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

N063324354

FACILITY: HANSEN-BALK STEEL TREATING CO		**SRN / ID:** N0633
LOCATION: 1230 MONROE AVE NW, GRAND RAPIDS		**DISTRICT:** Grand Rapids
CITY: GRAND RAPIDS		**COUNTY:** KENT
CONTACT: Steven Balk ,		**ACTIVITY DATE:** 02/05/2014
STAFF: Denise Plafcan	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MINOR
SUBJECT: Scheduled unannounced inspection.		
RESOLVED COMPLAINTS:		

Denise Plafcan (DP) conducted an unannounced scheduled inspection to determine compliance with state and federal Air Quality rules and regulations. DP drove around the area prior to entering the facility. There were no odors, fugitive emissions or opacity noted from the facility. DP met with, Jim Balk and he explained that Steve Balk keeps the records. DP requested a plant walk through and agreed to come back tomorrow to discuss the records and existing permits. DP explained the purpose of the inspection and reviewed the Environmental Inspection brochure.

Hansen & Balk has been in the heat treating industry since the 1950s. There are 45 employees working 3 shifts 5 days per week. They use a variety of methods to heat treat and quench the metal including vacuum metal treating system with a nitrogen quench and traditional heating furnaces with either an oil, salt or water quench. There are 20 vacuum systems with nitrogen quench, one molten salt tank, two water tanks and six oil quench tanks.

After reviewing the processes, water quenching and water-based salt induction heating and tempering, and endothermic gas production are not sources of air contaminants, and therefore, did not need to be permitted. However, natural gas-fired burners on these processes qualify as exempt under Rule 282(b)(i).

All six oil quench tanks were installed since 1981 and the four new units were installed in 2013. The four new units are completely enclosed boxes that the parts move through and the doors are shut even during the oil quench. Since the tanks emissions are not controlled and released to the in-plant environment and the ITSLs are greater than 24 micrograms/ml the facility should be able to use a Rule 290 exemption for each tank. Rule 290 allows for up to 1000 lbs/month per emission unit. DP requested records of the amount of oil purchased, reclaimed and disposed of in 2013 to determine the emissions from the six oil quench tanks.

On February 13, 2014 Steven provided the attached records. The records provided were purchase records and waste/reclaim for all six oil tanks combined and not usage records. Emissions were calculated assuming what is purchased is emitted. The VOC calculation is as follows:

1. Density = ~ 8 pounds per gallon of oil used
2. AP-42 emission factor of 280 lbs VOC/ton of material (no particulate emission factor could be found)
3. Gallons of quench oil 1980 gallons for a year
4. Waste collected 700 gallons

1980 -700 = 1280 gallons
1280 X 8 = 10240 pounds / 2000 pounds = 5.12 tons
280 pounds of emissions X 5.12 tons = 1433.6 pounds of emissions for all six oil quench tanks for one year.

This is well below the 1000 pounds per month per tank deminimus to use a Rule 290 exemption.

Based on the physical inspection and the amount and materials used the facility operations appear to be exempt from Rule 201 permitting requirements and in compliance with state and federal Air Quality rules and regulations.

NAME Denise Plafcan DATE 2.20.14 SUPERVISOR PMB