

April 25, 2024 Project No. 240316

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Response to Violation Notice, dated April 5, 2024 Dicastal North America, Inc (SRN: N7688) Greenville, Michigan

Dicastal North America, Inc. (Dicastal) has prepared this letter in response to the EGLE Violation Notice (VN) dated April 5, 2024. The VN alleges that Dicastal violated the following Special Conditions (SC) related to Permit to Install (PTI) 78-15H:

Process Description	Rule/Permit Condition Violated	Comments
Liquid Coating Line (EU-LiquidCoat)	PTI No. 78-15H, EU-LiquidCoat, Special Conditions IV.5.	Failure to properly maintain the air pressure differential at the levels established during testing to assure that the non-fugitive enclosure (NFE) is maintained and operated in a satisfactory manner.
Brushing Burr (EU-BrushingBurr)	Permit to Install No. 78-15G, EU-BrushingBurr, Special Condition IV.1.	Operation of the brushing burr cells without fabric filter control from December 15, 2023, until the date of the inspection.
Sand Blasting Machine (EU-SandBlast)	Permit to Install No. 78-15H, EU-SandBlast, Special Condition IV.2.	Failure to maintain the baghouse with a device to monitor and record the pressure drop from January 13, 2024 through January 28, 2024.
Aluminum Melting Furnaces (FG-Melting)	PTI No. 78-15H, FG-Melting, Special ConditionVI.9.	Failure to maintain the baghouse lime injection rate at or above the feeder setting established during compliance testing.

As requested, this letter provides information regarding the referenced citations, including:

- The date the alleged violations occurred.
- An explanation of the causes and duration of the alleged violation.
- Whether the violation is ongoing.
- A summary of the actions that have been taken, and/or are proposed to be taken, to correct the violation, if any.
- The date(s) by which these actions will take place.
- What steps are being taken to prevent a reoccurrence.



## **Air Pressure Differential**

During the recent EGLE-AQD inspection, AQD staff observed that three of the eight air pressure differential gauges were outside the ranges established during the previous performance test. PTI 75-15H and the MAP for FG-LiquidCoat requires:

...the pressure differential between the Non-Fugitive Enclosure (NFE) and oven for EU-LiquidCoat and the outside area, on a continuous basis, to verify that air is entering the NFE. The permittee shall record the pressure differential at least once per operating day. Alternatively, to monitoring the pressure differential between NFE and outside air, the permittee may measure the pressure differential across the enclosure.

In lieu of the daily records required in the PTI and the Malfunction Abatement Plan (MAP), the facility provided AQD with the 3-hour average pressure drop readings from the Data Management System (DMS). Facility records reviewed by AQD documented several readings outside of the established ranges. The location of the gauges were originally recommended by AQD staff because an air curtain between the flash tunnel and oven, prevented Dicastal from demonstrating – via a smoke tube test – that all air flows were into the enclosure. AQD also recommended the pressure drops required at each location to continuously demonstrate compliance and requested that these be kept above the readings taken during the stack test. The pressure drops recommended by AQD for the gauges in the ducts to the Thermal Oxidizer are more restrictive than those required for permanent total enclosures (PTEs) subject to the National Emissions Standard for Hazardous Air Pollutants (NESHAP) requirement of 0.007 inches. PTI 75-15H allows that the pressure differential be determined across the enclosure as an alternative. Dicastal has contacted experts in the monitoring of coating lines. These experts have done a preliminary review of the system and indicated the current locations of the pressure drop monitors and the required pressure differential ranges in the MAP might not appropriate for the current booth configuration and exhaust setup. Dicastal has requested quotes to have a thorough review performed. Dicastal is also researching the feasibility of conducting flow monitoring in lieu of measuring pressure.

Dicastal is continuing to investigate process improvements to ensure proper records can be maintained demonstrating that the coating line NFE is capturing the volatile air contaminant (VOC) emissions and routing the emissions to the thermal oxidizer. Dicastal has assigned personnel to review alarms and adjust air flow as needed. The following activities have also been conducted:

- Air Balance inspection in January 2024
- Gathered quotes for a new return air supply handing units
- Daily air flow inspections and adjustments
- Visual indicators installed for air flow in booth openings.

Dicastal will notify AQD regarding the direction chosen for process improvements and a potential stack test to demonstrate compliance with the NFE requirements. Dicastal will update the MAP as needed.

## **Brushing Burr Baghouse**

On December 15, 2023, the Brushing Burr Baghouse caught fire. Since that time, Dicastal has contacted several suppliers of baghouses and dust collection equipment to determine what type of dust collection would work best for the process. Dicastal is reviewing quotes from baghouse suppliers to determine if the baghouse replacement can use the Rule 336.1285(2)(d) exemption – *Reconstruction or replacement of air pollution control equipment with equivalent or more efficient equipment*.

Since the fire, and until a replacement baghouse can be installed, Dicastal is operating the brushing burr machines without exhausting to the outside air. All brushing burr machines are currently internally vented and the building acts to capture any fugitive emissions; therefore, we do not believe any excess particulate emissions are being emitted.

While we understand that the permit requires use of the baghouse per our air permit; the brushing burr machines could also meet the exemption under Rule 336.1285(2)(I)(vi)(B):

(vi) Equipment for carving, cutting, routing, turning, drilling, machining, sawing, surface grinding, sanding, planing, buffing, sand blast cleaning, shot blasting, shot peening, or polishing ceramic artwork, leather, metals, graphite, plastics, concrete, rubber, paper board, wood, wood products, stone, glass, fiberglass, or fabric which meets any of the following:
(B) Equipment that has emissions that are released only into the general in-plant environment.

Dicastal will notify EGLE when the new baghouse is installed. Until then, Dicastal will continue to vent the brushing burr machines internally and remove dust with a vacuum.

## Sand Blast

Records of pressure differential of the sand blast baghouse indicated the gauge was frozen for the timeframe of January 13, 2024 through January 26, 2024. During the time period in question, plant personnel did try to obtain daily records; however, because the gauge was frozen they were unable to log the differential pressure. Daily records noted that the pressure gauge was frozen. The pressure differential gauge was repaired and logging of pressure differential started again on January 27,2024. To expedite replacement or repair of pressure differential monitors, Dicastal's Plant Safety Officer is now reviewing the records more frequently. During this time period, Dicastal does not have any reason to believe the sand blast baghouse was not operating properly.

## **Lime Injection Rate**

Dicastal does not believe that the lime injection rate displayed on the baghouse control panel is measuring lime injection and it is likely that the lime injection rate of 5.9 pounds per hour (lb/hr) during stack testing was inaccurate. The emissions of hydrochloric acid (HCl) and hydrogen fluoride (HF) during the 2018 stack testing was non-detect and well below under permit limits.

	FG-N	FG-Melting	
	Measured	Permit Limit	
PM emissions (lb/hr)	0.25	2,92	
PM-10 emissions (lb/hr)	0.43	2.68	
PM-2.5 emissions (lb/hr)	0.43	1.89	
VOC emissions (lb/hr)			
VOC DE (% wt)	***		
HCl emissions (lb/hr)	<0.02	7.69	
HF emissions (lb/hr)	<0.01	1.67	

Dicastal's Maintenance Department has an annual procedure for ensuring lime is being injected into the baghouse. Part of the procedure involves manually weighing the lime and reviewing the color of the baghouse dust to ensure it has a yellow/tan color which is indicative of emissions are being captured. Dicastal maintenance will increase the frequency of the lime injection measurements to quarterly and look for a scale to purchase which can communicate with the facility's Data Management System (DMS). The injection rate for the lime injection system operates based on a set point and is not variable. This set point was not documented during the original stack test because it was believed that the DMS readings were accurate.

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Additionally, Dicastal is looking at the feasibility of adding a second baghouse to the Melt Shop and rerouting exhausts from the furnaces to two separate baghouses. Once the design phase is complete and approved, Dicastal will need to submit a PTI Application to update the air permit and monitoring required. Once approved, Dicastal will retest the existing and new baghouses, determine new lime injection rates and set point required, and update the MAP as necessary.

Dicastal is committed to working with EGLE to ensure the NFE is maintained in compliance with all environmental regulatory requirements. Dicastal is working diligently to find and correct (if possible) the daily melt records. If you have any questions or require additional information, please contact me at 616.619.7510 (senbody@dicastalna.com).

Sincerely,



Manna Carbody

Shawna Enbody, MPH, ASP, CWCP Environment, Health, & Safety Manager

By email and USPS Copy: Jenine Camilleri – EGLE Heidi Hollenbach – EGLE Samantha Lown – Dicastal Stephanie A. Jarrett, PE – Fishbeck