ Tue ___ Wed ___ Thurs ___ Fri ___ (If Visible Emissions Contact Your Supervisor)

11) ACS VACUUM - #12 DUST COLLECTOR Visually Check For Stack Emissions And Leaks (If Visible Emissions Contact Your Supervisor)

Record #12 Manometer Reading:

Mon ___ Tue ___ Wed ___ Thurs ___ Fri ___ (If <14.0 - >20.0 Contact Your Supervisor)

Check #12 Air Pulse Unit Operation - Record Inlet Air Pressure (Operating Pressure 85 - 100 Psi, Adjust Regulator If Necessary)

Mon ___ Tue ___ Wed ___ Thurs ___ Fri ___ (If Visible Emissions Contact Your Supervisor)

12) ___ FINAL BLAST - #13 DUST COLLECTOR Visually Check For Stack Emissions And Leaks (If Visible Emissions Contact Your Supervisor)

Mon ___ Tue ___ Wed ___ Thurs ___ Fri ___

Record #13 Manometer Readings: (IF <5.0 - >13.0 Contact Your Supervisor)

Mon ___ Tue ___ Wed ___ Thurs ___ Fri ___

Check #13 Air Pulse Unit Operation - Record Inlet Air Pressure (Operating Pressure 85 - 100 Psi, Adjust Regulator If Necessary)

Mon ___ Tue ___ Wed ___ Thurs ___ Fri ___

13)#17 SHAKEOUT DUST COLLECTOR

Inspect Collector For Misc. Failures (Loose Fasteners, Missing Guards, Etc.) Check Air Pulse Unit Operation - Record Inlet Air Pressure:

Mon ___ Tue ___ Wed ___ Thurs ___ Fri ___ (If Visible Emissions Contact Your Supervisor)

14)#19 DUST COLLECTOR - Record #19 Manometer Reading:

Mon ___ Tue ___ Wed ___ Thurs ___ Fri ___ (If <2.0 - >10.0 Contact Your Supervisor)

Check #19 Air Pulse Unit Operation - Record Inlet Air Pressure

Mon ___ Tue ___ Wed ___ Thurs ___ Fri ___

15) ___ VIBRA DRUM - #20 DUST COLLECTOR Visually Check For Stack Emissions And Leaks

Mon ___ Tue ___ Wed ___ Thurs ___ Fri ___ (If Visible Emissions Contact Your Supervisor)

Record #20 Manometer Readings: (IF <2.0 - >10.0 Contact Your Supervisor)

Mon ___ Tue ___ Wed ___ Thurs ___ Fri ___ (If Visible Emissions Contact Your Supervisor)

16) Check #20 Air Pulse Unit Operation - Record Inlet Air Pressure (Operating Pressure 85 - 100 Psi, Adjust Regulator If Necessary)

KT-MUSKEGON

%

MKG Maintenance

Task Instructions

Mon ___ Tue ___ Wed ___ Thurs ___ Fri ___

****Were Any Air Pressure Gauges Readjusted? Yes ___ No ___ IF YES MAINT.SUPV NOTIFY EHS**

****Were Any Manometer Readings Out-Of-Spec? Yes ___ No ___ IF YES MAINT. SUPV NOTIFY EHS**

KT-MUSKEGON % MKG Plant

PM Code	Job Type
5765-D-MON	PM

Description

D - 2ND SHIFT - MR - PLANT TOUR EMISSION - D1 THRU D5

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
79	M5600	GENERAL PLANT		A	WEEKLY	1	WEEK	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed

Task Instructions

5765-D

- A) COMPLETE PROPER LOCKOUT / TAGOUT
- B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR
- C) PERFORM THE FOLLOWING TASKS
 - 1) _____ KAISER ROOM CHECK THE HEATER AND FAN ONLY
 - 2) _____ CHECK AJAX FURNACE HYDRAULIC OIL LEVEL
 - 3) _____ CHECK AJAX FURNACE TILT CYLINDERS FOR LEAKS
 - A) VERIFY TILT VALVE IS WORKING PROPERLY
 - B) VERIFY HYD. SYS FOR TILT IS WORKING PROPERLY
 - C) VERIFY PIVOT POINTS FOR TILT ARE LUBRICATED
 - 4) _____ CHECK CUPOLA EMISSION WATER, DRAINS, AND COOLING WATER..
 - 5) _____ CHECK EMISSION STACK FOR LEAKS,WEAR OR VIBRATIONS.
 - 6) _____ CHECK EMISSION PUMP ROOM FOR PROPER TEMP (WINTER MONTHS)7) _____ CHECK EMISSION PIT SUMP PUMP
 - 8) _____ LISTEN FOR LOOSE/SQUEALING BELTS
 - 9) _____ VISUAL CHECK OF EMISSION PUMP FOR LEAKING MECH. SEAL
 - 10) _____ CHECK EMISSION PUMP DISCHARGE PRESURE AT HEADER SHOULD BE 70+
 - 11) _____ CHECK PUMP AMP DRAW AT ELC. PANEL SHOULD BE = 62 AMPS +/- 2 AMPS
 - 12) _____ HEATERS AND PUMP PITS FOR EXCESS WATER.
 - 13) _____ IN ZURN FAN ROOM - RECORD THE AMP READING ON THE LOG _____
 - 14) _____ CHECK TO MAKE SURE VENTURI PANEL IS POWERED ON (LOCATED IN BLOWER ROOM) BUMP OPEN BUTTON TO MAKE SURE VENTURI IS WORKING.
 - 15) _____ Check Ajax Bac Operation Of Pumps, Fans, Water Flow.
 - 16) _____ Check Bac Chemicals.
 - 17) _____ Check Ceramic Tower And Tuyere Pumps.
 - 18) _____ MAG. HYDROXIDE ROOM - CHECK PUMP OPERATION AND TANK LEVEL
 - RECORD MAG. HYDROXIDE FLOW METER READING :
 - Mon. G.P.M. _____ Tue. G.P.M. _____ Wed. G.P.M. _____ Thur. G.P.M. _____ Fri. G.P.M. _____
 - _____ (If No Reading Contact Your Supervisor)
 - 19) _____ Check Bond System. Check For Leaks, Bad Boosters Etc.- Make Sure You Have Spare Boosters Built Up For New Sand System.
 - 20) _____ Check Pond Water Level. POND SHOULD AT/AROUND THE 5TH PIN
CHECK PROPANE VAPORIZERS
 - 21) _____ RECORD LINE PRESSURE.
Mon _____ PSI Tue _____ PSI Wed _____ PSI Thur. _____ PSI Fri. _____ PSI (If Below 50psi, Contact Your Supervisor

Task Instructions

22) _____ IS PROPANE PUMP OPERATING YES _____ NO _____ RECORD PSI
Mon _____ PSI Tue _____ PSI Wed _____ PSI Thur. _____ PSI Fri. _____ PSI (If Below
80psi, Contact Your Supervisor)

23) _____ IF PUMP IS NOT OPERATING - WILL PUMP OPERATE IN HAND ? YES _____ NO _____

24) _____ RECORD TUYERE PUMP PRESSURE (Desired PSI 65 - 85)
Mon _____ PSI Tue _____ PSI Wed _____ PSI Thur. _____ PSI
Fri _____ PSI

25) _____ RECORD MARLEY TOWER PUMP PRESSURE (Desired PSI 28-32)
Mon _____ PSI Tue _____ PSI Wed _____ PSI Thur. _____ PSI
Fri _____ PSI

26) _____ RECORD THE WET CAP PUMP PRESSURE (Desired PSI 55-70)
Mon _____ PSI Tue _____ PSI Wed _____ PSI Thur. _____ PSI
Fri _____ PSI

27) #5 Dust Collector - Ductile Collector (Range 3.0 - 10.0)
_____ #1 MANOMETER READINGS M _____ T _____ W _____ Th _____ F _____

MONDAY TUESDAY WEDSNEDAY THURSDAY FRIDAY

28) Was Supervisor notified of all out of spec. readings? Yes _____ No _____

KT-MUSKEGON % **MKG Plant**

PM Code Job Type
 5766-D PM

Description

W - 2nd SHIFT - MR - PLANT TOUR EMISSION

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
79	M5600	GENERAL PLANT		AA-MR	WEEKLY	1	WEEK	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed

Task Instructions

DAILY PM - 2nd Shift, MACHINE REPAIR

REVISED ON : 2/22/06, 1/17/06,

INSTRUCTION :

- INITIAL COMPLETED TASKS ON THE LINE PROVIDED, ON FRONT OF PM
 - a. @ BOOKED HOURS - ENTER YOUR CLOCK NUMBER AND DATE COMPLETED
 - b. @ REMARKS AREA - TO BE REVIEWED BY SUPERVISION
- DOCUMENT NON-EMERGENCY ISSUES / Write COMPLETED Repairs Starting With - DONE INITIAL

- 1) ___ 1250HP - CENTAC COMPRESSOR: CHECK COOLING WATER OPERATION & RECORD HOUR METER READING : _____
 - 2) ___ 700HP - CENTAC COMPRESSOR: CHECK COOLING WATER OPERATION & RECORD HOUR METER READING : _____
 - 3) ___ CHECK KAISER COMPRESSORS FOR; PROPER OIL LEVEL, AIR FILTER CONDITION & RECORD HOUR METERS : # 64 _____ #65 _____
 - 4) ___ CHECK AJAX FURNACE HYDRAULIC OIL LEVEL.
 - 5) ___ CHECK AJAX FURNACE TILT CYLINDERS FOR LEAKING.
 - 6) ___ Check Cupola Emission Water, Drains, And Cooling Water.
 - 7) ___ RECORD OPERATING CUPOLA EMISSION SYSTEM MANOMETER READINGS.
 OPERATING CUPOLA NO. _____ HIGH _____ LOW _____
 (If No Reading Contact Your Supervisor)
 - Diffenence Between HIGH & LOW Reading _____ , [IF Difference is greater than (13) Contact Your MAINTENANCE SUPERVISOR ' IMMEDIATELY ' .
 - 8) ___ IN Zurn Fan ROOM - " At-Start-Of-Shift " : Record Vibration & amp. Readings on log sheet
 RECORD NORTH BEARING (MILS) _____
 RECORD SOUTH BEARING (MILS) _____ [RANGE LESS THAN 2.0 MILS]
 - 9) ___ Check Ajax Bac's Operation Of Pumps, Fans, Water Flow.
 - 10) ___ Check Bac Chemicals.
 - 11) ___ Check Ceramic Tower And Tuyere Pumps.
 - 12) ___ Check Emission Pit Sump Pump.
 - 13) ___ Check Emission Pond Water Chemicals.
 - 14) ___ MAG. HYDROXIDE ROOM - CHECK PUMP OPERATION AND TANK LEVEL
 - RECORD MAG. HYDROXIDE FLOW METER READING : G.P.M. _____
 (If No Reading Contact Your Supervisor)
 - 15) ___ Check Bond System Over Daily. Check For Leaks, Bad Boosters Etc.
 - Make Sure You Have Spare Boosters Built Up For New Sand System.
 - 16) ___ Check New Sand System Over Daily. Check For Leaks, Bad Boosters Etc.
 - 17) ___ Check Pond Water Level.
- CHECK PROPANE VAPORIZERS
- 18) ___ IS PROPANE PUMP OPERATING YES ___ NO ___
 - 19) ___ IF PUMP IS NOT OPERATING - WILL PUMP OPERATE IN HAND ? YES ___ NO ___
 - 20) ___ RECORD LINE PRESSURE. _____ PSI (If Below 45 psi, Contact Your Supervisor)
 - 21) ___ RECORD TUYERE PUMP PRESSURE _____ PSI , (Desired PSI)

KT-MUSKEGON % MKG Plant

Task Instructions

- 22) _____ RECORD MARLEY TOWER PUMP PRESSURE _____ PSI, (Desired PSI)
- 23) _____ RECORD WET COLLECTOR PUMP PRESSURE _____ PSI, (Desired PSI)

KT-MUSKEGON % **MKG Plant**

PM Code	Job Type
5600-010	PM

Description

D - 1st SHIFT - MR - PLANT TOUR - D1

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
79	M5600	GENERAL PLANT		AA-MR	DAILY	1	WEEK	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed

Task Instructions

- A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE
- B) PERFORM THE FOLLOWING TASKS
- C) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR.
- 1) _____ CHECK EMISSION STACK FOR LEAKS, WARE OR VIBRATIONS.
- 2) _____ CHECK EMISSION PUMP ROOM FOR PROPER TEMP (WINTER MONTHS)
- 3) _____ HEATERS AND PUMP PITS FOR EXCESS WATER.
- 4) _____ CHECK POND LEVEL (NO MORE 15" BELOW BAIL).
- 5) _____ CHECK KAISER COMP ROOM, HEATER, OIL AND FLOOR, WATER, FILTERS CLEAN AS NECESSARY.
- 6) _____ CHECK BOND SILO AND WATCH FOR PROPER CYCLE FILL BLOW

REVISIONS:
NEW 09/13/11 REQ #134

KT-MUSKEGON % MKG Maintenance

PM Code	Job Type
5800-001	PM

Description

M - 1ST SHIFT - OIL - DUST COLLECTORS 1,2,5,6,12,13,17,19 GREASING - WK1

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
44	M5800	ENVIRONMENTAL		A	MONTHLY	1	MONTH	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed
Task Instructions						

5800-001

A) COMPLETE PROPER LOCKOUT/ TAGOUT PROCEDURE

B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR

C) PERFORM THE FOLLOWING TASKS

- 1) _____ GREASE THE 2 PILLOW BLOCK BEARINGS FOR THE BLOWER AND THE 2 AUGER BEARINGS ON #1 DUST COLLECTOR (M5801)
- 2) _____ GREASE THE 2 PILLOW BLOCK BEARINGS FOR THE BLOWER ON #2 DUST COLLECTOR (M5802)
- 3) _____ GREASE THE 2 PILLOW BLOCK BEARINGS FOR THE BLOWER AND THE 2 AUGER BEARINGS ON #5 DUST COLLECTOR (M5805)
- 4) _____ GREASE THE 2 PILLOW BLOCK BEARINGS FOR THE BLOWER AND THE 2 AUGER BEARINGS ON #6 DUST COLLECTOR (M5806)
- 5) _____ GREASE THE 2 PILLOW BLOCK BEARINGS FOR THE BLOWER AND THE 2 AUGER BEARINGS ON #12 DUST COLLECTOR (M5812)
- 6) _____ GREASE THE 2 PILLOW BLOCK BEARINGS FOR THE BLOWER ON #13 DUST COLLECTOR (M5813)
- 7) _____ GREASE THE 2 PILLOW BLOCK BEARINGS FOR THE BLOWER ON #17 DUST COLLECTOR (M5817)
- 8) _____ GREASE THE 2 PILLOW BLOCK BEARINGS FOR THE BLOWER AND THE 4 AUGER BEARINGS ON #19 DUST COLLECTOR (M5819)

KT-MUSKEGON % MKG Plant

PM Code	Job Type
5819-001	PM

Description

BW - 2ND SHIFT - MW - # 19 DUST COLLECTOR MECHANICAL CHECK - EVEN

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
79	M5819	# 19 SAND SYSTEM DUST COLLECTOR 90,000 CFM		A	BIWEEKLY	2	WEEK	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed
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Task Instructions

5819-001

A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE
 B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR.
 C) PERFORM THE FOLLOWING TASKS

- 1) _____ CHECK AUGER EAST BELTS (CWC# BEVE3081) AND WEST CHAIN FOR TENSION
- 2) _____ CHECK AUGER SHEAVES AND SPROCKET FOR WEAR
- 3) _____ CHECK BLOWER BELTS FOR TENSION AND WEAR
- 4) _____ CHECK BLOWER AND MOTOR SHEAVES FOR WEAR
- 5) _____ CHECK BLOWER AND LOUVER BOOTS (SEALS) FOR WEAR

KT-MUSKEGON % MKG Plant

PM Code	Job Type
5819-002	PM

Description

W - 1ST SHIFT - MW - # 19 DUST COLLECTOR MECH. CHECK

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
79	M5819	# 19 SAND SYSTEM DUST COLLECTOR 90,000 CFM		A	WEEKLY	1	WEEK	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed
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Task Instructions

5819-002

A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE
 B) PERFORM THE FOLLOWING TASKS
 C) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR

- 1) _____ CHECK DRIVE BELTS ON EAST END OF AUGER
- 2) _____ CHECK BEARING ON EST END OF AUGER FOR NOISE OR CHATTER
- 3) _____ CHECK CHAIN ON WEST END OF AUGER FOR TIGHTNESS
- 4) _____ CHECK BEARING ON WEST END OF AUGER
- 5) _____ CHECK AIR LOCKS (TWO) FOR NOISE OR VIBRATION
- 6) _____ CHECK BELTS ON BLOWER FOR LOOSE OR DAMAGE OR NOISE (BEVE0850)
- 7) _____ CHECK BEARINGS TEMP ON BLOWER
- 8) _____ CHECK SEALS FROM DUST COLLECTOR TO BLOWER AND LOUVER SEALS OR BOOTS
- 9) _____ CHECK FOR STACK VIBRATION

KT-MUSKEGON % MKG Plant

PM Code	Job Type
5819-007	AUT

Description

M - BOB MEACHAM - # 19 DUST COLLECTOR PIPE BUILD UP REVIEW

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
79	M5819	# 19 SAND SYSTEM DUST COLLECTOR 90,000 CFM		A	MONTHLY	1	MONTH	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed
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Task Instructions

5819-007

- A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE

- B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR.

- C) PERFORM THE FOLLOWING TASKS
 - 1) ___ OPEN ACCESS DOORS ON #19 DC
 - 2) ___ CHECK FOR MATERIAL BUILD UP IN PIPE
 - 3) ___ CHECK FOR MATERIAL BUILD UP CHOP GATE
 - 4) ___ REPORT RESULTS TO BOB MEACHAM

Compliance Assurance Monitoring (CAM) Plan CWC Textron

I. BACKGROUND

Emission Unit

Description: Knockoff operation #227, Spiral Elevator #228 and Rocker Barrel Blast
Identification: EU-MP-RBB
Pollution Control Equipment: Dust Collector Unit #1, Dust Collector Unit #13, Dust Collector Unit #6
Facility: CWC Textron
1085 West Sherman Blvd
Muskegon, MI 49441-3588

Applicable Regulation, Emission Limit, Monitoring Requirements

Renewable Operating Permit No: MI-ROP-B1909-2019a

Emission Limits

Particulate Matter: 0.01 lbs per 1,000 lbs of exhaust gases. Rule 336.1331 (1)(c)

Opacity:

10% opacity based on 6-minute average, Rule 1301 (1)(c)

Monitoring Requirements:

A non-certified visual emissions (Opacity) observation will be conducted daily on days of production.

Record the static pressure drop across the fabric filter dust collectors once per day.

Record the reading from the particle sensors on each of the fabric filter dust collectors once per day.

Control Technology

Pre-control potential emissions for PM are more than 100 tons annually. The efficiency rate for the fabric filter dust collectors units #1, #6 and #13 is over 99%.

II. MONITORING APPROACH

Indicator

Installed static pressure drop monitors with readings taken once per day

Installed particle sensor system indicator reading recorded once per day

A non-certified visual emissions (Opacity) observation will be conducted daily on days of operation.

Indicator Range

An excursion is defined as excessive opacity for a duration exceeding two hours or if the pressure drop across the dust collectors deviate from their normal ranges (DC#1 7"-12", DC#6 7" - 12" and DC#13 8"-12") or if particle sensor readings deviate from the limits established within the preventative maintenance plan.

III. PERFORMANCE CRITERIA

Data Representativeness Measurements are made each day of production

Verification of Operational
Status Calibration of pressure gauges

QA/QC Practices and Criteria Routine preventative maintenance

Monitoring Frequency Each day of production

Data Collection Procedure Measurements are made at dust collector #1, #6 and #13 and are recorded daily on the written daily environmental checklist form.

IV. JUSTIFICATION

Rationale for Selection of Performance Indicator

Opacity was selected as a performance indicator of good operation and maintenance of the dust collection system.

When the static pressure drop and particle sensors are all operating within the required ranges, there will be zero or minimal opacity. However, opacity excursions do not necessarily represent PM emission violations and are usually associated with startup and shutdown procedures.

The selected ranges of the monitoring systems have historically indicated good system performance and particulate control.

Compliance Assurance Monitoring (CAM) Plan CWC Textron

I. BACKGROUND

Emission Unit

Description: ACS sand system which controls emissions from the sand cooler, sand tower, sand muller, the sand basement and elevators #18 and #23.

Identification: EU-ACS-SAND

Pollution Control Equipment: Dust Collector Unit #19

Facility: CWC Textron
1085 West Sherman Blvd
Muskegon, MI 49441-3588

Applicable Regulation, Emission Limit, Monitoring Requirements

Renewable Operating Permit No: MI-ROP-B1909-2019a

Emission Limits

Particulate Matter: 0.10 lbs per 1,000 lbs of exhaust gases. Rule 336.1331 (1)(a)

Opacity: 20% opacity based on 6-minute average, except for one 6 minute average per hour of not more than 27% opacity, Rule 301

Monitoring Requirements:

A non-certified visual emissions (Opacity) observation will be conducted daily on days of production.

Record the static pressure drop across the fabric filter dust collectors once per day.

Control Technology

Pre-control potential emissions for PM are more than 100 tons annually. The efficiency rate for the fabric filter dust collector unit #19 is over 99%.

II. MONITORING APPROACH

Indicator: Installed static pressure drop monitors with readings taken once per day
A non-certified visual emissions (Opacity) observation will be conducted daily on days of operation.

Indicator Range: An excursion is defined as excessive opacity for a duration exceeding two hours or if the pressure drop across the dust collector deviates from its normal range of 3"- 7".

III. PERFORMANCE CRITERIA

Data Representativeness: Measurements are made each day of production

Verification of Operational Status Calibration of pressure gauges

QA/QC Practices and Criteria Routine preventative maintenance

Monitoring Frequency Each day of production

Data Collection Procedure Measurements are made at dust collector #19 and are recorded daily on the written daily environmental checklist form.

IV. JUSTIFICATION

Rationale for Selection of Performance Indicator

Opacity was selected as a performance indicator of good operation and maintenance of the dust collection system.

When the static pressure drop is operating within the required ranges, there will be zero to minimal opacity. However, opacity excursions do not necessarily represent PM emission violations and are usually associated with startup and shutdown procedures.

The selected ranges of the monitoring systems have historically indicated good system performance and particulate control.

**Compliance Assurance Monitoring (CAM) Plan
CWC Textron**

I. BACKGROUND

Emission Unit

Description: Cupola #1, which is the West Cupola and includes charging operations.
Identification: EU-WEST-CUPOLA-1
Facility: CWC Textron
1085 West Sherman Blvd
Muskegon, MI 49441-3588

Applicable Regulation, Emission Limit, Monitoring Requirements

Renewable Operating Permit No: MI-ROP-B1909-2019a

Emission Limits

Particulate Matter: 0.15 lbs per 1,000 lbs of exhaust gases. Rule 336.1331 (1)(a)

Opacity: 20% opacity based on 6-minute average, except for one 6 minute average per hour of not more than 27% opacity, Rule 301

Monitoring Requirements:

A non-certified visual emissions (Opacity) observation will be conducted daily on days of production.

Record the pressure drop at the high energy venturi scrubber and demister separator system once per day.

Record the water pressure rate to the high energy venturi scrubber system once per day.

Control Technology

Pre-control potential emissions for PM are more than 100 tons annually. The efficiency rate for cupola emission scrubber system exceeds 99%.

II. MONITORING APPROACH

Indicator Installed high energy venturi scrubber and demister system with pressure drop monitors with readings taken once per day
Installed water line in the emission control system with a pressure indicator recorded once per day
A non-certified visual emissions (Opacity) observation will be conducted daily on days of production.

Indicator Range An excursion is defined as excessive opacity for a duration exceeding two hours, the pressure drop across the venturi deviates from it's normal range 30"- 56" psi during blasting, the demister pressure drop deviates from its' normal level or 0" - 3" psi

III. PERFORMANCE CRITERIA

Data Representativeness	Measurements are made each day of production
Verification of Operational Status	Calibration of pressure gauges
QA/QC Practices and Criteria	Routine preventative maintenance
Monitoring Frequency	Each day of production
Data Collection Procedure	Measurements are made at the venturi scrubber, demister separator and the emissions room and recorded daily on the written daily environmental checklist form.

IV. JUSTIFICATION

Rationale for Selection of Performance Indicator

Opacity was selected as a performance indicator of good operation and maintenance of the cupola emission system

When the venturi scrubber, demister separator and the water flow line are all operating within the required ranges, there will be minimal opacity. Particulate emission test results historically indicate that the emission rate is well below the particulate limit when the stack opacity is at or below 20%. However, opacity excursions do not necessarily represent PM emission violations and are usually associated with startup and shutdown procedures.

The selected ranges of the monitoring systems have historically indicated good system performance and particulate control.

Performance Testing

Stack testing for particulate conducted on September 12, 2017 indicates that when the performance indicators are within their ranges, particulate emissions are well below the emission requirements of the permit.

Compliance Assurance Monitoring (CAM) Plan CWC Textron

I. BACKGROUND

Emission Unit

Description: Casting shakeout and return sand system.
Identification: EU-SHAKEOUT
Pollution Control Equipment: Dust Collector Unit #6, Dust Collector Unit #17 and Dust Collector Unit #20
Facility: CWC Textron
1085 West Sherman Blvd
Muskegon, MI 49441-3588

Applicable Regulation, Emission Limit, Monitoring Requirements

Renewable Operating Permit No: MI-ROP-B1909-2019a

Emission Limits

Particulate Matter: 0.10 lbs per 1,000 lbs of exhaust gases. Rule 336.1331 (1)(a)

Opacity: 20% opacity based on 6-minute average, except for one 6 minute average per hour of not more than 27% opacity, Rule 301

Monitoring Requirements:

A non-certified visual emissions (Opacity) observation will be conducted daily on days of production.

Record the static pressure drop across the fabric filter dust collectors once per day.

Record the particle sensor reading at the fabric filter dust collector #6 once per day.

Control Technology

Pre-control potential emissions for PM are more than 100 tons annually. The efficiency rate for the fabric filter dust collectors unit #6, #17 and #20 is over 99%.

II. MONITORING APPROACH

Indicator: Installed static pressure drop monitors with readings taken once per day
Installed particle sensor reading taken once per day on Dust Collector Unit #6
A non-certified visual emissions (Opacity) observation will be conducted daily on days of operation.

Indicator Range: An excursion is defined as excessive opacity for a duration exceeding two hours or if the pressure drop across the dust collector units deviates from their normal ranges (DC#6 7" - 12", DC#17 7" - 12", DC#20 "3 - 7") or if DC#6 particle sensor readings deviate from the limits established within the preventative maintenance plan.

III. PERFORMANCE CRITERIA

Data Representativeness Measurements are made each day of production

Verification of Operational
Status Calibration of pressure gauges

QA/QC Practices and Criteria Routine preventative maintenance

Monitoring Frequency Each day of production

Data Collection Procedure Measurements are made at dust collector #6, dust collector #17 and dust collector #20 and are recorded daily on the written daily environmental checklist form.

IV. JUSTIFICATION

Rationale for Selection of Performance Indicator

Opacity was selected as a performance indicator of good operation and maintenance of the dust collection system.

When the static pressure drop is operating within the required ranges, and the particle sensor device on DC#6 has not deviated from its established limit, there will be zero to minimal opacity. However, opacity excursions do not necessarily represent PM emission violations and are usually associated with startup and shutdown procedures.

The selected ranges of the monitoring systems have historically indicated good system performance and particulate control.



ISO 14001 PROCEDURE MANUAL

Document name: Fugitive Emissions Dust Control Plan
Date: April 27, 2018
Rev: 3

Document no. 8.1-5
Page 1 of 2

Primary Approval: EHS Manager
Secondary Approval: Integrated Supply Chain Manager
Secondary Approval: Operations Manager
Secondary Approval: Technology Manager

I Purpose

The purpose of this procedure is to provide for a system and instructions, and to assign responsibilities for a Fugitive Dust Control Program.

II Application

This procedure applies to the company's activities, products, and services that can interact with the environment; whether they are carried out or generated in-house, purchased or sub-contracted.

III Responsibility and Authority.

The EHS Manager is responsible for collecting and coordinating information regarding the fugitive dust control plan.

IV Procedure

1. CWC will establish and implement an internal set of guidelines for a Fugitive Dust Control Program.

VI Fugitive Dust Control Program

- A. The storage piles are created and maintained with a front-end loader. Care shall be exercised during this work to minimize the quantity of fugitive dust created.
 - B. There is one storage pile of foundry refuse sand located under the west end of the crane runway. The normal maximum size of this pile is 40 feet wide x 30 feet high x 40 feet long..
2. Other Refuse Sources
 - A. Slag from the desulfurizing operation will be collected in storage pile on east end of the crane way as it is generated. This material shall be loaded out to the landfill on a timely basis.



ISO 14001 PROCEDURE MANUAL

Document name: Fugitive Emissions Dust Control Plan
Date: December 21, 2017
Rev: 2

Document no. EOP8.1-5
Page 2 of 2

- B. Bags of dust from dry collectors will be carefully placed in roll off hoppers to prevent spillage. Any spillage of this material will be cleaned up immediately.

3. Roads and Traffic Areas

- A. All paved roads will be swept on a weekly basis or as needed.
- B. All sand spillage on paved roads from refuse loading operations shall be removed as necessary.
- C. All dirt, sand, and other foreign material deposited on paved roads from vehicles from unpaved areas will be removed as necessary.
- D. All material spillage from incoming and outgoing delivery trucks on paved roads will be removed as necessary.

4. Loading Out of Refuse Material

- A. The free fall distance from the front-end loader into the trucks will be kept to a minimum.
- B. The front-end loader operator shall be directed to avoid overfilling the bucket of the loader to prevent spillage when transporting and loading materials onto trucks.

5. Inspection and Record Keeping

- A. The EHS Manager or a designate shall make a weekly inspection and maintain a record of these inspections and are documented on the daily environmental check sheet (811.001).
- B. Any deviations of this policy shall be documented and forwarded to the EHS Manager.

- ASSOCIATED DOCUMENTS:
 - Daily Environmental Check Sheet (811.001)

RECEIVED

JUL 10 2023

State of Michigan - EGLE
Air Quality Standards District

SRN: B1909

Section Number (if applicable):

PART C: SOURCE REQUIREMENT INFORMATION

Answer the questions below for specific requirements or programs to which the source may be subject.

<p>C1. Actual emissions and associated data from all emission units with applicable requirements (including those identified in the existing ROP, Permits to Install and other equipment that have not yet been incorporated into the ROP) are required to be reported in MAERS. Are there any emissions and associated data that have not been reported in MAERS for the most recent emissions reporting year? If Yes, identify the emission unit(s) that was/were not reported in MAERS on an AI-001 Form. Applicable MAERS form(s) for unreported emission units must be included with this application.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>C2. Is this source subject to the federal regulations on ozone-depleting substances? (40 CFR Part 82)</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>C3. Is this source subject to the federal Chemical Accident Prevention Provisions? (Section 112(r) of the Clean Air Act Amendments, 40 CFR Part 68) If Yes, a Risk Management Plan (RMP) and periodic updates must be submitted to the USEPA. Has an updated RMP been submitted to the USEPA?</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>C4. Has this stationary source added or modified equipment since the last ROP renewal that changes the potential to emit (PTE) for criteria pollutant (CO, NOx, PM10, PM2.5, SO2, VOC, lead) emissions? If Yes, include potential emission calculations (or the PTI and/or ROP revision application numbers, or other references for the PTE demonstration) for the added or modified equipment on an AI-001 Form. If No, criteria pollutant potential emission calculations do not need to be included.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>C5. Has this stationary source added or modified equipment since the last ROP renewal that changes the PTE for hazardous air pollutants (HAPs) regulated by Section 112 of the federal Clean Air Act? If Yes, include potential emission calculations (or the PTI and/or ROP revision application numbers or other references for the PTE demonstration) for the added or modified equipment on an AI-001 Form. Fugitive emissions must be included in HAP emission calculations. If No, HAP potential emission calculations do not need to be included.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>C6. Are any emission units subject to the Cross-State Air Pollution Rule (CSAPR)? If Yes, identify the specific emission unit(s) subject to CSAPR on an AI-001 Form.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>C7. Are any emission units subject to the federal Acid Rain Program? If Yes, identify the specific emission unit(s) subject to the federal Acid Rain Program on an AI-001 Form. Is an Acid Rain Permit Renewal Application included with this application?</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>C8. Are any emission units identified in the existing ROP subject to compliance assurance monitoring (CAM)? If Yes, identify the specific emission unit(s) subject to CAM on an AI-001 Form. If a CAM plan has not been previously submitted to EGLE, one must be included with the ROP renewal application on an AI-001 Form. If the CAM Plan has been updated, include an updated copy. Is a CAM plan included with this application? If a CAM Plan is included, check the type of proposed monitoring included in the Plan: 1. Monitoring proposed by the source based on performance of the control device, or 2. Presumptively Acceptable Monitoring, if eligible</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> <input type="checkbox"/>
<p>C9. Does the source have any plans such as a malfunction abatement plan, fugitive dust plan, operation/maintenance plan, or any other monitoring plan that is referenced in an existing ROP, Permit to Install requirement, or any other applicable requirement? If Yes, then a copy must be submitted as part of the ROP renewal application.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>C10. Are there any specific requirements that the source proposes to be identified in the ROP as non-applicable? If Yes, then a description of the requirement and justification must be submitted as part of the ROP renewal application on an AI-001 Form.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p><input checked="" type="checkbox"/> Check here if an AI-001 Form is attached to provide more information for Part C. Enter AI-001 Form ID: AI-001</p>	



RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, Part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

SRN: B1909	Section Number (if applicable):
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1. Additional Information ID AI-C001

Additional Information

2. Is This Information Confidential? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Changed check mark in Box C-4 and C-5. New permit 69-21 was incorporated into ROP permit B1909-2019 on September 20, 2021.

Also forgot to include HAP calculations sheet in original submittal. Sheets sent by electronic submission to EGLE Eric Grinstern on 7/6/23 and also put into mail on 7/6/2023.

PART B: APPLICATION SUBMITTAL and CERTIFICATION by Responsible Official

Identify the items that are included as part of your administratively complete application in the checklist below. For your application to be complete, it must include information necessary to evaluate the source and to determine all applicable requirements. Answer the compliance statements as they pertain to all the applicable requirements to which the source is subject. The source's Responsible Official must sign and date this form.

Listing of ROP Application Contents. Check the box for the items included with your application.

<input checked="" type="checkbox"/> Completed ROP Renewal Application Form (and any AI-001 Forms) (required)	<input type="checkbox"/> Compliance Plan/Schedule of Compliance
<input checked="" type="checkbox"/> Mark-up copy of existing ROP using official version from the AQD website (required)	<input type="checkbox"/> Stack information
<input checked="" type="checkbox"/> Copies of all Permit(s) to Install (PTIs) that have not been incorporated into existing ROP (required)	<input type="checkbox"/> Acid Rain Permit Initial/Renewal Application
<input checked="" type="checkbox"/> Criteria Pollutant/Hazardous Air Pollutant (HAP) Potential to Emit Calculations	<input type="checkbox"/> Cross-State Air Pollution Rule (CSAPR) Information
<input type="checkbox"/> MAERS Forms (to report emissions not previously submitted)	<input type="checkbox"/> Confidential Information
<input type="checkbox"/> Copies of all Consent Order/Consent Judgments that have not been incorporated into existing ROP	<input checked="" type="checkbox"/> Paper copy of all documentation provided (required)
<input checked="" type="checkbox"/> Compliance Assurance Monitoring (CAM) Plan	<input type="checkbox"/> Electronic documents provided (optional)
<input checked="" type="checkbox"/> Other Plans (e.g., Malfunction Abatement, Fugitive Dust, Operation and Maintenance, etc.)	<input type="checkbox"/> Other, explain:

Compliance Statement

This source is in compliance with **all** of its applicable requirements, including those contained in the existing ROP, Permits to Install that have not yet been incorporated into that ROP, and other applicable requirements not currently contained in the existing ROP. Yes No

This source will continue to be in compliance with all of its applicable requirements, including those contained in the existing ROP, Permits to Install that have not yet been incorporated into that ROP, and other applicable requirements not currently contained in the existing ROP. Yes No

This source will meet in a timely manner applicable requirements that become effective during the permit term. Yes No

The method(s) used to determine compliance for each applicable requirement is/are the method(s) specified in the existing ROP, Permits to Install that have not yet been incorporated into that ROP, and all other applicable requirements not currently contained in the existing ROP.

If any of the above are checked No, identify the emission unit(s) or flexible group(s) affected and the specific condition number(s) or applicable requirement for which the source is or will be out of compliance at the time of issuance of the ROP renewal on an AI-001 Form. Provide a compliance plan and schedule of compliance on an AI-001 Form.

Name and Title of the Responsible Official (Print or Type)

ROBERT MEACHAM - SR. ENVIRONMENTAL & FACILITY ENGINEER

As a Responsible Official, I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this application are true, accurate, and complete.



Signature of Responsible Official



Date



RENEWABLE OPERATING PERMIT APPLICATION AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, Part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

SRN: B1909

Section Number (if applicable):

1. Additional Information ID

AI-C001

Additional Information

2. Is This Information Confidential?

Yes No

Changed check mark in Box C-4 and C-5. New permit 69-21 was incorporated into ROP permit B1909-2019 on September 20, 2021.

Also forgot to include HAP calculations sheet in original submittal. Sheets sent by electronic submission to EGLE Eric Grinstern on 7/6/23 and also put into mail on 7/6/2023.

Hazardous Air Pollutants (HAP's)	
Cupola Metal HAPs	0.575
Cupola Organic HAP's	8.64
Molding PCS HAP's	13.77
Non Stack HAP's Fuels, Solvents.	1.4
Grinding/Blasting	0.003
Total HAP's @ Permit limit of 129,325 tons/year	24.391

Summary Sheet

Pounds of material that went through the dust collectors and was not captured, count as stack emissions

DC#	Chromium	Copper	Iron	Lead	Manganese	Nickel	Zinc	Filter Efficiency	Total Particulates Sand and Metallic's	Metals	Sand
1	0.108	0.139	42.825	0.002	0.918	0.029	0.002	0.998	203.930	44.023	159.907
2	1.157	0.968	0.000	0.007	0.807	0.065	0.020	0.980	269.024	3.024	266.000
5	0.007	0.193	20.630	0.007	0.173	0.004	0.019	0.999	66.550	21.034	45.516
6	0.005	0.015	16.147	0.007	0.078	0.005	0.016	0.999	1242.074	16.273	1225.801
12	0.000	0.000	0.234	0.000	0.002	0.000	0.000	0.998	26.902	0.238	26.665
13	0.109	0.164	54.726	0.005	1.095	0.036	0.006	0.999	456.053	56.142	399.912
17	0.002	0.006	4.932	0.006	0.066	0.002	0.011	0.999	508.455	5.025	503.431
19	0.021	0.070	63.811	0.070	0.534	0.020	0.133	0.999	5801.000	64.659	5736.341
20	0.023	0.087	63.811	0.064	0.551	0.022	0.122	0.999	5801.000	64.679	5736.321
Totals	1.433	1.642	267.117	0.168	4.224	0.181	0.331		14374.989	275.096	14099.893

	Pounds
Total Metallic's Emitted	275.096
Total Metal HAP's Emitted	6.006
Total Metal HAP's Tons Emitted	0.0030

From Dust collection including Grinding and Shot Blast operations

PTE	Total PCS HAP's Emission Factor AFS	
129,325	2.13E-01	13.773
Tons	Pounds per ton	Tons of emissions

Gasoline	HAP Pounds
Gallons Purchased	521
Specific Gravity	0.71
Pounds/Gallon	5.92
Pounds per year	3085.05
Benzene	1%
Tert-butyl methyl ether	1%
Total HAPS in pounds	30.85 30.85 61.70

Total Fugitive HAPS in Pounds 2828.89
 Total Fugitive HAPS in Tons 1.41

Methanol	HAP Pounds
Gallons Purchased	400
Specific Gravity	0.795
Pounds/Gallon	6.63
Pounds per year	2652.12
Methanol	100%
Total HAPS in pounds	2652.12

Diesel	HAP Pounds
Gallons Purchased	14639
Specific Gravity	0.845
Pounds/Gallon	7.05
Pounds per year	103165.42
Naphthalene	0.10%
Total HAPS in pounds	103.17

Spray Paint	HAP Pounds
15 oz spray cans	500
Pounds per year	468.75
Ethyl Benzene	0.59%
Xylenes	1.95%
Total HAPS in pounds	11.91

Cupola Organics

	Benzene	Toluene	Formaldehyde	Total
	Emission Factor	Emission Factor	Emission Factor	
Tons/Year	6.39E-02	4.21E-02	2.76E-02	
129325	4.13	2.72	1.78	8.64

PTE

Stack Testing 4/11/23

PTE	Total Metal HAP's Emission Factor	
129,325	8.89E-03	0.575
Tons	Pounds per ton	Tons of emissions

