

DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
**ACTIVITY REPORT: On-site Inspection**

B626166531

<b>FACILITY:</b> Mobex Global	<b>SRN / ID:</b> B6261
<b>LOCATION:</b> 14638 APPLE DRIVE, FRUITPORT	<b>DISTRICT:</b> Grand Rapids
<b>CITY:</b> FRUITPORT	<b>COUNTY:</b> OTTAWA
<b>CONTACT:</b> Robert Eckheart , EHS Director	<b>ACTIVITY DATE:</b> 02/28/2023
<b>STAFF:</b> Eric Grinstern	<b>COMPLIANCE STATUS:</b> Compliance
<b>SUBJECT:</b> On-site, unannounced compliance inspection	<b>SOURCE CLASS:</b> MINOR
<b>RESOLVED COMPLAINTS:</b>	

On-site inspection of Mobex Global. Prior to entering the facility, an offsite odor investigation was conducted in response to a complaint forwarded by US EPA, received on January 11, 2023. The odor investigation is documented in MACES Report No. CA B626166532. In summary, no odors in violation of Rule 901 were observed during the investigation.

### Facility Description

The facility is a permanent and semi-permanent mold, aluminum foundry operation. The facility manufactures safety critical automotive castings, such as knuckles, control arms, cross members, and other structural components.

### Regulatory Overview

The facility is classified as an aluminum foundry. The facility previously documented that they are not subject to Subpart ZZZZZZ, the area source Aluminum, Copper, and Other Nonferrous Foundries NESHAP. The facility is not subject because they do not melt aluminum that contains aluminum HAPs in excess of the standard's thresholds. As part of this inspection, AQD Staff, Eric Grinstern (EG), requested and reviewed the SDSs for all metal charge material used by the facility. Review of the SDSs showed that all aluminum HAPS, as defined by Subpart ZZZZZZ, were below the thresholds for applicability to Subpart ZZZZZZ.

The facility is currently not subject to Subpart RRR since they only melt scrap that meets the definition of clean charge. The facility charges spec ingot and sows, internal runaround, as well as chunks of scrap aluminum wheels. The scrap wheel aluminum is thermally processed by the supplier and is purchased as certified to meeting the definition of clean under Subpart RRR. Observation of the scrap during the inspection showed it to be clean and free of any coatings.

The facility has the following active air quality permits:

**32-16B** Multiple emission units – permit should have been voided with the issuance of PTI No. 64-20. Void will be requested.

**64-20** Facility-wide permit, includes all emission units, except FGLINED, which is permitted under PTI No. 11-23.

**11-23** FGLINED, includes EUPLIBRICOMM8, EUPLIBRICOMM9, and EUCASTLINED.

**Compliance Evaluation**

Prior to entering the facility, a survey of the perimeter was made. No opacity was noted and only a brief, faint odor was detected from Mobex, directly adjacent to the plant while on Apple Drive.

At the facility, staff met with Robert Eckheart, EHS Director. Mr. Eckheart accompanied EG on a tour of the facility and provided copies of requested records.

Below is a summary of operations based on NSR permits.

**PTI No. 64-20 Facility-wide permit, including all emission units, except FGLINED, which is permitted under PTI No. 11-23.**

**FGLINEA** - Includes emission units EUPLIBIRCOMM1, EUPLIBRICOMM2, EUWESTCAST.

EUPLIBIRCOMM1 – 25,000 lb. holding capacity reverberatory furnace

EUPLIBRICOMM2 – 25,000 lb. holding capacity reverberatory furnace

EUWESTCAST – Laundering system that includes 6 holding furnaces, 11 crucible furnaces and core shakeout.

**POLLUTION CONTROL EQUIPMENT**

The core shakeout operation is controlled by a dust collector that vents internally.

**EMISSION LIMIT(S)**

The permit contains the following emission limits for FGLINEA:

Compliance with the emission limits is based on the requirement that core shakeout have baghouse control, prohibiting the furnaces from pouring simultaneously, requirement that only clean charge can be melted in FGLINEA, limitations on aluminum and flux usage, and testing upon request.

During the inspection, baghouse control was observed for core shakeout. The facility provided details of how they only pour from one furnace at a time. Additionally, review of charge material onsite and reviewed records showed that only clean charge is melted in the furnaces.

**MATERIAL LIMIT(S) - MONITORING/RECORDKEEPING**

The permit contains the following material limits for FGLINEA:

<b>Material</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>
1. Aluminum	51 ton/day	Calendar Day	EUPLIBRICOMM1,

<b>Material</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>
	for each EU		EUPLIBRICOMM2
2. Total flux	61.2 lb/day for each EU	Calendar Day	EUPLIBRICOMM1, EUPLIBRICOMM2
3. Fluorinated flux	10.2 lb/day (included in total flux) for each EU	Calendar Day	EUPLIBRICOMM1, EUPLIBRICOMM2
4. Aluminum	71.4 ton/day	Calendar Day	EUWESTCAST
5. Total flux	433.50 lb/day	Calendar Day	EUWESTCAST
6. Fluorinated flux	55 lb/day (included in total flux)	Calendar Day	EUWESTCAST
7. Core material	2,500 lb/hr	Calendar Day	EUWESTCAST

Compliance with the material limits is based on the requirement that the facility maintain records of material usage. EG requested and the facility supplied material usage records for the most recent 60-day time period (attached) Review of the records showed aluminum charge to be well below the 51 ton/day per emission unit limit. Records also showed compliance with the flux/fluorinated flux, and core material limits. The facility stated and review of flux records showed that fluorinated flux is only used in the reverb furnaces, not in the laundering system.

### TESTING/SAMPLING

Testing upon request to verify PM, PM10, and/or PM2.5 emission rates. Testing has not been requested yet.

### STACK/VENT RESTRICTIONS

The flex group has 21 stacks with restrictions. Actual measurement of the stacks was not conducted, however, visual observation of the stacks showed that they appeared to meet the required dimensions.

**FGLINEB** - Includes emission units EUPLIBIRCOMM3, EUPLIBRICOMM4, EUEASTCAST.

EUPLIBRICOMM3 – 40,000 lb. holding capacity reverberatory furnace

EUPLIBRICOMM4 – 40,000 lb. holding capacity reverberatory furnace

EUEASTCAST – Laundering system that includes 6 holding furnaces, 12 crucible furnaces.

#### **EMISSION LIMIT(S)**

The permit contains the following emission limits for FGLINEB:

Compliance with the emission limits is based on the requirement of prohibiting the furnaces from pouring simultaneously, requirement that only clean charge can be melted in FGLINEB, limitations on aluminum and flux usage and testing upon request.

The facility provided details of how they only pour from one furnace at a time. Additionally, review of charge material onsite and reviewed records showed that only clean charge is melted in the furnaces.

#### **MATERIAL LIMIT(S) - MONITORING/RECORDKEEPING**

The permit contains the following material limits for FGLINEB:

Compliance with the material limits is based on the requirement that the facility maintain records of material usage. EG requested and the facility supplied material usage records for the most recent 60-day time period (attached) Review of the records showed compliance with the aluminum charge and flux usage restrictions. The facility stated and review of flux records showed that fluorinated flux is only used in the reverb furnaces, not in the laundering system.

#### **TESTING/SAMPLING**

Testing upon request to verify PM, PM10, and/or PM2.5 emission rates. Testing has not been requested yet.

#### **STACK/VENT RESTRICTIONS**

The flex group has 8 stacks with restrictions. Actual measurement of the stacks was not conducted, however, visual observation of the stacks showed that they appeared to meet the required dimensions.

**FGLINEC** - Includes emission units EUPLIBIRCOMM6, EUPLIBRICOMM7, EUPLIB6CAST.

EUPLIBRICOMM6 – 40,000 lb. holding capacity reverberatory furnace

EUPLIBRICOMM7 – 120,000 lb. holding capacity reverberatory furnace

EUEASTCAST – Laundering system that includes 8 holding furnaces, 12 crucible furnaces and core shakeout.

## **POLLUTION CONTROL EQUIPMENT**

The core shakeout operation is controlled by a dust collector that vents internally.

### **EMISSION LIMIT(S)**

The permit contains the following emission limits for FGLINEC:

Compliance with the emission limits is based on the requirement that core shakeout have baghouse control, prohibiting the furnaces from pouring simultaneously, requirement that only clean charge can be melted in FGLINEC, limitations on aluminum and flux usage and testing upon request. Testing was required within 180 days after commencement of initial startup for EUPLBRICOMM7. Compliance testing was performed in February 2021, at which time compliance with the PM, PM10 and PM2.5 emission limits were demonstrated.

During the inspection, baghouse control was observed for core shakeout. The facility provided details of how they only pour from one furnace at a time. Additionally, review of charge material onsite and reviewed records showed that only clean charge is melted in the furnaces.

### **MATERIAL LIMIT(S) - MONITORING/RECORDKEEPING**

The permit contains the following material limits for FGLINEC:

Compliance with the material limits is based on the requirement that the facility maintain records of material usage. EG requested and the facility supplied material usage records for the most recent 60-day time period (attached) Review of the records showed compliance with the aluminum charge and flux usage restrictions. With the exception of the fluorinated flux usage limit for EUPLBRICOMM6. Review of the facility records showed that the daily fluorinated flux usage limit (8.5 lb./day) was exceeded 30 times. Fluorinated flux usage during those days ranged from 10 pounds to 25 pounds. EG requested clarification from the facility regarding the flux usage amounts. The facility investigated and determined that only 8 pounds of fluorinated flux was being added to the furnace. An additional 2.5 pounds of fluorinated flux was added to the T-section connecting Reverb 6 and 7, which is part of the casting system that is allowed to have 69.7 pounds of fluorinated flux added per day. The facility stated that the records showing up to 20 pounds of fluorinated added to the furnaces was actually non-fluorinated flux. The facility stated that they are in the process of making revisions, including training, regarding the recording of flux usage. The facility also stated that they recently hired an EHS administrator, which will allow for the flux and charge logs to be scrutinized daily. The facility stated that they have drastically reduced the amount of fluorinated flux usage and that Mobex Global has set a goal to remove the use of fluorinated flux entirely.

### **TESTING/SAMPLING**

Testing was required within 180 days after commencement of initial startup for EUPLBRICOMM7. Compliance testing was performed in February 2021, at which time compliance with the PM, PM10 and PM2.5 emission limits were demonstrated.

The permit also requires testing upon request to verify PM, PM10, and/or PM2.5 emission rates. Testing has not been requested, beyond the initial testing of EUPLIBRICOMM7.

### **STACK/VENT RESTRICTIONS**

The flex group has 11 stacks with restrictions. Actual measurement of the stacks was not conducted, however, visual observation of the stacks showed that they appeared to meet the required dimensions.

**PTI No.11-23 FGLINED, includes EUPLIBRICOMM8, EUPLIBRICOMM9, and EUCASTLINED.**

**FGLINED** - Includes emission units EUPLIBRICOMM8, EUPLIBRICOMM9, EUCASTLINED.

EUPLIBRICOMM8 – 60,000 lb. holding capacity reverberatory furnace

EUPLIBRICOMM9 – 60,000 lb. holding capacity reverberatory furnace

EUCASTLINED – Laundering system that includes 4 holding furnaces, 4 casting units.

### **STATUS**

At the time of the inspection the facility was in the process of installing FGLINED. No portion of FGLINED had commenced trial operation. Upon completion of installation and commencement of trial operation, testing of EUPLIBRICOMM9 is required within 180 days to demonstrate compliance with PM, PM10 and PM2.5 emission limits.

### **CONCLUSION**

Based on the information obtained and observations made through this inspection, the facility appears to be in compliance with applicable air quality rules and regulations.

NAME Eric Grinstern

DATE 04/13/2023

SUPERVISOR HH