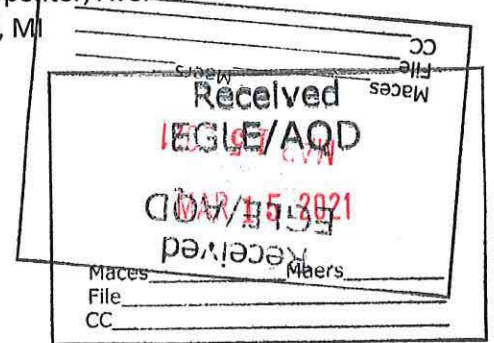




Grede LLC – Iron Mountain
801 S. Carpenter, Ave.
Kingsford, MI



Ms. Jenine Camilleri, Mr. Ed Lancaster and Mr. Michael Conklin

EGLE AQD

PO Box 30260

Lansing, MI 48909-7760

1504 West Washington St.

Marquette, MI 49855

Dear Ms. Camilleri, Mr. Lancaster and Mr. Conklin –

Grede LLC. is dedicated to environmental sustainability and limiting our environmental impact concerning our activities, products, and services. Ensuring environmental compliance with all local, state, and federal rules is a key part of this.

I am pleased that all of our recent stack test results were able to demonstrate significant improvement in air quality emissions over past results and that all but one of the recent stack test results were able to demonstrate compliance with permitted emission limits. We do recognize that during the December 15-17, 2020, stack tests conducted at our facility, one stack test was above the allowed maximum emission for PM10. More specifically, we recognize that the PM10 emission limit rate for the cupola tested above the allowed maximum emission rate of 1.30 pounds per hour with an average emission test result of 2.50 pounds per hour. Per your Violation Notice letter dated February 19, 2021, Grede has initiated the following actions necessary to correct the cited violation. Grede would like to note that this was listed as an exceedance based on application of a dilution factor per method 5D. When reviewing this same dilution factor applied to prior acceptable stack tests where this was not applied, the December 17, 2020 stack test was only 49% of the 2008 results, and 79% of the 2013 results (figure 1).

- As I discussed with you on 2/1/21, Grede has spent more than \$250,000 and completed a number of tasks already to try to improve the cupola baghouse performance. These steps have included relining the baghouse with new bags, completion of a structural evaluation of the baghouse, refitting the cupola afterburners, reprogramming the cupola operating system, and optimizing cupola operation and identifying and selecting a higher quality coke raw material. Despite these efforts, we do not believe we are able to meet the 1.30 pound per hour limit after correcting for dilution in the baghouse. We believe this established limit is quite low, especially



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compared to other cupola processes in the state. We believe the low limit for Grede's operation was developed many years ago, possibly as early as 2006.

- Grede would like to pursue a permit modification to our existing Permit to Install and Renewable Operating permit and request a modest increase in allowable PM10 limits. Grede believes that such an increase will enable the facility to demonstrate compliance with a subsequent stack test. We understand that requesting such a permit request would likely require that updated air modeling might be necessary to demonstrate that the allowable permit increase would be in compliance with the National Ambient Air Quality Standard for PM10 at our property line. If EGLE is willing to approve this approach, Grede will work closely with EGLE to complete the ambient air modeling, demonstrate that the modeling meets the NAAQS and/or look at other production limits to satisfy the modeling/permitting. Grede is willing to participate on a conference call with the Marquette staff to discuss modeling requirements. Grede believes it could complete the modeling effort in April 2021. Assuming the modeling is successful in demonstrating compliance with the PM10 NAAQS, Grede will submit a PTI requesting a permit limit modification in May 2021 and prepare a stack testing protocol and complete a subsequent PM10 stack test in the summer of 2021 to demonstrate compliance, assuming our stack tester is available to complete the test. Grede is committed to working with EGLE to resolve the PM10 issue, please feel free to reach out with any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Tyler Hill', with a long horizontal flourish above it.

Tyler Hill

Plant Manager Grede IM



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Figure 1

PM-10 Results for last four PM-10 tests

	2008 Cupola Test Event				2013 Cupola Test Event				2018 Cupola Test Event				2021 Cupola Test Event			
	Run 1	Run 2	Run 3	Average	Run 1	Run 2	Run 3	Average	Run 1	Run 2	Run 3	Average	Run 1	Run 2	Run 3	Average
Date	1/8/2008	1/8/2008	1/8/2008		12/8/2013	12/10/2013	12/11/2013		4/23/2018	4/24/2018	4/24/2018					
Sample Duration	120	120	120		120	120	120		120	120	120		120	120	120	
Cupola BH Inlet Airflow, ACFM	38,800	42,320	43,110	41,430	53,090	59,950	54,740	55,927	42,700	43,390	40,520	42,203	42,043	40,371	38,219	40,211
Cupola BH Inlet Airflow, DSCFM	15,010	17,100	17,010	16,373	22,700	24,420	23,270	23,463	15,900	15,370	14,900	15,367	15,332	15,365	14,584	15,097
Cupola BH Inlet Temp, °R	1017	1012	1028	1019	1129	1124	1125	1126	1110	1108	1100	1108	1195	1144	1154	1,104
Cupola BH Outlet Temp, °R	873	854	860	863	828	828	815	823	584	674	670	645	832	830	834	834
Ambient Temperature °R	495	490	494	493	493	495	490	495	514	528	499	514	470	488	485	481
Cupola Abs Pressure, in. Hg	28.97	28.97	28.97	28.97	28.66	28.66	28.66	28.66	28.82	28.82	28.82	28.82	28.92	28.92	28.87	28.90
Cupola Moisture, %wv	8.18	7.78	7.31	7.70	3.88	1.27	1.11	2.02	3.77	7.6	8.62	6.00	3.38	2.82	2.95	3.05
Dilution Airflow Rate, ACFM	75,104	96,240	208,208	126,538	197,580	228,121	234,843	220,182	319,824	128,863	98,282	182,323	145,580	138,017	132,570	138,722
Cupola BH Exhaust Airflow, ACFM	114,024	138,660	251,318	167,968	250,870	288,071	289,583	276,108	362,524	172,253	138,802	224,526	187,022	178,387	170,769	178,933
Cupola BH Exhaust Airflow, SCFM	80,030	108,379	219,403	138,137	201,975	232,778	238,188	224,313	315,002	129,959	104,396	183,319	151,478	143,110	137,161	145,916
Cupola BH Exhaust Airflow, DSCFM	79,543	99,937	203,364	127,615	194,542	228,822	235,542	219,969	303,704	120,083	97,485	173,757	148,360	139,081	133,109	139,517
PM-10 LB/HR Inlet DSCFM	1.05	0.58	0.32	0.65	0.41	0.25	0.30	0.34	0.48	0.45	0.43	0.45	0.41	0.18	0.21	0.27
PM-10 LB/HR Outlet DSCFM* * via EPA Method 5D dilution	5.54	3.38	3.84	5.00	3.48	2.32	3.82	3.16	9.23	3.52	2.81	5.13	3.89	1.67	1.95	2.50

Results in green are as reported

PM-10 Testing Summary