

DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
ACTIVITY REPORT: Scheduled Inspection

N182543064

FACILITY: CASCADE DIE CASTING GROUP, INC / MID STATE DIV		SRN / ID: N1825
LOCATION: 7750 S DIVISION, GRAND RAPIDS		DISTRICT: Grand Rapids
CITY: GRAND RAPIDS		COUNTY: KENT
CONTACT: Terry Gage , Maintenance Manager		ACTIVITY DATE: 01/18/2018
STAFF: Eric Grinstern	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MINOR
SUBJECT: Unannounced compliance inspection		
RESOLVED COMPLAINTS:		

#### FACILITY DESCRIPTION

Cascade Die Casting Group/Mid-State Division is a zinc die casting facility. Facility operations include metal melting, die casting, finishing and assembly.

The facility is comprised of one building which houses offices in the front and manufacturing in the back. The facility is situated with residential land use to the east and west and commercial and industrial use to the north and south.

The facility operates 5 days a week during 1.5 shifts per day. AQD files do not show any recent complaints regarding the facility.

#### REGULATORY ANALYSIS

The facility currently has one air use permit (PTI No. 366-88C) that covers all operations on-site. PTI No. 366-88C was issued in 2013 for the installation of a MPH Model 63-ITM-7 furnace with a holding capacity of 45,000 pounds. Upon issuance of PTI No. 366-88C, all previous permits were voided.

None of the facilities casting operations currently appear to be subject to any federal NSPS or NESHAP standards.

#### COMPLIANCE EVALUATION

At the facility, AQD staff, consisting of Eric Grinstern (EG), met with Terry Gage, Maintenance Manager, who accompanied EG during the facility tour.

Prior to entering the facility, no visible emissions or odors were observed.

The facility has eight holding furnaces that supply molten zinc to eight die casters. The holding furnaces are identified as EUHOLDING1 through EUHOLDER8. The holding furnaces receive molten zinc from one of three remelt furnaces. Additionally, solid zinc ingot is charged to the holding furnaces. The die casters are exempt from permitting under Rule 285(2)(I)(ii). The facility stated that they do not conduct any fluxing/degassing in the furnaces.

The facility has three remelt furnaces. In October 2017, the facility completed an expansion, at which time they moved the remelt furnaces to the rear of the facility into the expanded area.

PTI No 366-88C addresses three remelt furnaces, EUREMELT0, EUREMELT1 and EUREMELT2.

EUREMELT0 is a Kosma with a holding capacity of 44,000 pounds. The facility stated that this furnace has been removed.

EUREMELT1 is a MPH #5 with a holding capacity of 32,500 pounds. This furnace is used to melt Z8 alloy zinc.

EUREMELT2 is a MPH 63-ITM-7 with a holding capacity of 45,000 pounds. This furnace is used to melt Z3 alloy zinc.

The facility has installed an MPH furnace with a holding capacity of approximately 40,000 pounds. This furnace is used to melt Z5 alloy zinc. The facility stated that this furnace was installed in October 2017 at the time of the building expansion. A PTI was not obtained prior to installation of the furnace.

#### EMISSION LIMIT

FGDIECASTING has a PM emission limit of 0.01 lb/1,000 pounds of exhaust gas. Compliance is based on stack testing, which has not been require. Compliance is also based on processing only clean charge, which they are doing.

#### MATERIAL LIMITS

Remelt furnaces No. 1 and No. 2 are restricted to the amount of zinc charge on an annual basis. With the addition/switch in furnaces, furnace usage has change. Melt restrictions will change and be evaluated with the permitting of the new remelt furnace.

The facility is restricted to melting only clean charge. The facility stated that they only purchase spec. ingot and melt internal runaround in the remelt furnaces. Staff only observed spec. ingot during the inspection.

Limits the facility to burning only pipeline quality sweet natural gas. No alternative fuel sources were observed during the inspection.

#### PROCESS/OPERATIONAL LIMITS

Prohibits fluxing and degassing. The facility stated that they do not conduct any fluxing or degassing. No fluxing or degassing agents were observed during the inspection.

#### MISCELLANEOUS

The facility has various finishing processes (buffers, sanders, tumblers) that are vented internally. The finishing operations appear to be exempt from permitting under Rule 285(2)(l)(vi)(B).

#### CONCLUSION

Based on the information and observations made as part of this inspection, the facility appears to be in compliance with applicable air quality rules and regulations, except for the following:

Installation of an MPH 40,000 lb. holding capacity remelt furnace prior to obtaining a permit to install. A violation notice will be issued to address the unpermitted furnace.

NAME 

DATE 1/26/18

SUPERVISOR 