

COUNTY OF



ALLEGHENY

Air Quality Program

301 39th Street, Clack Health Center Building 7, Pittsburgh, PA 15201-1811
ph: 412.578.8103 • 24-hr: 412.687.ACHD (2243) • www.alleghenycounty.us/healthdepartment

SUBMISSION FORM – AIR POLLUTION MITIGATION PLAN

APPLICANT INFORMATION

The Air Pollution Mitigation Plan is submitted by affected facilities to meet the requirements of Allegheny County regulations found in §2106.06 (Mon Valley Air Pollution Episode) of Article XXI.

01 Facility Information

Name of Facility	Magnus Products, LLC
Address	1300 Braddock Avenue
City State Zip+4	Braddock, PA 15104
Permit #	0265-OP16b Phone (219) 808-2890

02 Environmental Contact Information (Person to contact regarding technical details of this mitigation plan)

Name/Title	Richard Morris	
Address	734 E. Schantz Ave.	
City State Zip+4	Oakwood, OH 45419-3815	
Email	rmorris@magnus-products.com	Phone (219) 808-2890

03 Responsible Official Information

Name/Title	Richard Morris	
Address	734 E. Schantz Ave.	
City State Zip+4	Oakwood, OH 45419-3815	
Email	rmorris@magnus-products.com	Phone (219) 808-2890



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RICH FITZGERALD
COUNTY EXECUTIVE

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04

AFFIDAVIT

I certify that, subject to the penalties of Title 18Pa. C.S.A. Section 4904 and 35 P.S. Section 4009(b)(2), I am the responsible official having primary responsibility for the operation of the facilities to which this air pollution mitigation plan applies and that the information provided in this mitigation plan is true, accurate and complete to the best of my knowledge, information and belief formed after reasonable inquiry.

Signature: 

Date 10/20/2022

Typed/Printed Name: Richard Morris





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5 List all equipment or processes at your facility that emit PM₁₀ and/or PM_{2.5}
Two (2) Pugmills (P001); Two (2) Screens (P002); Two (2) Front End Loaders (P003); Twenty one (21) Material Transfer Points (P004); Rotary Kiln Dryer (P005); Three (3) Storage Silos (P006); Storage Piles (F001); Plant Roads (F002)

WATCH PHASE OF MITIGATION PLAN

6 How will your facility ensure that equipment which produces particulate emissions is operating in a manner consistent with optimal engineering practices?
The facility will maintain a maintenance log of operation equipment. The facility will also maintain production records to ensure equipment will stay below the maximum capacity for each of the following: Pugmills 438,000 tons/year or 50 tons/hour; Screens 438,000 tons/year or 50 tons/hour; Front End Loaders 438,000 tons/year or 50 tons/hour; Material Transfer Points 438,000 tons/year or 50 tons/hour; Rotary Kiln Dryer 50 tons/hour; Lime Silo 10 tons/hour; Cement Silo 150 tons/hour; Bentonite/Sodium Siclicate Silo 30 tons/hour; Storage Piles 438,000 tons/year or 50 tons/hour.

7 How will your facility ensure that air pollution control equipment is maintained in optimal working condition?
Particulate emissions from the rotary kiln dryer (P005) are controlled by a cyclone and baghouse. Particulate emissions from the storage silos (P006) are controlled with bin vent filters. Some of the material transfer points (P004) are controlled with a baghouse. The facility operates the air pollution control equipment in accordance with manufacturers' specifications and good engineering practices by performing regular maintenance per the manufacturer's recommendations.

8 How will your facility ensure that actions taken in blocks 05 and 06 are properly monitored, recorded, and reported to the Health Department?
The facility operates in accordance with Title V Operating Permit 0265-OP16b. This operating permit includes monitoring, recording and reporting requirements to ensure that actions are taken to properly maintain the facility's equipment in a manner to reduce air pollution. Compliance certifications are submitted on an annual basis to certify that the facility operates the equipment in accordance with the terms and conditions of the operating permit.



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WARNING PHASE OF MITIGATION PLAN

9 How will your facility ensure that procedures are in place so enough staff and resources are available to implement the Mon Valley Air Pollution Warning Phase within 24 hours of the notification from ACHD?

Magnus will ensure that there are sufficient staff and resources (Magnus employees and/or contractors) available to implement the Mon Valley Air Pollution Warning Phase within 24 hours of the Department's notification of a Mon Valley Air Pollution Warning. The site operates with supervisors on site at all times. Supervisors may call in additional staff or resources if needed.

10 For every process and piece of equipment, list all available methods to reduce PM_{2.5}/PM₁₀ emissions from your four-year hourly average. During an actual warning phase, the actions to reduce emissions must last the length of the episode.

For all equipment at the Magnus facility, it is possible to reduce PM_{2.5}/PM₁₀ emissions with a reduction in material throughput. In addition, the facility may employ additional roadway wetting to minimize road dust.

Process ID	Process Description	Feasible PM _{2.5} /PM ₁₀ Reduction Method
P001	New and Old Pugmills	<ul style="list-style-type: none"> • Reduction in material throughput • Reduction in operating time
P002	Two Screens	<ul style="list-style-type: none"> • Reduction in material throughput • Reduction in operating time
P003	Two Front End Loaders	<ul style="list-style-type: none"> • Reduction in material throughput • Reduction in operating time
P004	Twenty One (21) Material Transfer Points	<ul style="list-style-type: none"> • Reduction in material throughput • Reduction in operating time
P005	Rotary Kiln Dryer	<ul style="list-style-type: none"> • Reduction in material throughput • Reduction in operating time
P006	Three (3) Storage Silos	<ul style="list-style-type: none"> • Reduction in material throughput • Reduction in operating time
F001	Storage Piles	<ul style="list-style-type: none"> • Reduction in material throughput • Reduction in operating time
F002	Roads and Vehicles	<ul style="list-style-type: none"> • Increased use of controls or suppression equipment

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11 For each piece of equipment and process, determine which emission reduction methods are feasible. List whether each method is feasible or infeasible and provide a justification for your determination.

Magnus Products, LLC is located on the US Steel - Edgar Thomson site. The Magnus facility receives waste products from US Steel, including furnace flue dust, slag and sludge, mill scale and coke fines, dries them in a rotary kiln fired with coke oven gas, combines them with lime, cement, sodium silicate, water, bentonite and molasses in a wet mixing process in two pugmills, and forms the moist mix into briquettes. The finished briquettes are piled on-site with a radial stacker and then loaded onto railcars and sent back to US Steel to be used in their furnaces.

The US Steel - Edgar Thomson site has submitted to ACHD a Warning Plan that will be implemented in the case of a Mon Valley Air Pollution Warning Phase. The Plan includes material handling reduction of waste material transfer and travel. With this reduction of waste material transfer, the material handled by the Magnus facility will also be reduced, hence reducing PM2.5/PM10 emissions from all equipment at the facility. In addition, Magnus will increase roadway watering to reduce fugitive dust emissions.



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12 How will your facility ensure that actions taken in block 10 are properly monitored, recorded, and reported to the Health Department?

Magnus will submit a report after the warning phase has ended, itemizing what actions were taken to meet the requirements of the warning phase. Compliance certifications will be submitted on an annual basis to certify the facility is in compliance with these requirements. The methods that will be used to reduce PM2.5/PM10 emissions for each source during a Warning Phase are summarized in the following table:

Process ID	Process Description	Proposed Action
P001	New and Old Pugmills	<ul style="list-style-type: none"> • Delay production to a future day when a mitigation plan is not needed. • Delay any non-essential activities to a future day when a mitigation plan is not needed.
P002	Two Screens	<ul style="list-style-type: none"> • Delay production to a future day when a mitigation plan is not needed. • Delay any non-essential activities to a future day when a mitigation plan is not needed.
P003	Two Front End Loaders	<ul style="list-style-type: none"> • Delay production to a future day when a mitigation plan is not needed. • Delay any non-essential activities to a future day when a mitigation plan is not needed.
P004	Twenty One (21) Material Transfer Points	<ul style="list-style-type: none"> • Delay production to a future day when a mitigation plan is not needed. • Delay any non-essential activities to a future day when a mitigation plan is not needed.
P005	Rotary Kiln Dryer	<ul style="list-style-type: none"> • Delay production to a future day when a mitigation plan is not needed. • Delay any non-essential activities to a future day when a mitigation plan is not needed.
P006	Three (3) Storage Silos	<ul style="list-style-type: none"> • Delay production to a future day when a mitigation plan is not needed. • Delay any non-essential activities to a future day when a mitigation plan is not needed.
F001	Storage Piles	<ul style="list-style-type: none"> • Delay production to a future day when a mitigation plan is not needed. • Delay any non-essential activities to a future day when a mitigation plan is not needed.
F002	Roads and Vehicles	<ul style="list-style-type: none"> • Stop or decrease unnecessary transportation activities and reduce travel speed on necessary transportation. • Employ additional roadway wetting to minimize road dust creation.

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13 Provide an active spreadsheet containing the following:

- Calculations of your facility's PM_{2.5} and PM₁₀ emissions for each of the past four years (2017-2020) in tons/year for every piece of equipment and process;
- Calculation of average four year emissions of PM_{2.5} and PM₁₀ in lbs/hr for each piece of equipment and process;
- Feasible PM_{2.5} and PM₁₀ emission reductions in lbs/hr that will occur during a warning phase for every piece of equipment and process as well as the facility total; and
- Feasible PM_{2.5} and PM₁₀ emission reductions in percent reduced from the hourly four year average for every piece of equipment and process as well as the facility total percent reduction.

This spreadsheet will be used to calculate actual emission reductions that will be reported to the Health Department after warning phases have ended.

14 How much time will be required for your facility to implement the emission reductions in block 10?
The facility will implement the requirements of the warning phase within 24 hours.

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Mitigation Plan Checklist

The following checklist is provided as a list of items required for a complete mitigation plan submission. If at any time you have questions about your application, please call JoAnn Truchan 412-578-7981 or Jayme Graham 412-578-8129.

- ✓ Has the responsible official signed and dated the first page (block 04)?
- ✓ Have you provided an active spreadsheet showing actual emissions for every piece of equipment and process of PM2.5 and PM10 for the past four years in tons per year?
- ✓ Does the spreadsheet include the average actual PM2.5 and PM10 emissions from every piece of equipment and process for the past four years in lbs/hr?
- ✓ Does the spreadsheet include the PM10 and PM2.5 reduction that will be achieved from every piece of equipment and process in lbs/hr and % from the four year hourly average during the warning phase?
- ✓ Have you provided a complete response for each of the fourteen blocks?

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