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

N768858732

FACILITY: Dicastal North America, Inc.		**SRN / ID:** N7688
LOCATION: 1 Dicastal Dr., GREENVILLE		**DISTRICT:** Grand Rapids
CITY: GREENVILLE		**COUNTY:** MONTCALM
CONTACT: Mike James , Plant Engineer		**ACTIVITY DATE:** 06/23/2021
STAFF: Eric Grinstern	**COMPLIANCE STATUS:** Non Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: On-site announced compliance inspection		
RESOLVED COMPLAINTS:		

FACILITY DESCRIPTION

Dicastal North America Inc. is located in the city of Greenville, in Montcalm County. The facility is a low pressure permanent mold aluminum alloy wheel manufacturing operation. All process associated with the alloy wheel manufacturing process are conducted onsite, including melting, casting, heat treating, finishing and coating.

REGULATORY ANALYSIS

The stationary source has as an opt-out permit (No. 78-15H) that covers all permitted processes. Permit No. 78-15H was issued in 2021, to address the replacement of the existing chip dryer with a new rotary drum chip dryer and thermal oxidizer. Additionally, the facility is operating under Consent Order No. AQD 2019-21, which addresses violations associated with the operation of an aluminum chip dryer. The facility's chip dryer (EU-Dryer) is subject to the area source requirements of Subpart RRR, Secondary Aluminum Production NESHAP. A natural gas boiler (11.2 MMBtu/hr), associated with the paint shop (EU-PaintShopBlr) is subject to NSPS Dc. The facility also has a 1,500 kW diesel emergency generator (EU-Gen1) that is subject to the RICE MACT, Subpart ZZZZ and NSPS subpart IIII.

COMPLIANCE EVALUATION

At the facility, AQD staff, consisting of Eric Grinstern (EG), and Mike Cox (MC) met with Mike James, Engineering Manager, and Saurabh Gadkari, Process Engineer.

In response to COVID-19 proper PPE and social distancing were practiced and the inspection was announced.

Below is an evaluation of compliance based on PTI No. 78-15H.

EU-Chip Dryer

DESCRIPTION: Machining fluid removal system and thermal chip dryer. A spinner uses centrifugal force to mechanically remove excess emulsion fluid from the chips, followed by a thermal chip dryer for volatilizing the remaining emulsion on the chips using natural gas combustion (6.0 MMBtu/hr) for heat. Control consists of a thermal oxidizer followed by a high efficiency cyclone..

The facility operated a chip dryer under PTI 78-15G, however the thermal oxidizer associated with the chip dryer had a fire in July 2020. The chip dryer was shut down until a new chip dryer and thermal oxidizer, permitted under PTI 78-15H, came online June 6, 2021. The new chip dryer is a rotary unit.

EMISSION LIMITS

The permit limits the emission of PM, PM10, PM2.5, VOC and dioxins and furans. Particulate matter and VOC are limited on a pph basis. Dioxins and furans are limited under Subpart RRR on a grain per ton of charge basis.

Compliance with the emission limits is based on proper operation of the control equipment and compliance testing.

Testing of the new chip dryer is required within 180 days of initial start up. The facility stated that they are in the process of scheduling compliance testing.

The facility previously tested and demonstrated compliance with the permitted emission limits while operating the previous chip chip dryer.

MATERIAL LIMITS

The chip dryer is limited to processing 3.31 tons of chips per hour (daily average) and 20,834 tpy on a 12 -month rolling time period.

Compliance with the material throughput limits is determined through the permit and Subpart RRR requirement that the chip dryer be equipped with a device to measure and record the weight of chips fed to the dryer. The facility is also required to monitor and record the weight of chips fed to the dryer on a daily basis, keep a log of the hourly average throughput rate of material charged and keep monthly and 12-month rolling records of the total weight of charge materials to the dryer.

The conveyor system is equipped with a feed rate scale that shows tons per hour and a recorder that tracks total chips feed to the dryer.

The chip dryer was operating during the inspection. Observation of the scale reading showed a feed rate of 0.9 - 1.1 tons per hour. The chip dryer is not currently at full capacity, therefore excess chips are shipped to an outside company that processes the chips and ships sows back to Dicastal. The facility supplied daily and 3 hour block throughput records, as requested, for the previous 7 days. The tons per hour (calendar day average) was 2.59 tons, which is below the 3.31 tph limit. The facility supplied requested throughput records from the initial startup (June 6, 2021) until the inspection, The records documented 6569.32 tons of chips processed for the 12-month period ending in June 2021. Which is below the 20,834 tpy limit.

Feedstock to the chip dryer is limited to unpainted/uncoated aluminum chips. Only unpainted/uncoated aluminum chips were observed being fed to the dryer.

PROCESS/OPERATIONAL RESTRICTIONS

Requires that the emissions from the chip dryer be controlled with a thermal oxidizer. The thermal oxidizer was observed and was operating at the time of the inspection. The thermal oxidizer is required to be operated at a minimum temperature of 729 degrees C, or the temperature established during stack testing. At the time of the inspection the TO exhaust temperature was observed at 733 degrees C. The facility has not conducted testing yet to establish an operating temperature of the TO different from the permit limit.

The facility is required to submit an OM&M plan for EU-DChipDryer within 90 days after a successful initial performance test. Testing has not been completed yet, therefore the OM&M plan is not due yet.

DESIGN/EQUIPMENT PARAMETERS

Requires a device to measure and record the weight of feed to the chip dryer. The device has been installed and was observed operating during the inspection. The device is required to be able to measure and record the weight of feed over the same time period used in the performance test. A performance test has not been conducted yet, therefore the time period has not been established.

Requires a device to monitor and record the thermal oxidizer temperature on a continuous basis. The monitor was observed during the inspection, and continuous temperature records were supplied by the facility.

Requires that the capture and control equipment meet the requirements of Subpart RRR, including a capture and control system that meets ACGIH, vent emissions through a closed system and operate capture and control in accordance with the OM&M plan. The system was designed per the permit application to comply with capture and control requirements. Observation of the system during the inspection showed that it appeared to meet the requirements. The facility is required to certify compliance in the Notification of Compliance Status Report. The first certification for the new chip dryer system is July 31, 2021. EU-DChipDryer shall not operate unless the capture system, cyclone and thermal oxidizer are installed, maintained and operated in accordance with the manufacturer's recommendations. During the inspection, staff observed the required equipment installed and did not observed anything that would be contrary to the manufacture's recommendations.

TESTING/SAMPLING

The facility is required to verify compliance with the permitted PM, PM10, PM2.5 emission limits within 180 days of permit issuance. Testing has not been completed, the facility is in the process of scheduling compliance testing.

In accordance with Subpart RRR, dioxin/furan emission rate testing is required within 180 days of initial startup. Testing has not been completed, the facility is in the process of scheduling compliance testing.

MONITORING/REPORTING/RECORDKEEPING

The facility is required to record the temperature of the thermal oxidizer in 15-minute block averages and record the average temperature for each 3-hour block time period. The facility provided requested records of the 15-minute averages and 3-hour block average temperatures. The records document a 3-hour block average greater than the permit established minimum temperature of 729 degrees F, with the a few exceptions that facility provided an explanation for on August 9, 2021.

"There are a couple of 3-hour block average temps for the Chip Dryer TO that are below the 729°C minimum temperature. This happened during three hour blocks that had the chip dryer feed up and down or not running at all. The TO was setup to shutoff anytime there is no chip feed and only allow chip feed when it is above 729°C. However, this TO cools much quicker and the data collection system is not filtering out all the temperature readings when the chip feed has stopped. This has been corrected by changing the TO setup to keep running at minimum temperature of 729°C when there is no chip feed. In the future we hope to improve this so we can idle down the TO when there is no chips feeding and still collect the data to accurately reflect the proper operating temperature averages when chips are feeding. That will help conserve natural gas."

The facility is required to maintain records of the following: chip dryer feed weight per operating cycle, daily record of average hourly throughput rate, and monthly and 12-month rolling total charge to the dryer. The facility is maintaining the required records of feed throughput. Compliance testing has not been conducted, therefore, the operating cycle has not been established.

In accordance with Subpart RRR, the facility is required to submit semiannual compliance certification reports. The facility fill out, but did not submit a semiannual certification for the period of July through December 2020. The facility had a fire in the chip dryer TO in July 2020, resulting in the chip dryer being idled. During the entire reporting period the dryer was only operated for a couple of hours on July 1, 2020 and processed 10.2 tons of chips. The facility subsequently submitted the semiannual certification on July 19, 2021. The facility reported no deviations for the reporting period.

STACK/VENT

The stack associated with chip dryer is required to be a maximum of 22 inches in diameter and a minimum height of 75 feet. The stack is detached from the facility and is located on the east side of the plant. Visual observation of the stack showed that it appear to meet the required dimensions.

EU-MoldPreHeat

DESCRIPTION: 1.86 MMBtu/hr natural gas combustion furnace for preheating the die casting molds. Furnace has 3 burners each rated at 180 kW. Exhaust gases are vented with EU-MoldCoatFurn.

The mold preheat furnace is restricted to burn only pipeline quality natural gas and to not exceed 180 kilowatts per burner.

No other source of fuel was observed, except natural gas. The burners are assumed to meet the 180 kilowatt maximum as designed and permitted.

EU-MoldCoatFurn

DESCRIPTION: 1.24 MMBtu/hr two-chamber natural gas combustion furnace for drying the water-based mold coating. Furnace has 2 burners each rated at 180 kW. Furnace includes two rail car bays. Exhaust gases are vented with EU-MoldPreHeat.

The mold coat furnace is restricted to burn only pipeline quality natural gas and to not exceed 180 kilowatts per burner.

No other source of fuel was observed, except natural gas. The burners are assumed to meet the 180 kilowatt maximum as designed and permitted.

EU-MoldSonicClean

DESCRIPTION: Mold sonic cleaner baths consisting of alkaline cleaner, rinse, followed by rust inhibitor used to clean the molds before casting. Vapors from the baths are vented externally out the wall.

MONITORING/RECORDKEEPING

Requires that the facility maintain a current list, from the manufacture, of the chemical composition of every material used in EU-MoldSonicClean. The facility previously provided copies of the SDSs for the cleaners used in the process.

EU-DieCasting

DESCRIPTION: 28 low-pressure die casting machines used to form the shape of the aluminum wheels. There is no dedicated exhaust system for the die casting machines. Molten aluminum is transported to the electric holding furnaces of the die casting machines. A solid fluxing agent is used in the die casting machines' holding furnaces for removing impurities in the molten aluminum prior to the aluminum being injected into the molds. A cooling tower is used to cool process water. Process water is used to cool the molds in the die casting machines.

EMISSION LIMITS

The emission of PM from the cooling tower is limited to 0.005% drift loss. Compliance with the emission limit is verifiable via testing, which has not been required.

MATERIAL LIMITS/ RECORDKEEPING

The permit limits the use of flux in EU-DieCasting. Compliance is based on the requirement that the facility maintains records of the daily flux usage as well as the monthly and 12-month rolling usage of flux.

Flux usage is limited to 80lb/ 8-hours and 92,594 lb./ year limit. The facility is required to maintain daily, monthly and 12-month rolling time period flux usage records. Review of the previous 7 days of flux records showed a daily usage high of 72 pounds. Review the monthly flux records for the past 12 months showed a high usage of 6,274 pounds/month in January 2021. The 12-month rolling total was 54,9000 pounds, ending in May 2021.

MONITORING/RECORDKEEPING

In addition to records of flux usage, the facility is required to maintain records of HCL emissions. HCL emissions are associated with the use of flux in EU-DieCasting. The facility provided monthly and 12-month rolling HCL emissions. EU-DieCasting does not contain a limit for HCL. Facility records for the previous 12 months show a monthly high occurred in January 2021 with 0.33 tons of HCL emitted. The 12-month rolling high occurred in May 2021 with 2.88 tons emitted, based on a 12-month rolling total.

Observations

Observation of the die casters showed no visible emissions into the in-plant atmosphere.
The holding furnaces are fluxed twice a day (once every shift). Fluxing is conducted by hand, with weight based on a standardized bag of flux and the number of scoops to the furnace. Additionally, the the furnaces are fluxed via injection once per month.

EU-SandBlast

DESCRIPTION: Sand Blasting Machine used to clean the molds following casting. The emissions from the sand blasting machine are controlled by a fabric filter.

EMISSION LIMITS

The emission of PM is limited to 0.007 grains per dscf of gas. Compliance with the emission limit is based on proper operation of the fabric filter. To assure proper operation of the fabric filter unit, the facility is required to monitor and record the pressure drop once per day.

The facility provided a copy of the pressure drop readings for the previous 30 days. All readings were 2.0 inches or below. The facility has established an upper limit of 6 inches, (above 6 inches they are to notify Maintenance)

Observations

Observation of the baghouse showed no visible emissions and no collected material on the ground around the baghouse. There is a residual stain on the building from an emission event from the baghouse stack several years ago.

EU-Pretreatment

DESCRIPTION: Wheel surface preparation consisting of degreasing tanks (3), acidic, passivation and sealant tanks, which will be used to spray apply acidic or alkaline solutions to degrease (remove the machining fluid) and prepare the surface for proper coating adhesion to the aluminum. During various steps in the surface preparation process, water will be used to rinse off the alkaline and acidic solutions.

MONITORING/RECORDKEEPING

The facility is required to maintain monthly and 12-month rolling time period records of acid and degreasing solvent additions.

The facility provided records of acid and degreasing additions for the requested previous 12-months along with previous years records.

EU-PretreatOven

DESCRIPTION: 7.6 MMBtu/hr Natural Gas Combustion Oven for removing the surface moisture on the wheels that have been treated.

After the wheels are processed through the pretreatment surface preparations they are conveyed through the pretreatment oven.

EMISSION LIMITS/DESIGN PARAMETERS

The primary requirement for the pretreat oven is the limited heat input capacity of 7.6 MMBtu per hour and NOx emission rate guarantee from the manufacture of 75 ppmv@3% O2. Additionally, fuel usage is limited to pipeline quality natural gas.

The facility appears to be in compliance with the burner and NOx emission rate requirements, based on installed design. No other source of fuel was observed, except natural gas.

EU-PaintShopBlr

DESCRIPTION: 11.2 MMBtu/hr Natural gas Combustion Paint Shop Boiler

The Paint Shop boiler is located adjacent to the paint line thermal oxidizer.

EMISSION LIMITS/MATERIAL LIMITS/DESIGN PARAMETERS

The primary requirement for the pretreat oven is the limited heat input capacity of 11.2 MMBtu per hour and NOx emission rate guarantee from the manufacture of 75 ppmv@3% O2.

The previously observed rating plate listed 10.5 MMBtu.

The permittee shall burn only pipeline quality natural gas in EU-PaintShopBlr.

No other fuel supply was observed during the inspection, the facility supplied natural gas usage records for the boiler.

The facility is required to maintain records of monthly natural gas usage. The facility supplied the previous 12 months of fuel usage records as requested. The records document the use of 26.98 MMCF of natural gas for the 12 month period ending in June 2021.

The permittee shall submit notification of the date of construction and actual startup of EU-PaintShopBlr in accordance with NSPS 40 CFR 60.7.

The notification was submitted on November 30, 2015.

EU-LiquidCoat

DESCRIPTION: One Base liquid coating booth and one Clear liquid coating booth, each utilizing high volume low pressure (HVLP) or comparable applicators, associated flash off tunnels, and one 2.6 MMBtu/hr Natural Gas Combustion Curing Oven. The VOC emissions from this line will be controlled by Non-Fugitive Enclosure (NFE) and a recuperative thermal oxidizer (TO). The particulate emissions are controlled by water spray.

EMISSION LIMITS

The emissions of VOC, Heavy aromatic solvent naphtha, Mixed Xylenes, Butyl carbitol, Formaldehyde and Naphthalene are limited by the permit.

Compliance with the VOC emission limit is based on compliance testing and proper operation of the capture and control system (thermal oxidizer). Compliance testing was conducted in September 2016, at which time compliance with the thermal oxidizer destruction efficiency (minimum 95%) was documented. Compliance with the Heavy aromatic solvent naphtha, Mixed Xylenes and Butyl carbitol emission limit is demonstrated via the facility recording daily usage of each material. The facility provided records documenting compliance with the applicable emission limits.

PROCESS/OPERATIONAL RESTRICTIONS

The facility is required to capture all waste materials and store them in closed containers, dispose of spent filters in a manner to minimized the introduction of air contaminants to the outer air, and to handle all VOC and HAP containing materials to minimize the generation of fugitive emissions.

Staff did not witness any activities that contradicted the above listed requirements during the inspection.

The facility is required to have a MAP for the TO. The facility previously submitted a copy of the MAP. Additionally, a MAP was requested and provided by the facility as part of this inspection.

DESIGN/EQUIPMENT PARAMETERS

The facility is required to install and operate a thermal oxidizer with a minimum VOC destruction efficiency of 95% and maintain a minimum temperature of 1292 degrees F (700 degrees C). To monitor the TO temperature, the facility is required to install and operate a monitor to record the temperature on a continuous basis. During the inspection, the temperature monitor was observed.

Review of the RTO temperature records for the previous 7 days showed recorded temperatures were consistently at 725 degrees C. At the time of the inspection, the observed RTO temperature was 725 degrees C, which is the set point for the RTO.

The facility is required to operate EU-LiquidCoat in a non-fugitive enclosure. The facility has installed pressure drop gauges to verify and demonstrate negative pressure in the bake oven, liquid base coat and liquid clear coat booths. The facility has previously stated that the pressure drop readings are taken with every color change, which was greater than once per day.

Observation of the pressure drop gauges during the inspection showed the following readings:

	Pressure Reading	Normal Range
Bake Oven	Not observed	0.05 +/-10%
Liquid Base Booth Entrance	0.008	>0.007
Liquid Base Booth Exit	UFL	>0.007
Liquid Base Booth TO	UFL	26.5 +/-10%
Liquid Clear Booth Entrance	No Display Reading	>0.007
Liquid Clear Booth Exit	UFL	>0.007
Liquid Clear Booth TO	0.005	0.1 +/-10%
TO Flash Tunnel	No Display Reading	0.04 +/-10%

The facility is required to monitor the pressure differential continuously and record the readings at least once per operating day. The facility is also required to implement an air pressure differential monitoring plan as part of the MAP. The MAP contains an air pressure differential monitoring plan in Section 6.1.1. As detailed in the MAP, monitoring is done using eight differential pressure drop gages (listed above), with the pressure drop readings recorded once per operating day. Additionally, the MAP lists the normal operating ranges for each monitoring location (see above). Readings for the past 60 days were requested and provided by the facility. Review of the records showed consistent readings of UFL (under flow) for Liquid Base Booth TO and Liquid Clear Booth Exit, and no readings for Liquid Clear Booth Entrance and TO Flash Tunnel. Additionally, readings were documented that were outside of the established normal operating range for the bake oven and liquid clear booth TO.

MONITORING/RECORDKEEPING

The facility is required to maintain coating/material usage and VOC emission records on a monthly basis. The facility provided records as requested, documenting compliance with the permitted limits.

The facility is required to records on a monthly basis, documenting the gallons of coating used and reclaimed, VOC content of each material, VOC emission calculations (monthly and 12-month rolling). Supplied records showed compliance with the VOC limit of 17.5 tpy based on a 12-month rolling average. The 12-month rolling emission rate ending in May 2021 was 0.69 tons. The facility supplied requested records documenting materials used, reclaimed and VOC content.

The facility is required to maintain usage records on a daily basis for heavy aromatic solvent naphtha, mixed xylene and butyl carbitol containing materials used. The facility supplied requested records documenting compliance.

The facility is required to maintain monthly records for formaldehyde and naphthalene, regarding the of the following: Gallons of formaldehyde and naphthalene containing material used, gallons of material reclaimed, formaldehyde and naphthalene content of material, monthly emission calculations for each in tons per month, annual emissions of each in tons per 12-month rolling time period. Additionally, the facility is required to maintain records of heavy aromatic solvent naphtha, mixed xylene and butyl carbitol content of each material used and emissions in pounds per calendar day. The facility provided requested records documenting compliance with the record keeping requirements and emission limits as summarized in the table below.

The facility is required to maintain usage and HAP emissions data on a monthly basis.
The facility provided requested records documenting a high of 0.05 tons/month for the previous 12 months.

The facility is required to maintain records demonstrating compliance with the below listed emission limits. The records reviewed demonstrate compliance with the applicable limits.

Pollutant	Limit	Time Period / Operating Scenario	Maximum emission rate from records
2. Heavy aromatic solvent naphtha (CAS No. 64742-94-5)	105.50 lb/day[1]	Calendar day	0.97 lb/day
3. Mixed Xylenes (CAS No. 1330-20-7)	150.66 lb/day[1]	Calendar day	2.30 lb/day
4. Butyl carbitol (CAS No. 112-34-5)	30.14 lb/day[1]	Calendar day	0.10 lb/day
5. Formaldehyde (CAS No. 50-00-0)	0.83 tpy[1]	12-month rolling time period as determined at the end of each calendar month	Facility records document 0.00 tons/12-month rolling time period. (facility records document two coatings that contain formaldehyde, which have limited usage. After control, emissions in tons are below two significant digits)
6. Naphthalene	0.18 tpy	12-month rolling time period as determined at the end of each calendar month	0.02 tons/12-month rolling time period

EU-BrushingBurr

DESCRIPTION: 12 Brushing Burr Machines controlled by a common fabric filter.

EMISSION LIMITS

The emission of PM is limited to 0.0075 lbs. per 1,000 lbs. of gas. Compliance with the emission limit is based on proper operation of the fabric filter. To assure proper operation of the fabric filter unit, the facility is required to monitor and record the pressure drop.

The facility supplied pressure drop records for March 27, 2021 until current (excluding June 2021) The records showed all readings below the facility established 7" upper limit. The highest recorded pressure drop was 0.3 inches. Review of the records showed an average of a day or two each month that the pressure drop was not recorded. During the inspection, staff and the facility discussed the need to have a backup employee in place if the person responsible for taking readings is absent. Additionally, the facility reported that they have misplaced the pressure drop readings for the month of June 2021, however, staff reviewed the June pressure drop readings during the inspection (prior to the records being misplaced), the highest recorded reading was 0.7 inches. During the month of June, there were 4 days were the pressure drop was not recorded.

Observation of the baghouse showed no VE and good housekeeping practices.

EU-Gen1

DESCRIPTION: A 1,500 kilowatt (kW) or smaller diesel-fueled emergency engine with a model year of 2006 or later, and a displacement of less than 30 liters/cylinder. This emergency engine is subject to the New Source Performance Standards Stationary for Reciprocating Internal Combustion Engines (RICE), combustion ignition, emergency RICE less than 3000 HP.

EMISSION LIMITS/MATERIAL LIMITS

The permit limits the emission of NOx+HC, CO, PM, NOx and PM2.5.

Compliance is based primarily on the facility installing an EPA Certified engine and maintaining the engine in accordance with the manufacture recommendations.

Opacity from the unit is limited to 15% during lugging and 20% at all other times.

The generator was not operating at the time of the inspection.

The unit is limited to burning diesel fuel with a maximum sulfur content of 15 ppm by weight and a minimum Cetane index of 40 or a maximum aromatic content of 35 volume percent.

The facility verifies compliance based on fuel delivery records. The facility provided a copy of a fuel analysis record from June 25, 2021, demonstrating compliance with the sulfur content and Cetane index minimum. The certificate of analysis showed a Cetan index of 41 and a sulfur content of 0.0003 percent.

The engine is limited to 500 hours of operation a year and 100 hours per year for maintenance checks. Compliance is based the requirement that engine be equipped with non-resettable hours meters and the maintaining of records of the hours of operation. The facility provided records of the hours of usage showing 6.0 hours of total maintenance check use in 2020, with 1 hour of emergency use. In 2021 (through June) total non-emergency use was 3 hours and emergency use was 1 hour.

During the inspection, the facility provided the total hours of operation for the generator since startup: 77.4 hours.

FG-Melting

DESCRIPTION: Two natural gas fired aluminum melting furnaces with burners rated at 10.1 MMBtu/hr and a capacity of 13.2 tons each, two natural gas fired aluminum chip melting furnaces with burners rated at 6.2 MMBtu/hr and a holding capacity of 13.2 tons each, two natural gas fired aluminum holding furnaces with burners rated at 2.7 MMBtu/hr and a holding capacity of 13.2 tons each, and the process transfer ladles.

Emission Units: EU-Melt1, EU-Melt2, EU-Chip1, EU-Chip2, EU-Hold1, EU-Hold2, EU-LadleHood

EMISSION LIMITS/RECORDKEEPING

The permit limits the emission of PM, PM10, PM2,5, HCL, HF, cadmium and chromium.

Compliance with the emission limits is demonstrated via material throughput limits, proper operation of the lime-injected baghouse and compliance testing. Compliance testing was conducted in May 2018, at which time compliance was demonstrated for the following pollutants.

	Measured	Permit limit
PM (lb/hr)	0.25	2.92
PM-10 (lb/hr)	0.43	2.68
PM-2.5 (lb/hr)	0.42	1.89
HCL (lb/hr)	<0.02	7.69
HF (lb/hr)	<0.01	1.67

As required by the permit, the facility is required to calculate and maintain records of the monthly and 12-month rolling emission records for HCL, cadmium and chromium to demonstrate compliance with the ton per year limits. The facility provided records demonstrating compliance with the 12-month rolling total emission rate for HCL, cadmium and chromium.(ending in June 2021)

	Recorded (thru 6/2021)	**Permit limit**
HCL (tpy)	0.26 tpy	3.72 tpy
Cadmium (tpy)	9.80E-05 tpy	1.79E-04 tpy
Chromium (tpy)	1.19E-03 tpy	1.83E-3 tpy

MATERIAL LIMITS/ RECORDKEEPING

Feed/charge and material throughput rates are limited for each of the melting furnaces, chip furnaces, and holding furnaces, on a ton per hour basis. The facility supplied requested records demonstrating compliance with the limits. Review of the daily material usage records for each of the furnaces showed compliance with the limits. The highest charge rate for a melt furnace was 2.56 tons/hr (limit=3.31 tons/hr). The highest throughput rate for a chip furnace was 0.93 tons/hr (limit=1.65 tons/hr). The highest throughput rate for a holding furnace was 3.20 tons/hr (limit =4.96 tons/hr)

The melt rate for painted wheels is limited to 904,020 wheels per year. Review of the facility records shows a 12-month total high of 72,423 wheels melted (occurring in June 2020).

Flux usage is limited to 1,866 lb/day and 564,053 lb/yr. The facility provided requested daily records, monthly and 12-month records for flux usage. Facility records showed a daily flux usage high rate of 190 pounds, for records reviewed. This is an increase from the high of 40 pounds per day observed during the last inspection, but still well below the permitted limit. The 12-month rolling usage high occurred in July 2020 with 44,669 pounds of flux used.

The facility is required to melt only clean charge as defined by Subpart RRR. During the inspection and based on facility records, the facility appears to only use charge materials that are defined as clean

charge under Subpart RRR. This includes ingots and rejected painted/unpainted wheels that have remained under the control of Dicastal.

PROCESS/OPERATIONAL RESTRICTIONS

The facility is required to implement and maintain a malfunction abatement plan (MAP). The facility previously submitted a MAP.

DESIGN/EQUIPMENT PARAMETERS

FG-MELTING requires proper operation of a capture system and lime injected baghouse equipped with a bag leak detection system. The facility has capture for each of the furnaces which duct to a lime injected baghouse equipped with a bag leak detection system.

The observed lime feed rate at the time of the inspection was 25.8 lb/hr. The facility stated that the feed rate is calibrated every few months. The minimum lime feed rate was established during the melt furnace stack test conducted on May 10, 2018, at
5.9 lb./hr.

TESTING/SAMPLING

Emission testing for PM, PM10, PM2.5, HCL and HF is required by the permit. Testing was conducted on May 8-10, 2018, at which time compliance was demonstrated.

Observations

During the inspection, some smoke was observed being emitted into the in-plant atmosphere from the chip melting furnace (located west of the chip dryer) while the furnaces was having dross removed. The hood over the furnace did not appear to adequately capture emissions during drossing. The facility will be requested to evaluate the cause of the observed emissions.

FG-HeatTreat

DESCRIPTION: Three natural gas fired heat treat lines with burners rated at 10 MMBtu/hr each.

Emission Units: EU-HeatTreat1,EU-HeatTreat2,EU-HeatTreat3

EMISSION LIMITS/MATERIAL LIMITS

FG-HeatTreat does not have specific emission limits but is restricted to burn only pipeline quality natural gas. No gas other than pipeline quality natural gas has been observed in use.

DESIGN/EQUIPMENT PARAMETERS

The designed heat input for each burner in FG-HeatTreat is limited to 10MMBtu per hour. Compliance is based on the manufacture specifications.

FG-PowderCoat

DESCRIPTION: The powder coating process which includes two primer coatings booths, a 3.5 MMBtu/hr rated primer powder curing oven, one clear coating booth, and a 3.5 MMBtu/hr clear coat powder curing oven. The powder coating portions of this process are controlled by a dry filtering system with isolation chamber.

Emission Units: EU-PrimePowder, EU-PrimeOven, EU-ClearPowder, EU-ClearOven

EMISSION LIMITS/RECORDKEEPING

FG-PowderCoat has emission limits for PM and NOx. PM is limited to 0.03 tpy and NOx is limited to 75 ppmv@3%O2. Compliance with the PM limit is based on proper operation of the dry filtering system and isolation chamber. Compliance with the NOx limit is based on the manufacture guarantee.

PROCESS/OPERATIONAL RESTRICTIONS

Requires a minimum transfer efficiency of 93%. Compliance can be determined via testing, which has not been requested.

FG-MACT6Z

DESCRIPTION: The affected source is the collection of all melting operations located at an aluminum, copper, or other nonferrous foundry, that is (or is part of) an area source of hazardous air pollutant (HAP) emissions. The affected source is a new small foundry as defined by 40 CFR Part 63 Subpart ZZZZZZ.

Emission Units: EU-Melt1, EU-Melt2, EU-Chip1, EU-Chip2, EU-Hold1, EU-Hold2, EU-LadleHood

Subpart 6Z establishes material limits regarding the type of scrap metal melted, covering each furnace with a lid, if it is equipped with a lid, and operating in accordance with a management practices plan.

MATERIAL LIMITS/ RECORDKEEPING

The facility's charge material consists of ingot and internal scrap. Therefore, they are in compliance with the NESHAP requirements regarding the use of HAP metal depleted scrap.

PROCESS/OPERATIONAL RESTRICTIONS

The facility is complying with the cover and enclosing requirements for the furnaces. The facility provided a copy of the June 2021 furnace cover/enclosure inspection check sheet.

The facility previously submitted a written management practices plan as required by Subpart 6Z.

FGFACILITY

Flex group that establishes source-wide opt out limits for HAP emissions.

EMISSION LIMITS/RECORDKEEPING

The permit limits emissions of each individual HAP to less than 8.9 tpy and aggregate HAPs to less than 22.5 tpy.

The facility provided records demonstrating compliance with the emission limits and record keeping requirements for FGFACILITY.

For the 12-month period ending in May 2021 the total aggregate HAP emission amount was 4.23 tons. The individual HAP with the highest emission rate was mixed Xylenes, with a 12-month rolling total of 0.55 tons ending in May 2021.

CONCLUSION

Based on the information and observations made during this inspection, the facility is in compliance with applicable air quality rules and regulations, with the exception of the following:

A Violation Notice will be issued for the above documented failure to properly monitor the differential pressure drop for the non-fugitive enclosure associated with EU-LiquidCoat.

NAME Eric Grinstern DATE 08/19/2021 SUPERVISOR HH