

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

SOURCE 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.

	()1	Facility	Information
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Name of Facility U. S. Steel Irvin Plant

Address 1 Camp Hollow Road

City State Zip+4 West Mifflin, PA 15122

Permit # 0050-OP16c Phone (412) 675-7382

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

Name/Title Nicole Heinichen, Environmental Engineer

Address 1 Camp Hollow Road

City State Zip+4 West Mifflin, PA 15122

Email NLHeinichen@uss.com Phone (412) 675-7382

03 Responsible Official Information

Name/Title Kurt Barshick, General Manager

Address P. O. Box 878

City State Zip+4 **Dravosburg, PA 15034**

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SUBMISSION FORM – AIR POLLUTION MITIGATION PLAN

Phone

(412) 675-2600

KBarshick@uss.com

Kurt A. Barshick

04 AFFI	DAVIT				
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: Kt Bankier	Date 12/27/2021				



Email

Typed/Printed Name:



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05 List all equipment or processes at your facility that emit PM₁₀ and/or PM_{2.5}

- Boiler #1
- Boiler #2
- Boiler #3
- Boiler #4
- CA Line
- CGL #1 Preheat Furnace
- CGL #2 Preheat Furnace
- HPH Furances #1-#31
- HSM Furnace #1
- HSM Furnace #2
- HSM Furnace #3
- HSM Furnace #4
- HSM Furnace #5
- OCA Furnaces #1-#16
- Miscellaneous Natural Gas
- 64" Pickling Line (Descaler and Scrubber)
- 84" Pickling Line (Descaler and Scrubber)
- Cold Reduction Mill Fugitive
- Cold Reduction Mill Stack
- Cooling Tower HPH Annealing
- Cooling Tower North Water Treatment Plant
- Paved Roads Heavy Duty Diesel Vehicles
- Paved Roads Light Duty Gasoline Vehicles
- Unpaved Roads Light Duty Gasoline Vehicles
- Unpaved Roads Heavy Duty Diesel Vehicles
- Contractor Activities
- Diesel locomotives



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WATCH PHASE OF MITIGATION PLAN

06 How will your facility ensure that equipment which produces particulate emissions is operating in a manner consistent with optimal engineering practices?

Check process operations to confirm "normal" operations at the Plant and initiate corrective actions, as necessary, for any abnormal process conditions at the:

- a. Hot Mill
- b. Pickle Lines
- c. Cold Mill
- d. Annealing
- e. Galvanize
- f. Boilers
- g. Oil Separation Facility (MORS)
- h. Ground flares
- i. Main COG flares

Check all pollution control equipment for normal operation and initiate corrective actions as necessary.

- a. Check both CPLs scrubber DPs
- b. Check both CPLs scrubber make up water flow rates and recirculation water flow rates
- c. Check 64 CPL scale breaker DP (between 0.5 and 8 in w.c.)
- d. Check CRM mist eliminators and exhaust fan inlet pressures

07 How will your facility ensure that air pollution control equipment is maintained in optimal working condition?

All air pollution control equipment has electrical and mechanical preventative maintenance tasks, as applicable, scheduled to ensure the equipment is in optimal working condition.

08 How will your facility ensure that actions taken in blocks 05 and 06 are properly monitored, recorded, and reported to the Health Department?



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Verification of actions taken will be reviewed by and signed off on by appropriate area manager or designee in the Watch Phase Checklist, which will be made available for submission to ACHD.



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WARNING PHASE OF MITIGATION PLAN

09 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?

USS will ensure that there are sufficient staff and resources available to implement the Mon Valley Air Pollution Warning Phase within 24 hours of the Department's notification to the source of a Mon Valley Air Pollution Watch.

- **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.
 - 1. Actions will be implemented as decided upon in the Watch Phase. Actions may include the items below on a case-by-case basis.
 - 2. Discontinue or curtail non-essential contractor activity that contributes to airborne dust.
 - 3. Notify Union Railroad Company. Minimize engine idling, any engine unnecessary movement if possible, and/or reduce speeds.
 - 4. Ensure that roll off boxes containing any dry material that may contribute to PM emissions are properly covered or tarped.
 - Evaluate outage schedule/maintenance shut downs activities that may contribute to the release of particulate
 matter and discontinue or minimize any contruction and maintenance activities that generate particulate matter
 emissions.
 - 6. Ensure that paved roadways and paved parking lots are sufficiently watered.
 - 7. Ensure dust suppressant is sufficiently applied to unpaved roadways, unpaved parking lots, and south yard storage area, as necessary.
 - 8. Plant protection will enforce ACHD's diesel-idling rule.



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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.
 - Boiler #1
 - Follow work practices/Environmental Management System procedures to minimize fugitive emissions -Feasible
 - Ensure environmental work practices are being followed to minimize emissions Feasible
 - Boiler #2
 - Follow work practices/Environmental Management System procedures to minimize fugitive emissions -Feasible
 - o Ensure environmental work practices are being followed to minimize emissions Feasible
 - Boiler #3
 - Follow work practices/Environmental Management System procedures to minimize fugitive emissions -Feasible
 - o Ensure environmental work practices are being followed to minimize emissions Feasible
 - Boiler #4
 - Follow work practices/Environmental Management System procedures to minimize fugitive emissions -Feasible
 - o Ensure environmental work practices are being followed to minimize emissions Feasible
 - CA Line
 - Follow work practices/Environmental Management System procedures to minimize fugitive emissions -Feasible
 - o Ensure environmental work practices are being followed to minimize emissions Feasible
 - CGL #1 Preheat Furnace
 - Follow work practices/Environmental Management System procedures to minimize fugitive emissions -Feasible
 - o Ensure environmental work practices are being followed to minimize emissions Feasible
 - CGL #2 Preheat Furnace
 - Follow work practices/Environmental Management System procedures to minimize fugitive emissions -Feasible



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- o Ensure environmental work practices are being followed to minimize emissions Feasible
- HPH Furances #1-#31
 - Follow work practices/Environmental Management System procedures to minimize fugitive emissions -Feasible
 - o Ensure environmental work practices are being followed to minimize emissions Feasible
- HSM Furnace #1
 - Follow work practices/Environmental Management System procedures to minimize fugitive emissions -Feasible
 - o Ensure environmental work practices are being followed to minimize emissions Feasible
- HSM Furnace #2
 - Follow work practices/Environmental Management System procedures to minimize fugitive emissions -Feasible
 - o Ensure environmental work practices are being followed to minimize emissions Feasible
- HSM Furnace #3
 - Follow work practices/Environmental Management System procedures to minimize fugitive emissions -Feasible
 - o Ensure environmental work practices are being followed to minimize emissions Feasible
- HSM Furnace #4
 - Follow work practices/Environmental Management System procedures to minimize fugitive emissions -Feasible
 - o Ensure environmental work practices are being followed to minimize emissions Feasible
- HSM Furnace #5
 - Follow work practices/Environmental Management System procedures to minimize fugitive emissions -Feasible
 - o Ensure environmental work practices are being followed to minimize emissions Feasible
- OCA Furnaces #1-#16
 - Follow work practices/Environmental Management System procedures to minimize fugitive emissions -Feasible
 - o Ensure environmental work practices are being followed to minimize emissions Feasible
- Miscellaneous Natural Gas
 - Follow work practices/Environmental Management System procedures to minimize fugitive emissions -Feasible
 - Ensure environmental work practices are being followed to minimize emissions Feasible
- 64" Pickling Line (Descaler and Scrubber)
 - Follow work practices/Environmental Management System procedures to minimize fugitive emissions -Feasible



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- o Ensure environmental work practices are being followed to minimize emissions Feasible
- 84" Pickling Line (Descaler and Scrubber)
 - Follow work practices/Environmental Management System procedures to minimize fugitive emissions -Feasible
 - o Ensure environmental work practices are being followed to minimize emissions Feasible
- Cold Reduction Mill Fugitive
 - Follow work practices/Environmental Management System procedures to minimize fugitive emissions -Feasible
 - o Ensure environmental work practices are being followed to minimize emissions Feasible
- Cold Reduction Mill Stack
 - Follow work practices/Environmental Management System procedures to minimize fugitive emissions -Feasible
 - o Ensure environmental work practices are being followed to minimize emissions Feasible
- Cooling Tower HPH Annealing
 - None the cooling tower provides cooling water to the plant and must support the processes that remain in operation
- Cooling Tower North Water Treatment Plant
 - None the cooling tower provides cooling water to the plant and must support the processes that remain in operation
- Paved Roads Heavy Duty Diesel Vehicles
 - Water paved roadways as necessary. Apply dust suppressant to paved roadways as necessary. Enforce ACHD's diesel-idling rule - Feasible
- Paved Roads Light Duty Gasoline Vehicles
 - o Water paved roadways as necessary. Apply dust suppressant to paved roadways as necessary Feasible
- Unpaved Roads Light Duty Gasoline Vehicles
 - Follow work practices/Environmental Management System procedures to minimize fugitive emissions -Feasible
 - o Ensure environmental work practices are being followed to minimize emissions Feasible
 - o Increase road watering Feasible
- Unpaved Roads Heavy Duty Diesel Vehicles
 - Follow work practices/Environmental Management System procedures to minimize fugitive emissions -Feasible
 - Ensure environmental work practices are being followed to minimize emissions Feasible
 - Evaluate dust suppressant application Feasible



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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?

Verification of actions taken will be reviewed by and signed off on by appropriate area manager or designee in the Warning Phase Checklist, which will be made available for submission to ACHD.

- 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?

USS will initiate actions within 2 hours of initial notification and will have plan fully implemented within 24 hours of initial notification.

USS may revise the plan at any time and notify the Department no later than 30 days following a revision to the plan. The revised plan shall be effective upon submission to the Department.



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INSTRUCTIONS					
Submission Form for the Air Pollution Mitigation Plan					
The facility name for the operation at that particular address should be used and not the name of the larger corporation. Use the address for the actual facility and not the company headquarters, if different. The most recent permit number should be included. If it is not known, it can be left blank.					
Fill in the contact information of the individual (e.g. employee or consultant) who will be contacted to provide environmental technical information for the Air Pollution Mitigation Plan					
This address and phone number are for the office where the responsible official works the majority of the time. See block 04 instructions for information regarding the responsible official.					
This affidavit must be signed by the responsible official. A Responsible Official is a President, Vice President, Secretary, Treasurer, General Partner, General Manager, a member of a Board of Directors, or Owner, depending on business structure. CORPORATION – President, Vice President, Secretary, Treasurer, or duly authorized person BUSINESS – Sole Proprietor or General Partner GOVERNMENT ENTITY – Ranking elected official or principal executive officer					
 The responses that you provide in blocks 05 through 08 will be specific to your equipment and facility. Below are some general ideas that may help you in how to approach these requirements. Staff related Review procedures with employees to ensure all equipment is properly operating in a way to minimize air emissions. Schedule additional or on-call employees for upcoming shifts to ensure facility is fully staffed for a warning phase. Conduct a shift meeting(s) to remind employees to prioritize the environmental impact of their operations to reduce emissions. Share any other procedures which would help ensure sufficient staff levels and available resources to implement a warning phase. Equipment related 					



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	 Inspect any equipment or processes which may have a potential to increase emissions to ensure proper operation and maintenance. Implement improved operation and maintenance practices beyond standard operating procedures. Ensure the facility is following the idling requirements under Act 124 of the PA Department of Environmental Protection regulations. Conduct maintenance on all pollution control equipment. Share any other procedures which help ensure the facility is operating in a manner consistent with good engineering practices. Share any other procedures which help ensure the air pollution control equipment is maintained in good working condition.
Block 09 Warning Phase of Mitigation Plan	A good starting point in completing this block is to refer to the table found in section II of your facility's air quality permit titled "Emission Unit Identification" and identify which units emit particulate matter. There may be other equipment, not listed in the section II table, that can be included in the block 09 list.
Block 10 Warning Phase of	Block 10 should explain what actions the facility could possible take to ensure that hourly emissions are reduced.
Mitigation Plan	Possible methods include: Reduction in material throughput Reduction in operating time Increased use of controls or suppression equipment Changes in raw materials
	 Examples of possible actions include: Reduce production by a certain percentage or rate from normal operating conditions. A reduction from a potential maximum production rate will not be accepted if it is too high compared to normal operating rates for the relevant time period, thereby not resulting in an actual reduction in pollution. Reduce usage of diesel fuel or other PM_{2.5} or PM₁₀ creating fuel types or switch fuel types to lower PM_{2.5} or PM₁₀ as allowed by the relevant permits. Bring in additional employees to allow the facility to operate in the best environmentally responsible manner.
	 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.



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	 Fully or partially enclose material movement and other work activities which produce dust and other particulate matter (PM_{2.5} or PM₁₀ emissions). Modify work practices to decrease PM_{2.5} or PM₁₀ emissions such as: Slowing material handling Fully or partially enclose material movement and other work activities which produce dust and other particulate matter (PM_{2.5} or PM₁₀ emissions). Stop or decrease unnecessary transportation activities and reduce travel speed on necessary transportation. Employ additional roadway wetting or other activities to minimize road dust creation. Add any other measures which reduce PM_{2.5} or PM₁₀ emissions.
Block 11 Warning Phase of Mitigation Plan	Emission reduction methods that are feasible can be eliminated from consideration for other reasons as long as adequate justification is given.
Block 12 Warning Phase of Mitigation Plan	The Health Department will require a report, submitted after the warning phase has ended, itemizing what actions were taken to meet the requirements of the warning phase.
Block 13 Warning Phase of Mitigation Plan	The spreadsheet must include actual plant emissions of PM _{2.5 and} PM ₁₀ for all equipment listed in block 09 for each of the past four years (2017-2020) in tons/year. These calculations can be copied directly from the spreadsheets submitted to the Health Department for emissions inventories.
	For each piece of equipment and process, emissions from the last four years must be provided in tons/year.
	For each piece of equipment and process, proposed feasible emission reductions must be provided in lbs/hr.
	The hourly average will be calculated for each unit and process by adding yearly emissions together and dividing by the total number of hours that the unit emitted over four years.
	In the case of a batch process, calculations will need to take into account the number of hours in each batch and the number of batches in a year.



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Block 14	Section 2106.06 of county air quality regulations requires that an affected facility is able to
Warning Phase	implement the requirements of the warning phase within 24 hours.
of	
Mitigation Plan	



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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 $PM_{2.5}$ and PM_{10} for the past four years in tons per year?
Does the spreadsheet include the average actual $PM_{2.5}$ and PM_{10} emissions from every piece of equipment and process for the past four years in lbs/hr?
Does the spreadsheet include the PM_{10} and $PM_{2.5}$ 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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ACHD Episode Rule: Watch Phase Checklist Date and Time of ACHD Notification: Verification of actions taken (Write OK on provided line; if not OK, please explain):							
Actions will be implemented as decided upon in the Watch Phase. Actions may include the items listed below on a case-by-case basis.							
1. Check all pollution control equipment for normal operation and initiate corrective actions as necessary.							
a. Check 64" CPL scrubber DP							
b. Check 84" CPL scrubber DP							
c. Check 64" CPL scrubber make up water flow rate							
d. Check 84" CPL scrubber make up water flow rate							
e. Check 64" CPL recirculation water flow rate							
f. Check 84" CPL recirculation water flow rate							
g. Check 64" CPL scale breaker DP (between 0.5 and 0.8 in w.c.)							
h. Check CRM mist eliminators							
i. Check CRM exhaust fan inlet pressures							
2. Check process operations to confirm "normal" operations at the Plant and initiate corrective actions, as necessary, for any abnormal process conditions at the: a. Hot Mill b. Pickle Lines c. Cold Mill d. Annealing e. Galvanize f. Boilers g. Oil Separation Facility (MORS) h. Ground flares i. Main COG flares i. Main COG flares							
3. Evaluate current contractor operations for normal operating conditions, and initiate any corrective actions as necessary							

ACHD	Episode Rule: Warning Phase Checklist
Date a	nd Time of ACHD Notification:
Verific	ation of Actions taken (Write OK on provided line; if not OK, please explain):
	s will be implemented as decided upon in the Watch Phase. Actions may include the items listed below on by-case basis.
1.	Any non-essential contractor activity contributing to airborne dust will be curtailed as necessary on a case by case basis
2.	Notify Railroad. Eliminate engine idling, any engine unnecessary movement if possible, and/or reduce speeds
3.	Ensure that roll off boxes containing any dry material that may contribute to PM emissions are properly covered or tarped
4.	Evaluate outage schedule/maintenance shut downs activities that may contribute to the release of particulate matter and either delay or determine methods to minimize emissions
5.	Ensure that paved roadways and paved parking lots are sufficiently watered
6.	Ensure dust suppressant is sufficiently applied to unpaved roadways, unpaved parking lots, and south yard storage area, as necessary.
7.	Plant protection will enforce ACHD's diesel-idling rule.

Source	PM10 (tons/yr)	PM2.5 (tons/yr)	PM10 (lb/hr)	PM2.5 (lb/hr)
Boiler #1 - COG	1.189957533	0.880842128		0.201105509
Boiler #1 - COG Boiler #1 - NG	0.020579671			0.004698555
Boiler #2 - COG	1.199019773	0.887550268		0.202637048
Boiler #2 - NG	0.020609056			0.202037048
Boiler #3 - COG	0.262519606			
Boiler #3 - NG				0.044366406
	0.003195873		0.000729651	0.000729651
Boiler #4 - COG	0.161577102		0.036889749	0.027306895
Boiler #4 - NG	0.002672148		0.000610079	0.000610079
CA Line - COG	0.288534995	0.213582226		0.048763065
CA Line - NG	0.005023651		0.001146952	0.001146952
CGL #1 Preheat Furnace - NG	0.091986429			0.021001468
CGL #2 Preheat Furnace - NG	0.066595034		0.015204346	0.015204346
COG Flares 1-3 Total				
COG Peachtree Flare A				
COG Peachtree Flare B				
HPH Furnaces #1 - #31 - COG - Total	0.851059479		0.194305817	0.143830973
HPH Furnaces #1 - #31 - NG - Total	0.013928725	0.013928725		0.003180074
HSM #1 Furnace - COG	3.003561263	2.223325809		0.507608632
HSM #1 Furnace - NG	0.151786479	0.151786479		0.034654447
HSM #2 Furnace - COG	2.974034554		0.679003323	0.502618552
HSM #2 Furnace - NG	0.150359048	0.150359048	0.03432855	0.03432855
HSM #3 Furnace - COG	2.808507277		0.641211707	0.474644068
HSM #3 Furnace - NG	0.145682658	0.145682658	0.033260881	0.033260881
HSM #4 Furnace - COG	2.981383949	2.206909498	0.680681267	0.503860616
HSM #4 Furnace - NG	0.149450378	0.149450378	0.034121091	0.034121091
HSM #5 Furnace - COG	3.08219507	2.281532903	0.703697505	0.520897923
HSM #5 Furnace - NG	0.154953287	0.154953287	0.035377463	0.035377463
OCA #1-16 Furnace Total - COG	0.696659363	0.51568808	0.159054649	0.117737005
OCA #1-16 Furnace Total - NG	0.011561255	0.011561255	0.002639556	0.002639556
Misc Natural Gas	0.265917458	0.265917458	0.060711748	0.060711748
80" HSM Rolling Oil				
64" Pickling Line (Descaler and Scrubber)	0.0301488	0.0301488	0.006883288	0.006883288
84" Pickling Line (Descaler and Scrubber)	0.10332	0.10332	0.023589041	0.023589041
Cold Reduction Mill - Fugitive	1.474627016	1.474627016	0.336672835	0.336672835
Cold Reduction Mill - Stack	7.22567238	7.22567238	1.64969689	1.64969689
Cooling Tower - HPH Annealing	0.421689406	0.421689406	0.09627612	0.09627612
Cooling Tower - North Water Treatment Plant	0.404865528	0.404865528	0.092435052	0.092435052
Solvent Degreasers (Safety Kleen)				
Paint and Thinner Emissions				
Ink Emissions				
Paved Roads - Heavy Duty Diesel Vehicles	0.12011886	0.02948372	0.027424397	0.006731443
Paved Roads - Light Duty Gasoline Vehicles	0.042099658	0.010333552	0.009611794	0.002359259
Unpaved Roads - Light Duty Gasoline Vehicles	0.778388771	0.077838877	0.177714331	0.017771433
Unpaved Roads - Heavy Duty Diesel Vehicles	0.704278252	0.070427825	0.160794121	0.016079412
HCL Storage Tanks				
Fuel Storage - Kerosene				
Fuel Storage - Diesel				
Fuel Storage - Gasoline				
Total	32.05851978	25.53645816	7.319296755	5.830241589

Source	DI/	10 (tons/yr)	DNA	2.5 (tons/yr)	PM10 (lb/hr)	PM2.5 (lb/hr)
Boiler #1 - COG	FIVI	0.743953766	FIVI		0.169852458	0.125729866
Boiler #1 - NG		0.043068104		0.043068104	0.103832438	0.0098329
Boiler #2 - COG		1.020590572		0.755471642		0.17248211
Boiler #2 - NG		0.054768549		0.054768549		
Boiler #3 - COG		0.222758376		0.164892407		0.012304233
Boiler #3 - NG						
Boiler #4 - COG		0.008156964		0.008156964		
Boiler #4 - NG		0.153527528		0.113645664	0.035051947 0.001789163	0.025946499
		0.007836532				0.001789163
CA Line - COG		0.409249809			0.093436029	0.069164141
CA Line - NG		0.021294188		0.021294188		
CGL #1 Preheat Furnace - NG		0.14653789		0.14653789		0.033456139
CGL #2 Preheat Furnace - NG		0.098002133			0.022374916	
COG Flares 1-3 Total						
COG Peachtree Flare A						
COG Peachtree Flare B						
HPH Furnaces #1 - #31 - COG - Total		0.853030702			0.194755868	0.144164114
HPH Furnaces #1 - #31 - NG - Total		0.039680371		0.039680371		0.009059445
HSM #1 Furnace - COG		3.166705605		2.344090126	0.722992147	0.535180394
HSM #1 Furnace - NG		0.15248678		0.15248678		0.034814333
HSM #2 Furnace - COG		3.166705605		2.344090126		
HSM #2 Furnace - NG		0.15248678		0.15248678		0.034814333
HSM #3 Furnace - COG		3.166705605			0.722992147	
HSM #3 Furnace - NG		0.15248678			0.034814333	0.034814333
HSM #4 Furnace - COG		3.166705605			0.722992147	
HSM #4 Furnace - NG		0.15248678			0.034814333	0.034814333
HSM #5 Furnace - COG		3.166705605			0.722992147	
HSM #5 Furnace - NG		0.15248678			0.034814333	0.034814333
OCA #1-16 Furnace Total - COG		0.758951848		0.561798839		0.128264575
OCA #1-16 Furnace Total - NG		0.035954524		0.035954524		0.008208796
Misc Natural Gas		0.379517604		0.379517604	0.086647855	0.086647855
80" HSM Rolling Oil						
64" Pickling Line (Descaler and Scrubber)		0.034144			0.007795434	0.007795434
84" Pickling Line (Descaler and Scrubber)		0.104216			0.023793607	0.023793607
Cold Reduction Mill - Fugitive		1.4458224		1.4458224		0.330096438
Cold Reduction Mill - Stack		5.394312		5.394312	1.231578082	1.231578082
Cooling Tower - HPH Annealing		0.421689406		0.421689406	0.09627612	0.09627612
Cooling Tower - North Water Treatment Plant		0.404865528		0.404865528	0.092435052	0.092435052
Solvent Degreasers (Safety Kleen)						
Paint and Thinner Emissions						
Ink Emissions						
Paved Roads - Heavy Duty Diesel Vehicles		0.11685357		0.02868224	0.026678897	0.006548457
Paved Roads - Light Duty Gasoline Vehicles		0.040955228		0.010052647	0.009350509	0.002295125
Unpaved Roads - Light Duty Gasoline Vehicles		0.757229185		0.075722919	0.172883376	0.017288338
Unpaved Roads - Heavy Duty Diesel Vehicles		0.685133274		0.068513327	0.156423122	0.015642312
HCL Storage Tanks						
Fuel Storage - Kerosene						
Fuel Storage - Diesel						
Fuel Storage - Gasoline						
Total		30.99806197		24.38660497	7.077183099	5.567718031

Source	PM10 (tons/yr)	PM2.5 (tons/yr)	PM10 (lb/hr)	PM2.5 (lb/hr)
Boiler #1 - COG	0.761807157	0.563912424	0.173928575	0.128747129
Boiler #1 - COG Boiler #1 - NG	0.065996671	0.065996671		0.015067733
Boiler #2 - COG	0.56988138	0.421843229		0.096311239
Boiler #2 - NG	0.112925378	0.421843229	0.130109904	0.030311233
Boiler #3 - COG	0.259054285		0.02378203	
Boiler #3 - NG			0.0039144814	0.043780759
Boiler #4 - COG	0.017597761			0.004017754
	0.13005169		0.029692167	0.021979029
Boiler #4 - NG	0.017593855		0.004016862	0.004016862
CA Line - COG	0.290199559		0.066255607	0.04904438
CA Line - NG	0.028049264	0.028049264		0.006403941
CGL #1 Preheat Furnace - NG	0.165251293	0.165251293		0.037728606
CGL #2 Preheat Furnace - NG	0.143331327	0.143331327		0.032724047
COG Flares 1-3 Total				
COG Peachtree Flare A				
COG Peachtree Flare B				
HPH Furnaces #1 - #31 - COG - Total	0.664340977		0.151676022	0.112275124
HPH Furnaces #1 - #31 - NG - Total	0.062984994	0.062984994		0.014380136
HSM #1 Furnace - COG	3.166705605	2.344090126		0.535180394
HSM #1 Furnace - NG	0.15248678	0.15248678		0.034814333
HSM #2 Furnace - COG	3.166705605		0.722992147	0.535180394
HSM #2 Furnace - NG	0.15248678	0.15248678	0.034814333	0.034814333
HSM #3 Furnace - COG	3.166705605	2.344090126	0.722992147	0.535180394
HSM #3 Furnace - NG	0.15248678	0.15248678	0.034814333	0.034814333
HSM #4 Furnace - COG	3.166705605	2.344090126	0.722992147	0.535180394
HSM #4 Furnace - NG	0.15248678	0.15248678	0.034814333	0.034814333
HSM #5 Furnace - COG	3.166705605	2.344090126	0.722992147	0.535180394
HSM #5 Furnace - NG	0.15248678	0.15248678	0.034814333	0.034814333
OCA #1-16 Furnace Total - COG	0.608786025	0.450641609	0.138992243	0.102886212
OCA #1-16 Furnace Total - NG	0.058225718	0.058225718	0.013293543	0.013293543
Misc Natural Gas	0.2517122	0.2517122	0.057468539	0.057468539
80" HSM Rolling Oil				
64" Pickling Line (Descaler and Scrubber)	0.0902712	0.0902712	0.020609863	0.020609863
84" Pickling Line (Descaler and Scrubber)	0.31929	0.31929	0.07289726	0.07289726
Cold Reduction Mill - Fugitive	1.107767143	1.107767143	0.252914873	0.252914873
Cold Reduction Mill - Stack	5.428059	5.428059	1.239282877	1.239282877
Cooling Tower - HPH Annealing	0.421689406	0.421689406	0.09627612	0.09627612
Cooling Tower - North Water Treatment Plant	0.404865528	0.404865528	0.092435052	0.092435052
Solvent Degreasers (Safety Kleen)				
Paint and Thinner Emissions				
Ink Emissions				
Paved Roads - Heavy Duty Diesel Vehicles	0.117556441	0.028854763	0.02683937	0.006587845
Paved Roads - Light Duty Gasoline Vehicles	0.041201573	0.010113113	0.009406752	0.00230893
Unpaved Roads - Light Duty Gasoline Vehicles	0.761783899	0.07617839		0.017392326
Unpaved Roads - Heavy Duty Diesel Vehicles	0.689254333	0.068925433	0.157364003	0.0157364
HCL Storage Tanks				
Fuel Storage - Kerosene				
Fuel Storage - Diesel				
Fuel Storage - Gasoline				
Total	30.18548998	23.79357153	6.891664379	5.432322267

Source	PM10 (tons/yr)	PM2 5 (tons/yr)	PM10 (lb/hr)	PM2.5 (lb/hr)
Boiler #1 - COG	0.946019264	0.700271731		0.159879391
Boiler #1 - COG Boiler #1 - NG	0.033899576	0.033899576		0.007739629
Boiler #2 - COG	0.88089842	0.652067336		0.148873821
Boiler #2 - NG	0.030172747		0.006888755	0.006888755
Boiler #3 - COG	0.366568337	0.271344838		0.061950876
Boiler #3 - NG				
	0.014206417	0.014206417		0.003243474
Boiler #4 - COG	0.324366084		0.074056183	0.0548186
Boiler #4 - NG	0.012896381		0.002944379	0.002944379
CA Line - COG	0.275648242		0.062933389	0.046585175
CA Line - NG	0.009901802	0.009901802		0.002260686
CGL #1 Preheat Furnace - NG	0.151074187	0.151074187		0.034491824
CGL #2 Preheat Furnace - NG	0.124219565		0.028360631	0.028360631
COG Flares 1-3 Total				
COG Peachtree Flare A				
COG Peachtree Flare B				
HPH Furnaces #1 - #31 - COG - Total	0.891882912		0.203626236	0.150730225
HPH Furnaces #1 - #31 - NG - Total	0.035504693	0.035504693		0.008106094
HSM #1 Furnace - COG	2.423632481	1.794045193		0.409599359
HSM #1 Furnace - NG	0.331743318	0.331743318		0.075740483
HSM #2 Furnace - COG	2.484874961	1.839378706	0.56732305	0.419949476
HSM #2 Furnace - NG	0.334340636	0.334340636	0.076333479	0.076333479
HSM #3 Furnace - COG	2.231697784	1.651969394	0.509520042	0.377161962
HSM #3 Furnace - NG	0.30149136	0.30149136	0.068833644	0.068833644
HSM #4 Furnace - COG	2.132866333	1.5788114	0.486955784	0.360459224
HSM #4 Furnace - NG	0.292076246	0.292076246	0.066684075	0.066684075
HSM #5 Furnace - COG	2.371715316	1.755614556	0.541487515	0.400825241
HSM #5 Furnace - NG	0.316813589	0.316813589	0.07233187	0.07233187
OCA #1-16 Furnace Total - COG	0.500006217	0.370119544	0.114156671	0.084502179
OCA #1-16 Furnace Total - NG	0.018952384	0.018952384	0.004327028	0.004327028
Misc Natural Gas	0.13236043	0.13236043	0.030219276	0.030219276
80" HSM Rolling Oil				
64" Pickling Line (Descaler and Scrubber)	0.0391384	0.0391384	0.008935708	0.008935708
84" Pickling Line (Descaler and Scrubber)	0.2891184	0.2891184	0.066008767	0.066008767
Cold Reduction Mill - Fugitive	1.077833878	1.077833878	0.246080794	0.246080794
Cold Reduction Mill - Stack	5.281386	5.281386	1.20579589	1.20579589
Cooling Tower - HPH Annealing	0.421689406	0.421689406	0.09627612	0.09627612
Cooling Tower - North Water Treatment Plant	0.404865528	0.404865528	0.092435052	0.092435052
Solvent Degreasers (Safety Kleen)				
Paint and Thinner Emissions				
Ink Emissions				
Paved Roads - Heavy Duty Diesel Vehicles	0.114073347	0.027999822	0.026044143	0.006392653
Paved Roads - Light Duty Gasoline Vehicles	0.039980806	0.009813471	0.009128038	0.002240518
Unpaved Roads - Light Duty Gasoline Vehicles	0.73921291	0.073921291	0.168770071	0.016877007
Unpaved Roads - Heavy Duty Diesel Vehicles	0.668832331	0.066883233	0.152701445	0.015270145
HCL Storage Tanks				
Fuel Storage - Kerosene				
Fuel Storage - Diesel				
Fuel Storage - Gasoline				
Total	27.04596069	21.55027238	6.174876869	4.920153511

Source	PM10 (lb/hr)	PM2.5 (lb/hr)
Boiler #1 - COG	0.207861742	0.153865473
Boiler #1 - NG	0.009334704	0.009334704
Boiler #2 - COG	0.209497154	0.155076054
Boiler #2 - NG	0.012470076	0.012470076
Boiler #3 - COG	0.063407569	0.046936177
Boiler #3 - NG	0.0024633	0.0024633
Boiler #4 - COG	0.043922512	0.032512756
Boiler #4 - NG	0.002340121	0.002340121
CA Line - COG	0.072125149	0.05338919
CA Line - NG	0.003668316	0.003668316
CGL #1 Preheat Furnace - NG	0.031669509	0.031669509
CGL #2 Preheat Furnace - NG	0.024665985	0.024665985
COG Flares 1-3 Total		
COG Peachtree Flare A		
COG Peachtree Flare B		
HPH Furnaces #1 - #31 - COG - Total	0.186090986	0.137750109
HPH Furnaces #1 - #31 - NG - Total	0.008681437	0.008681437
HSM #1 Furnace - COG	0.671267406	0.496892195
HSM #1 Furnace - NG	0.045005899	0.045005899
HSM #2 Furnace - COG	0.673077667	0.498232204
HSM #2 Furnace - NG	0.045072674	0.045072674
HSM #3 Furnace - COG	0.649179011	0.480541705
HSM #3 Furnace - NG	0.042930798	
HSM #4 Furnace - COG	0.653405336	0.483670157
HSM #4 Furnace - NG	0.042608458	
HSM #5 Furnace - COG	0.672792329	
HSM #5 Furnace - NG	0.0443345	
OCA #1-16 Furnace Total - COG	0.14637006	
OCA #1-16 Furnace Total - NG	0.007117231	0.007117231
Misc Natural Gas	0.058761855	
80" HSM Rolling Oil		
64" Pickling Line (Descaler and Scrubber)	0.011056073	0.011056073
84" Pickling Line (Descaler and Scrubber)	0.046572169	
Cold Reduction Mill - Fugitive		0.291441235
Cold Reduction Mill - Stack	1.331588435	1.331588435
Cooling Tower - HPH Annealing	0.09627612	0.09627612
Cooling Tower - North Water Treatment Plant	0.092435052	
Solvent Degreasers (Safety Kleen)		
Paint and Thinner Emissions		
Ink Emissions		
Paved Roads - Heavy Duty Diesel Vehicles	0.026746702	0.0065651
Paved Roads - Light Duty Gasoline Vehicles	0.009374273	
Unpaved Roads - Light Duty Gasoline Vehicles	0.173322761	
Unpaved Roads - Heavy Duty Diesel Vehicles	0.156820673	
HCL Storage Tanks		
Fuel Storage - Kerosene		
Fuel Storage - Diesel		
Fuel Storage - Gasoline		
Total	6.865755275	5.437608849
i ocui	0.003/332/3	5.757000043

Source	PM10 (lb/hr)	PM2.5 (lb/hr)	PM10 reduction (lb/hr)	PM2.5 reduction (lb/hr)	PM10 during episode (lb/hr)	PM2.5 during episode (lb/hr)	PM10 % change	PM2.5 % change
Boiler #1 - COG	0.207861742		0	0	0.207861742	0.153865473	0%	0%
Boiler #1 - NG	0.009334704	0.009334704	0	0	0.009334704	0.009334704	0%	0%
Boiler #2 - COG	0.209497154	0.155076054	0	0	0.209497154	0.155076054	0%	0%
Boiler #2 - NG	0.012470076	0.012470076	0	0	0.012470076	0.012470076	0%	0%
Boiler #3 - COG	0.063407569	0.046936177	0	0	0.063407569	0.046936177	0%	0%
Boiler #3 - NG	0.0024633	0.0024633	0	0	0.0024633	0.0024633	0%	0%
Boiler #4 - COG	0.043922512	0.032512756	0	0	0.043922512	0.032512756	0%	0%
Boiler #4 - NG	0.002340121	0.002340121	0	0	0.002340121	0.002340121	0%	0%
CA Line - COG	0.072125149	0.05338919	0	0	0.072125149	0.05338919	0%	0%
CA Line - NG	0.003668316	0.003668316	0	0	0.003668316	0.003668316	0%	0%
CGL #1 Preheat Furnace - NG	0.031669509	0.031669509	0	0	0.031669509	0.031669509	0%	0%
CGL #2 Preheat Furnace - NG	0.024665985	0.024665985	0	0	0.024665985	0.024665985	0%	0%
COG Flares 1-3 Total	0	0	0	0	0	0	0	0
COG Peachtree Flare A	0	0	0	0	0	0	0	0
COG Peachtree Flare B	0	0	0	0	0	0	0	0
HPH Furnaces #1 - #31 - COG - Total	0.186090986	0.137750109	0	0	0.186090986	0.137750109	0%	0%
HPH Furnaces #1 - #31 - NG - Total	0.008681437	0.008681437	0	0	0.008681437	0.008681437	0%	0%
HSM #1 Furnace - COG	0.671267406	0.496892195	0	0	0.671267406	0.496892195	0%	0%
HSM #1 Furnace - NG	0.045005899	0.045005899	0	0	0.045005899	0.045005899	0%	0%
HSM #2 Furnace - COG	0.673077667	0.498232204	0	0	0.673077667	0.498232204	0%	0%
HSM #2 Furnace - NG	0.045072674	0.045072674	0	0	0.045072674	0.045072674	0%	0%
HSM #3 Furnace - COG	0.649179011	0.480541705	0	0	0.649179011	0.480541705	0%	0%
HSM #3 Furnace - NG	0.042930798	0.042930798	0	0	0.042930798	0.042930798	0%	0%
HSM #4 Furnace - COG	0.653405336	0.483670157	0	0	0.653405336	0.483670157	0%	0%
HSM #4 Furnace - NG	0.042608458	0.042608458	0	0	0.042608458	0.042608458	0%	0%
HSM #5 Furnace - COG	0.672792329	0.498020988	0	0	0.672792329	0.498020988	0%	0%
HSM #5 Furnace - NG	0.0443345	0.0443345	0	0	0.0443345	0.0443345	0%	0%
OCA #1-16 Furnace Total - COG	0.14637006	0.108347493	0	0	0.14637006	0.108347493	0%	0%
OCA #1-16 Furnace Total - NG	0.007117231	0.007117231	0	0	0.007117231	0.007117231	0%	0%
Misc Natural Gas	0.058761855	0.058761855	0	0	0.058761855	0.058761855	0%	0%
80" HSM Rolling Oil	0	0	0	0	0	0	0	0
64" Pickling Line (Descaler and Scrubber)	0.011056073	0.011056073	0	0	0.011056073	0.011056073	0%	0%
84" Pickling Line (Descaler and Scrubber)	0.046572169	0.046572169	0	0	0.046572169	0.046572169	0%	0%
Cold Reduction Mill - Fugitive	0.291441235	0.291441235	0	0	0.291441235	0.291441235	0%	0%
Cold Reduction Mill - Stack	1.331588435	1.331588435	0	0	1.331588435	1.331588435	0%	0%
Cooling Tower - HPH Annealing	0.09627612	0.09627612	0	0	0.09627612	0.09627612	0%	0%
Cooling Tower - North Water Treatment Plant	0.092435052	0.092435052	0	0	0.092435052	0.092435052	0%	0%
Solvent Degreasers (Safety Kleen)	0	0	0	0	0	0	0	0
Paint and Thinner Emissions	0	0	0	0	0	0	0	0
Ink Emissions	0	0	0	0	0	0	0	0
Paved Roads - Heavy Duty Diesel Vehicles	0.026746702	0.0065651	0.024072032	0.00590859	0.00267467	0.00065651	-90%	-90%
Paved Roads - Light Duty Gasoline Vehicles	0.009374273	0.002300958	0.008436846	0.002070862	0.000937427	0.000230096	-90%	-90%
Unpaved Roads - Light Duty Gasoline Vehicles	0.173322761	0.017332276	0.155990485	0.015599048	0.017332276	0.001733228	-90%	-90%
Unpaved Roads - Heavy Duty Diesel Vehicles	0.156820673	0.015682067	0.141138606	0.014113861	0.015682067	0.001568207	-90%	-90%
HCL Storage Tanks	0	0	0	0	0	0	0	0
Fuel Storage - Kerosene	0	0	0	0	0	0	0	0
Fuel Storage - Diesel	0	0	0	0	0	0	0	0
Fuel Storage - Gasoline	0	0	0	0	0	0	0	0
Total	6.865/552/5	5.437608849	0.329637968	0.037692361	6.536117308	5.399916489	-4.80%	-0.69%