

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

WATCH/WARNING PLAN 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 **U. S. Steel Mon Valley Works – Clairton Plant**

Address **400 State Street**

City State Zip+4 **Clairton, PA 15025**

Permit # **0052** Phone **(412) 233-1467**

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

Name/Title **Michael G. Dzurinko**

Address **400 State Street**

City State Zip+4 **Clairton PA**

Email **mdzurinko@uss.com** Phone **(412) 233-1467**

03 Responsible Official Information

Name/Title **Kurt A. Barshick**

Address **P. O. Box 878**

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



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Email	kbarshick@uss.com	Phone	(412) 675-2600
04	AFFIDAVIT		
<p>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.</p>			
Signature:		Date	<u>12/27/21</u>
Typed/Printed Name:	Kurt A. Barshick		



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

1. Coke Battery No. 1
2. Coke Battery No. 2
3. Coke Battery No. 3
4. Coke Battery No. 13
5. Coke Battery No. 14
6. Coke Battery No. 15
7. Coke Battery No. 19
8. Coke Battery No. 20
9. Coke Battery B
10. Coke Battery C
11. Quench Tower No. 1 (Serves Batteries 1, 2 and 3)
12. Quench Tower No. 5 (Auxiliary Quench Tower for Batteries 13, 14 and 15)
13. Quench Tower No. 7 (Auxiliary Quench Tower for Batteries 19 and 20)
14. Quench Tower No. 5A (Serves Batteries 13, 14 and 15)
15. Quench Tower No. 7A (Serves Batteries 19 and 20)
16. Desulfurization Plant
17. Keystone Cooling Tower
18. Coke By-Product Recovery Plant
19. Continuous Barge Unloader No. 1
20. Continuous Barge Unloader No. 2
21. Pedestal Crane Unloader
22. Clam Shell Unloader
23. Coal Transfer
24. No. 1 Primary Pulverizer
25. No. 1 Secondary Primary Pulverizer
26. No. 2 Primary Pulverizer
27. No. 2 Secondary Primary Pulverize
28. Surge Bins and Bunkers (Coal)
29. Coke Transfer (1st Unit)
30. Coke Transfer (2nd Unit)
31. Coke Transfer (C Battery)
32. Coke Screening Station No. 1 (Batteries 1-3)
33. Coke Screening Station No. 2 (Batteries 13-15, 19 and 20)

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34. Coke Screening Station No. 4 (Batteries B and C)
35. Boom Conveyor (Coal Pile Destocking)
36. Coal and Coke recycle Screening
37. Coke Screening – Peters Creek
38. Boiler No. 1
39. Boiler No. 2
40. R1 Boiler
41. R2 Boiler
42. T1 Boiler
43. T2 Boiler
44. Ammonia Flare
45. Coal Storage Piles
46. Coke Storage Pile – Peters Creek
47. Coke Storage Pile – South Yard
48. Fugitive Emissions (Plant Roadways)
49. Misc. Fugitive Emissions (Abrasive Blasting of Coke Oven Doors)

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?

Processes and pollution control equipment will be checked/monitored to ensure they are operating in a manner consistent with optimal engineering practices.

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

Each air pollution control device 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?

Checklists will be utilized to ensure the operating parameters are properly evaluated. See attached checklists.



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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.**
- 2. Safety is of paramount importance, when developing mitigation actions/strategies in accordance with this plan.**
 - a. No action will be taken unless it is deemed safe.**
 - b. USS can deviate from the plan, if it is necessary to ensure safe operations.**
- 3. Rotating battery outages for an extended period of time and battery outages longer than four hours at full schedule causes the following issues:**
 - a. Safety**
 - i. The gas make on the battery is poor and causes the gas to run lean.**
 - ii. The batteries have a tendency to run hot when the gas make is poor.**
 - iii. The batteries have a tendency to kick, which increases the potential for employee burn injuries, when the gas make is poor.**
 - b. Environmental**
 - i. Stack opacity**
 - 1. Due to loss of beneficial carbon on extended coking times**
 - 2. Due to combustion issues caused by gas quality on extended coking times**
 - ii. Push/travel opacity after the outage**
- 4. When the batteries are on extended coking times, battery outages longer than two hours are not feasible due to the issues identified in item 2 above.**
- 5. Actions may include the items listed below on a case-by-case basis but may not include all items listed below based on current weather data, operational data and available weather prediction tools.**
- 6. The Warning Plan may be revised based on lessons learned during implementation of the Plan.**
 - a. U. S. Steel will advise the Department in writing of any change affecting the technical content or the implementation of the Plan no mor than 30 days following the change.**



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b. The revised Warning Plan will be effective upon submission to the Department.

7. Any non-essential plant or contractor activity contributing to airborne dust will be curtailed.
 - a. Contractor or USS ceramic welding
 - b. Sandblast activity
 - c. Other contractor activity as determined during the evaluation conducted in the Watch Phase
 - d. Reducing contractor activity and diesel idling will contribute to reductions in PM₁₀ and PM_{2.5}. Emission reduction estimates will be evaluated on a per episode basis.

8. Notify third party railroad company (724-579-9289) to eliminate engine idling, any engine unnecessary movement if possible, and/or reduce speeds.
 - a. Include diesel loco switchers at screening station

9. Optimize use of tarps on baghouse roll-off boxes before moving.

10. Implement operational adjustments evaluated in the Watch Phase (Item I. 2) to minimize pushing and quenching emissions and take corrective actions including coking time extensions or battery outage(s), if necessary.
 - a. **Actions impacting operations during each Warning Phase will be implemented on a case-by-case inversion event. Reference Section III, “Actions to be considered in developing event specific mitigation strategies”, for feasibility and issues concerning battery outages.**
 - i. Implement approved action plan developed in the Watch Phase.
 1. Ensure safety and protection of asset health.
 2. Plan can be stopped, with safety or environmental concern.
 3. Plan may be updated by Plant Manager / Division Manager Coking based on changing conditions, asset health, etc.
 4. Document actions taken and justification for revisions.
 - ii. Warning plan actions to be fully implemented within 24hr of notification.
 - iii. Plant Manager, Division Manager Coking or designee lead the implementation and changes to plan based on operating conditions
 - iv. Monitor episode conditions, communicate with ACHD, communicate end of warning phase.
 - b. Actions considered will include:
 - i. short-term stops on individual batteries/units – Reference Section III below,
 - ii. longer term maintenance outages on individual batteries/units,



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- iii. Curtail coal/coke stocking/destocking activity based on operational data reviewed and discussions held during the Watch Phase.
- iv. Apply dust suppressant on the following unpaved roads and lots:
 - 1. Coal stocking haul roads,
 - 2. #1 & #2 screening station roads,
 - 3. Berms on plant roads,
 - 4. Parking lots,
 - 5. All Peter's Creek roads,
 - 6. Any other non-paved areas that are being utilized.
 - 7. Dust suppressant is mixed with water. Applications will take place, if the temperature is above 32 degrees F.
- v. Evaluate loading/unloading of the following and determine which actions can be minimized, if any:
 - 1. Ammonia
 - 2. Tar
 - 3. Light oil
 - 4. Coal (including terminals)

11. Plant protection will document the enforcement of ACHD's diesel-idling rule.

Note: Information used to evaluate the above action items will include the ACHD's current forecast, available weather data, USS's internal operations data and PM_{2.5} prediction tools.

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.

1. Coke Battery No. 1

- a. Follow work practices/Environmental Management System procedures to minimize fugitive emissions - Feasible
- b. Ensure environmental work practices are being followed to minimize emissions - Feasible
- c. Extend coking times – feasible for up to four (4) hours on full schedule; feasible for up to two (2) hours on extended coking time.
 - i. Extending coking times beyond 4 hours causes issues with the coke oven gas that lead to additional environmental and safety concerns.
 - ii. Extending coking times beyond 2 hours, on battery extended coking times, causes issues with the coke oven gas that lead to additional environmental and safety concerns.



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2. Coke Battery No. 2
 - a. Follow work practices/Environmental Management System procedures to minimize fugitive emissions - Feasible
 - b. Ensure environmental work practices are being followed to minimize emissions - Feasible
 - c. Extend coking times – feasible for up to four (4) hours on full schedule; feasible for up to two (2) hours on extended coking time.
 - i. Extending coking times beyond 4 hours causes issues with the coke oven gas that lead to additional environmental and safety concerns.
 - ii. Extending coking times beyond 2 hours, on battery extended coking times, causes issues with the coke oven gas that lead to additional environmental and safety concerns.
3. Coke Battery No. 3
 - a. Follow work practices/Environmental Management System procedures to minimize fugitive emissions - Feasible
 - b. Ensure environmental work practices are being followed to minimize emissions - Feasible
 - c. Extend coking times – feasible for up to four (4) hours on full schedule; feasible for up to two (2) hours on extended coking time.
 - i. Extending coking times beyond 4 hours causes issues with the coke oven gas that lead to additional environmental and safety concerns.
 - ii. Extending coking times beyond 2 hours, on battery extended coking times, causes issues with the coke oven gas that lead to additional environmental and safety concerns.
4. Coke Battery No. 13
 - a. Follow work practices/Environmental Management System procedures to minimize fugitive emissions - Feasible
 - b. Ensure environmental work practices are being followed to minimize emissions - Feasible
 - c. Extend coking times – feasible for up to four (4) hours on full schedule; feasible for up to two (2) hours on extended coking time.
 - i. Extending coking times beyond 4 hours causes issues with the coke oven gas that lead to additional environmental and safety concerns.
 - ii. Extending coking times beyond 2 hours, on battery extended coking times, causes issues with the coke oven gas that lead to additional environmental and safety concerns.
5. Coke Battery No. 14
 - a. Follow work practices/Environmental Management System procedures to minimize fugitive emissions - Feasible
 - b. Ensure environmental work practices are being followed to minimize emissions - Feasible



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- c. Extend coking times – feasible for up to four (4) hours on full schedule; feasible for up to two (2) hours on extended coking time.
 - i. Extending coking times beyond 4 hours causes issues with the coke oven gas that lead to additional environmental and safety concerns.
 - ii. Extending coking times beyond 2 hours, on battery extended coking times, causes issues with the coke oven gas that lead to additional environmental and safety concerns.
- 6. Coke Battery No. 15
 - a. Follow work practices/Environmental Management System procedures to minimize fugitive emissions - Feasible
 - b. Ensure environmental work practices are being followed to minimize emissions - Feasible
 - c. Extend coking times – feasible for up to four (4) hours on full schedule; feasible for up to two (2) hours on extended coking time.
 - i. Extending coking times beyond 4 hours causes issues with the coke oven gas that lead to additional environmental and safety concerns.
 - ii. Extending coking times beyond 2 hours, on battery extended coking times, causes issues with the coke oven gas that lead to additional environmental and safety concerns.
- 7. Coke Battery No. 19
 - a. Follow work practices/Environmental Management System procedures to minimize fugitive emissions - Feasible
 - b. Ensure environmental work practices are being followed to minimize emissions - Feasible
 - c. Extend coking times – feasible for up to four (4) hours on full schedule; feasible for up to two (2) hours on extended coking time.
 - i. Extending coking times beyond 4 hours causes issues with the coke oven gas that lead to additional environmental and safety concerns.
 - ii. Extending coking times beyond 2 hours, on battery extended coking times, causes issues with the coke oven gas that lead to additional environmental and safety concerns.
- 8. Coke Battery No. 20
 - a. Follow work practices/Environmental Management System procedures to minimize fugitive emissions - Feasible
 - b. Ensure environmental work practices are being followed to minimize emissions - Feasible
 - c. Extend coking times – feasible for up to four (4) hours on full schedule; feasible for up to two (2) hours on extended coking time.
 - i. Extending coking times beyond 4 hours causes issues with the coke oven gas that lead to additional environmental and safety concerns.



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- ii. Extending coking times beyond 2 hours, on battery extended coking times, causes issues with the coke oven gas that lead to additional environmental and safety concerns.
- 9. Coke Battery B
 - a. Follow work practices/Environmental Management System procedures to minimize fugitive emissions - Feasible
 - b. Ensure environmental work practices are being followed to minimize emissions - Feasible
 - c. Extend coking times – feasible for up to four (4) hours on full schedule; feasible for up to two (2) hours on extended coking time.
 - i. Extending coking times beyond 4 hours causes issues with the coke oven gas that lead to additional environmental and safety concerns.
 - ii. Extending coking times beyond 2 hours, on battery extended coking times, causes issues with the coke oven gas that lead to additional environmental and safety concerns.
- 10. Coke Battery C
 - a. Follow work practices/Environmental Management System procedures to minimize fugitive emissions - Feasible
 - b. Ensure environmental work practices are being followed to minimize emissions - Feasible
 - c. Extend coking times – feasible for up to four (4) hours on full schedule; feasible for up to two (2) hours on extended coking time.
 - i. Extending coking times beyond 4 hours causes issues with the coke oven gas that lead to additional environmental and safety concerns.
 - ii. Extending coking times beyond 2 hours, on battery extended coking times, causes issues with the coke oven gas that lead to additional environmental and safety concerns.
- 11. Quench Tower No. 1 (Serves Batteries 1, 2 and 3)
 - a. Increase baffle washing - Feasible if the temperature is above 32 degrees F.
 - b. Suspend quenching operations – feasible while the batteries are on extended coking times.
- 12. Quench Tower No. 5 (Auxiliary Quench Tower for Batteries 13, 14 and 15)
 - a. Increase baffle washing - Feasible if the temperature is above 32 degrees F.
 - b. Suspend quenching operations – feasible while the batteries are on extended coking times.
- 13. Quench Tower No. 7 (Auxiliary Quench Tower for Batteries 19 and 20)
 - a. Increase baffle washing - Feasible if the temperature is above 32 degrees F.
 - b. Suspend quenching operations – feasible while the batteries are on extended coking times.
- 14. Quench Tower No. 5A (Serves Batteries 13, 14 and 15)
 - a. Increase baffle washing - Feasible if the temperature is above 32 degrees F.
 - b. Suspend quenching operations – feasible while the batteries are on extended coking times.
- 15. Quench Tower No. 7A (Serves Batteries 19 and 20)



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- a. Increase baffle washing - Feasible if the temperature is above 32 degrees F.
- b. Suspend quenching operations – feasible while the batteries are on extended coking times.
- 16. Desulfurization Plant
 - a. None – this plant processes the coke oven gas and must continue to operate (H₂S).
- 17. Keystone Cooling Tower
 - a. None – the cooling tower provides cooling water to the plant and must support the processes that remain in operation.
- 18. Coke By-Product Recovery Plant
 - a. None – this plant processes the coke oven gas and must continue to operate (H₂S).
- 19. Unloading Activities
 - a. Continuous Barge Unloader No. 1
 - i. Approximately 0.31 LBS/Day PM₁₀
 - ii. Approximately 0.05 LBS/Day PM_{2.5}
 - iii. Nothing feasible
 - b. Continuous Barge Unloader No. 2
 - i. Approximately 0.018 LBS/Day PM₁₀
 - ii. Approximately 0.03 LBS/Day PM_{2.5}
 - iii. Nothing feasible
 - c. Pedestal Crane Unloader
 - i. Approximately 0.03 LBS/Day PM₁₀
 - ii. Approximately 0.0003 LBS/Day PM_{2.5}
 - iii. Nothing feasible
 - d. Clam Shell Unloader
 - i. 0 LBS/YR PM₁₀
 - ii. 0 LBS/YR PM_{2.5}
- 20. Coal Transfer
 - a. None – the operation is enclosed.
- 21. Pulverizing Activities
 - a. No. 1 Primary Pulverizer
 - i. None – the operation in enclosed.
 - b. No. 1 Secondary Primary Pulverizer
 - i. None – the operation in enclosed.
 - c. No. 2 Primary Pulverizer
 - i. None – the operation is enclosed
 - d. No. 2 Secondary Primary Pulverizer



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- i. None – the operation in enclosed.
- 22. Surge Bins and Bunkers (Coal)
 - a. Approximately 14 LBS/YR PM₁₀
 - b. Approximately 14 LBS/YR PM_{2.5}
 - c. Nothing feasible
- 23. Coke Transfer and Screening Activities - 5% Reduction based on extended coking times
 - a. Coke Transfer (1st Unit)
 - b. Coke Transfer (2nd Unit)
 - c. Coke Transfer (C Battery)
 - d. Coke Screening Station No. 1 (Batteries 1-3)
 - e. Coke Screening Station No. 2 (Batteries 13-15, 19 and 20)
 - f. Coke Screening Station No. 4 (Batteries B and C)
- 24. Boom Conveyor (Coal Pile Destocking) – Approximate 5% reduction
 - a. 49 LBS/YR PM₁₀
 - b. 7 LBS/YR PM_{2.5}
 - c. Curtail operation on a case-by-case inversion event - feasible
- 25. Coal and Coke recycle Screening- Approximate 5% reduction
 - a. Curtail coal and coke screening as appropriate - Feasible
- 26. Coke Screening – Peters Creek
 - a. Suspend Peters Creek coke screening operations - feasible
- 27. Boiler No. 1
 - a. None – necessary for plant operation
- 28. Boiler No. 2
 - a. None – necessary for plant operation
- 29. R1 Boiler
 - a. None – necessary for plant operation
- 30. R2 Boiler
 - a. None – necessary for plant operation
- 31. T1 Boiler
 - a. None – necessary for plant operation
- 32. T2 Boiler
 - a. None – necessary for plant operation
- 33. Ammonia Flare
 - a. None – safety device that needs to operate when pressure setpoint is exceeded.



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- b. Operating hours limited to 2,920 hours per year for the wastewater surge tanks and 1,400 hours per year for the ammonia loading station.

34. Coal Storage Piles

35. Coke Storage Pile – Peters Creek

36. Coke Storage Pile – South Yard

37. Fugitive Emissions (Plant Roadways)

- a. Water roadways during event – Feasible if the temperature is above 32 degrees F.

38. Misc. Fugitive Emissions (Abrasive Blasting of Coke Oven Doors)

- a. Curtail abrasive blasting activities – Feasible

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

Warning phase checklists.

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 ensure that there is 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.

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INSTRUCTIONS	
Submission Form for the Air Pollution Mitigation Plan	
Block 01 Facility Information	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.
Block 02 Environmental Contact Information	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
Block 03 Responsible Official Information	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.
Block 04 Affidavit	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
Blocks 05–08 Watch Phase of Mitigation Plan	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. <ul style="list-style-type: none"> • Staff related <ul style="list-style-type: none"> • 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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	<ul style="list-style-type: none"> • 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.
<p><u>Block 09</u> Warning Phase of Mitigation Plan</p>	<p>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.</p>
<p><u>Block 10</u> Warning Phase of Mitigation Plan</p>	<p>Block 10 should explain what actions the facility could possible take to ensure that hourly emissions are reduced.</p> <p>Possible methods include:</p> <ul style="list-style-type: none"> • Reduction in material throughput • Reduction in operating time • Increased use of controls or suppression equipment • Changes in raw materials <p>Examples of possible actions include:</p> <ul style="list-style-type: none"> • 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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COUNTY EXECUTIVE

Air Quality Program

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SUBMISSION FORM – AIR POLLUTION MITIGATION PLAN

	<ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> ○ 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.
<p><u>Block 11</u> Warning Phase of Mitigation Plan</p>	<p>Emission reduction methods that are feasible can be eliminated from consideration for other reasons as long as adequate justification is given.</p>
<p><u>Block 12</u> Warning Phase of Mitigation Plan</p>	<p>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.</p>
<p><u>Block 13</u> Warning Phase of Mitigation Plan</p>	<p>The spreadsheet must include actual plant emissions of PM_{2.5} and PM₁₀ 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.</p> <p>For each piece of equipment and process, emissions from the last four years must be provided in tons/year.</p> <p>For each piece of equipment and process, proposed feasible emission reductions must be provided in lbs/hr.</p> <p>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.</p> <p>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.</p>

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SUBMISSION FORM – AIR POLLUTION MITIGATION PLAN

<u>Block 14</u> Warning Phase of Mitigation Plan	Section 2106.06 of county air quality regulations requires that an affected facility is able to implement the requirements of the warning phase within 24 hours.
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SUBMISSION FORM – AIR POLLUTION MITIGATION PLAN

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)? Yes
- Have you provided an active spreadsheet showing actual emissions for every piece of equipment and process of PM_{2.5} and PM₁₀ for the past four years in tons per year? Yes
- Does the spreadsheet include the average actual PM_{2.5} and PM₁₀ emissions from every piece of equipment and process for the past four years in lbs/hr? Yes
- Does the spreadsheet include the PM₁₀ 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? Yes
- Have you provided a complete response for each of the fourteen blocks? Yes



U. S. Steel Clairton Works Watch and Warning Plan

I. Watch Phase (see checklist form with appropriate personnel notifications and actions):

§2106.06(e)1: Mon Valley Air Pollution Watch Phase: A Mon Valley Air Pollution Watch Phase shall include procedures to ensure the source is operating in a manner consistent with good engineering practice and all air pollution control equipment is maintained in good working condition. The Mon Valley Air Pollution Watch Phase shall include procedures for record keeping and reporting to the Department the actions taken during the Mon Valley Air Pollution Watch period. The Mon Valley Air Pollution Watch Phase shall also include procedures to ensure that the source has 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.

1. Monitor episode event for potential warning trigger.
2. Discuss event specific actions to be implemented if the Warning Phase were to be triggered (battery outages, etc.), Options for event specific actions are outlined in Section III, "Actions to be considered in developing event specific mitigation strategies".
 - a. Plant Manager, Division Manager Coking or designee lead development
 - b. Inputs based on data, asset health, and current operating status of Batteries.
 - c. Develop low risk action plan to take rolling battery outages not to exceed 4 hours per battery group (2 hours per battery group if on extended coking time).
 - i. Discuss feasibility of continued outages (based on data, asset health, safety and environmental) during extended mitigation events.
 - d. Plant Manager, Division Manager Coking, or designee make final approval of the action plan, if needed, for warning phase.
3. Check all pollution control equipment for normal operation and initiate corrective actions as necessary.
 - a. Check baghouse suction.
 - b. Check baghouse fan amps.
 - c. Check quench tower baffle washing.
 - d. Check status of gas blanketing system.
4. Check process operations to confirm "normal" operations at the Plant and initiate corrective actions, as necessary, for any abnormal process conditions at the:
 - a. Coke Batteries
 - i. Ensure proper oven dampering and adherence to Soaking Work Practice Plan on all battery units.
 - ii. Remind topside workers to follow practices for good charging, gooseneck and standpipe cleaning, sealing, and proper lid replacement.
 - iii. Optimize all cleaning practices of machines, collector mains, screening stations, bunkers, standpipe platforms, etc., and any coal spillage.

- iv. Proper visual operation of the PEC System.
 - b. Byproducts (No. 1, 2, and 5 Control Rooms) including Sulfur Plant
- 5. Evaluate current contractor operations for normal operating conditions and initiate any corrective actions as necessary.
 - a. Sand blasting
 - b. Tar loading
 - c. Light oil loading
 - d. Heavy mobile equipment use
 - e. Screening
 - i. Truck loading at screening stations
 - ii. Verify dust suppressant is operational in Screen Station operation.
 - f. Reducing contractor activity and diesel idling will contribute to reductions in PM₁₀ and PM_{2.5}. Emission reduction estimates will be evaluated on a per episode basis.
- 6. Contact Mid Continent (233-0626) and advise them of the PM_{2.5} inversion so they can:
 - a. Shut down their screening operation, if appropriate,
 - b. Reduce trucking,
 - c. Assure proper watering of baghouse dust prior to dumping and only dump when absolutely necessary to maintain baghouse operation.
- 7. Eliminate or postpone the following:
 - a. Use of road sweeper,
 - b. Cleaning of pusher pads,
 - c. Use of track sweeper.
- 8. Water necessary paved and unpaved roads and lots.
 - a. If the temperature is above 32 degrees F.
- 9. Recordkeeping/Reporting
 - a. Watch Plan Checklist
 - b. All records will be available for review by ACHD for submission within a reasonable amount of time.
- 10. Resources Available
 - a. USS will ensure that there is 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.

II. Warning Phase (see checklist form with appropriate personnel notifications and actions):

§2106.06(e)2. Mon Valley Air Pollution Warning Phase: A Mon Valley Air Pollution Warning Phase shall include measures to reduce PM2.5 and PM10 emissions to minimize the impact on public health, safety, or welfare, the timeframe for implementing each measure, and an estimate of the PM2.5 and PM10 emissions reductions during a 24-hour period for each measure. The Mon Valley Air Pollution Warning Phase shall include the procedures identified in the Mon Valley Air Pollution Watch Phase and procedures for record keeping and reporting to the Department the actions taken during the Mon Valley Air Pollution Warning period. The measures to reduce PM2.5 and PM10 emissions may include, but are not limited to, the following:

- A. Reduce transportation activity;*
- B. Switch or decrease fuel use as allowed by the facility's permit issued under this Article;*
- C. Delay nonessential activities that may cause emissions;*
- D. Modify work or other practices; and*
- E. Reduce, modify, cease, curtail, defer or postpone production and allied operations.*

- 1. Actions will be implemented as decided upon in the Watch Phase.**
- 2. Safety is of paramount importance, when developing mitigation actions/strategies in accordance with this plan.**
 - a. No action will be taken unless it is deemed safe.**
 - b. USS can deviate from the plan, if it is necessary to ensure safe operations.**
- 3. Rotating battery outages for an extended period of time and battery outages longer than four hours at full schedule causes the following issues:**
 - a. Safety**
 - i. The gas make on the battery is poor and causes the gas to run lean.**
 - ii. The batteries have a tendency to run hot when the gas make is poor.**
 - iii. The batteries have a tendency to kick, which increases the potential for employee burn injuries, when the gas make is poor.**
 - b. Environmental**
 - i. Stack opacity**
 - 1. Due to loss of beneficial carbon on extended coking times**
 - 2. Due to combustion issues caused by gas quality on extended coking times**
 - ii. Push/travel opacity after the outage**
- 4. When the batteries are on extended coking times, battery outages longer than two hours are not feasible due to the issues identified in item 2 above.**
- 5. Actions may include the items listed below on a case-by-case basis but may not include all items listed below based on current weather data, operational data and available weather prediction tools.**
- 6. The Warning Plan may be revised based on lessons learned during implementation of the Plan.**

- a. U. S. Steel will advise the Department in writing of any change affecting the technical content or the implementation of the Plan no more than 30 days following the change.*
 - b. The revised Warning Plan will be effective upon submission to the Department.*
7. Any non-essential plant or contractor activity contributing to airborne dust will be curtailed.
 - a. Contractor or USS ceramic welding
 - b. Sandblast activity
 - c. Other contractor activity as determined during the evaluation conducted in the Watch Phase
 - d. Reducing contractor activity and diesel idling will contribute to reductions in PM₁₀ and PM_{2.5}. Emission reduction estimates will be evaluated on a per episode basis.
8. Notify third party railroad company (724-579-9289) to eliminate engine idling, any engine unnecessary movement if possible, and/or reduce speeds.
 - a. Include diesel loco switchers at screening station
9. Optimize use of tarps on baghouse roll-off boxes before moving.
10. Implement operational adjustments evaluated in the Watch Phase (Item I. 2) to minimize pushing and quenching emissions and take corrective actions including coking time extensions or battery outage(s), if necessary.
 - a. Actions impacting operations during each Warning Phase will be implemented on a case-by-case inversion event. Reference Section III, "Actions to be considered in developing event specific mitigation strategies", for feasibility and issues concerning battery outages.**
 - i. Implement approved action plan developed in the Watch Phase.
 1. Ensure safety and protection of asset health.
 2. Plan can be stopped, with safety or environmental concern.
 3. Plan may be updated by Plant Manager / Division Manager Coking based on changing conditions, asset health, etc.
 4. Document actions taken and justification for revisions.
 - ii. Warning plan actions to be fully implemented within 24hr of notification.
 - iii. Plant Manager, Division Manager Coking or designee lead the implementation and changes to plan based on operating conditions
 - iv. Monitor episode conditions, communicate with ACHD, communicate end of warning phase.
 - b. Actions considered will include:**
 - i. short-term stops on individual batteries/units – Reference Section III below,
 - ii. longer term maintenance outages on individual batteries/units,
 - iii. Curtail coal/coke stocking/destocking activity based on operational data reviewed and discussions held during the Watch Phase.
 - iv. Apply dust suppressant on the following unpaved roads and lots:
 1. Coal stocking haul roads,
 2. #1 & #2 screening station roads,

3. Berms on plant roads,
 4. Parking lots,
 5. All Peter's Creek roads,
 6. Any other non-paved areas that are being utilized.
 7. Dust suppressant is mixed with water. Applications will take place, if the temperature is above 32 degrees F.
- v. Evaluate loading/unloading of the following and determine which actions can be minimized, if any:
1. Ammonia
 2. Tar
 3. Light oil
 4. Coal (including terminals)

11. Plant protection will document the enforcement of ACHD's diesel-idling rule.

Note: Information used to evaluate the above action items will include the ACHD's current forecast, available weather data, USS's internal operations data and PM_{2.5} prediction tools.

12. Recordkeeping/Reporting

- a. A checklist form has been developed that captures actions implemented during the Warning Phase.
- b. All records will be available for review by ACHD for submission within a reasonable amount of time.

13. Estimate of Emissions Reductions

- a. **Emission reductions will be calculated on a per episode basis due to the mitigation actions being different for each episode.**

III. Actions to be considered in developing event specific Warning mitigation strategies.

1. Coke Battery No. 1

- a. Follow work practices/Environmental Management System procedures to minimize fugitive emissions - Feasible
- b. Ensure environmental work practices are being followed to minimize emissions - Feasible
- c. Extend coking times – feasible for up to four (4) hours on full schedule; feasible for up to two (2) hours on extended coking time.
 - i. Extending coking times beyond 4 hours causes issues with the coke oven gas that lead to additional environmental and safety concerns.
 - ii. Extending coking times beyond 2 hours, on battery extended coking times, causes issues with the coke oven gas that lead to additional environmental and safety concerns.

2. Coke Battery No. 2

- a. Follow work practices/Environmental Management System procedures to minimize fugitive emissions - Feasible

- b. Ensure environmental work practices are being followed to minimize emissions - Feasible
 - c. Extend coking times – feasible for up to four (4) hours on full schedule; feasible for up to two (2) hours on extended coking time.
 - i. Extending coking times beyond 4 hours causes issues with the coke oven gas that lead to additional environmental and safety concerns.
 - ii. Extending coking times beyond 2 hours, on battery extended coking times, causes issues with the coke oven gas that lead to additional environmental and safety concerns.
3. Coke Battery No. 3
- a. Follow work practices/Environmental Management System procedures to minimize fugitive emissions - Feasible
 - b. Ensure environmental work practices are being followed to minimize emissions - Feasible
 - c. Extend coking times – feasible for up to four (4) hours on full schedule; feasible for up to two (2) hours on extended coking time.
 - i. Extending coking times beyond 4 hours causes issues with the coke oven gas that lead to additional environmental and safety concerns.
 - ii. Extending coking times beyond 2 hours, on battery extended coking times, causes issues with the coke oven gas that lead to additional environmental and safety concerns.
4. Coke Battery No. 13
- a. Follow work practices/Environmental Management System procedures to minimize fugitive emissions - Feasible
 - b. Ensure environmental work practices are being followed to minimize emissions - Feasible
 - c. Extend coking times – feasible for up to four (4) hours on full schedule; feasible for up to two (2) hours on extended coking time.
 - i. Extending coking times beyond 4 hours causes issues with the coke oven gas that lead to additional environmental and safety concerns.
 - ii. Extending coking times beyond 2 hours, on battery extended coking times, causes issues with the coke oven gas that lead to additional environmental and safety concerns.
5. Coke Battery No. 14
- a. Follow work practices/Environmental Management System procedures to minimize fugitive emissions - Feasible
 - b. Ensure environmental work practices are being followed to minimize emissions - Feasible
 - c. Extend coking times – feasible for up to four (4) hours on full schedule; feasible for up to two (2) hours on extended coking time.
 - i. Extending coking times beyond 4 hours causes issues with the coke oven gas that lead to additional environmental and safety concerns.

- ii. Extending coking times beyond 2 hours, on battery extended coking times, causes issues with the coke oven gas that lead to additional environmental and safety concerns.
- 6. Coke Battery No. 15
 - a. Follow work practices/Environmental Management System procedures to minimize fugitive emissions - Feasible
 - b. Ensure environmental work practices are being followed to minimize emissions - Feasible
 - c. Extend coking times – feasible for up to four (4) hours on full schedule; feasible for up to two (2) hours on extended coking time.
 - i. Extending coking times beyond 4 hours causes issues with the coke oven gas that lead to additional environmental and safety concerns.
 - ii. Extending coking times beyond 2 hours, on battery extended coking times, causes issues with the coke oven gas that lead to additional environmental and safety concerns.
- 7. Coke Battery No. 19
 - a. Follow work practices/Environmental Management System procedures to minimize fugitive emissions - Feasible
 - b. Ensure environmental work practices are being followed to minimize emissions - Feasible
 - c. Extend coking times – feasible for up to four (4) hours on full schedule; feasible for up to two (2) hours on extended coking time.
 - i. Extending coking times beyond 4 hours causes issues with the coke oven gas that lead to additional environmental and safety concerns.
 - ii. Extending coking times beyond 2 hours, on battery extended coking times, causes issues with the coke oven gas that lead to additional environmental and safety concerns.
- 8. Coke Battery No. 20
 - a. Follow work practices/Environmental Management System procedures to minimize fugitive emissions - Feasible
 - b. Ensure environmental work practices are being followed to minimize emissions - Feasible
 - c. Extend coking times – feasible for up to four (4) hours on full schedule; feasible for up to two (2) hours on extended coking time.
 - i. Extending coking times beyond 4 hours causes issues with the coke oven gas that lead to additional environmental and safety concerns.
 - ii. Extending coking times beyond 2 hours, on battery extended coking times, causes issues with the coke oven gas that lead to additional environmental and safety concerns.
- 9. Coke Battery B
 - a. Follow work practices/Environmental Management System procedures to minimize fugitive emissions - Feasible
 - b. Ensure environmental work practices are being followed to minimize emissions - Feasible

- c. Extend coking times – feasible for up to four (4) hours on full schedule; feasible for up to two (2) hours on extended coking time.
 - i. Extending coking times beyond 4 hours causes issues with the coke oven gas that lead to additional environmental and safety concerns.
 - ii. Extending coking times beyond 2 hours, on battery extended coking times, causes issues with the coke oven gas that lead to additional environmental and safety concerns.

10. Coke Battery C

- a. Follow work practices/Environmental Management System procedures to minimize fugitive emissions - Feasible
- b. Ensure environmental work practices are being followed to minimize emissions - Feasible
- c. Extend coking times – feasible for up to four (4) hours on full schedule; feasible for up to two (2) hours on extended coking time.
 - i. Extending coking times beyond 4 hours causes issues with the coke oven gas that lead to additional environmental and safety concerns.
 - ii. Extending coking times beyond 2 hours, on battery extended coking times, causes issues with the coke oven gas that lead to additional environmental and safety concerns.

11. Quench Tower No. 1 (Serves Batteries 1, 2 and 3)

- a. Increase baffle washing - Feasible if the temperature is above 32 degrees F.
- b. Suspend quenching operations – feasible while the batteries are on extended coking times.

12. Quench Tower No. 5 (Auxiliary Quench Tower for Batteries 13, 14 and 15)

- a. Increase baffle washing - Feasible if the temperature is above 32 degrees F.
- b. Suspend quenching operations – feasible while the batteries are on extended coking times.

13. Quench Tower No. 7 (Auxiliary Quench Tower for Batteries 19 and 20)

- a. Increase baffle washing - Feasible if the temperature is above 32 degrees F.
- b. Suspend quenching operations – feasible while the batteries are on extended coking times.

14. Quench Tower No. 5A (Serves Batteries 13, 14 and 15)

- a. Increase baffle washing - Feasible if the temperature is above 32 degrees F.
- b. Suspend quenching operations – feasible while the batteries are on extended coking times.

15. Quench Tower No. 7A (Serves Batteries 19 and 20)

- a. Increase baffle washing - Feasible if the temperature is above 32 degrees F.
- b. Suspend quenching operations – feasible while the batteries are on extended coking times.

16. Desulfurization Plant

- a. None – this plant processes the coke oven gas and must continue to operate (H₂S).

17. Keystone Cooling Tower

- a. None – the cooling tower provides cooling water to the plant and must support the processes that remain in operation.

18. Coke By-Product Recovery Plant

- a. None – this plant processes the coke oven gas and must continue to operate (H₂S).

19. Unloading Activities

- a. Continuous Barge Unloader No. 1
 - i. Approximately 0.31 LBS/Day PM₁₀
 - ii. Approximately 0.05 LBS/Day PM_{2.5}
 - iii. Nothing feasible
- b. Continuous Barge Unloader No. 2
 - i. Approximately 0.018 LBS/Day PM₁₀
 - ii. Approximately 0.03 LBS/Day PM_{2.5}
 - iii. Nothing feasible
- c. Pedestal Crane Unloader
 - i. Approximately 0.03 LBS/Day PM₁₀
 - ii. Approximately 0.0003 LBS/Day PM_{2.5}
 - iii. Nothing feasible
- d. Clam Shell Unloader
 - i. 0 LBS/YR PM₁₀
 - ii. 0 LBS/YR PM_{2.5}

20. Coal Transfer

- a. None – the operation is enclosed.

21. Pulverizing Activities

- a. No. 1 Primary Pulverizer
 - i. None – the operation is enclosed.
- b. No. 1 Secondary Primary Pulverizer
 - i. None – the operation is enclosed.
- c. No. 2 Primary Pulverizer
 - i. None – the operation is enclosed
- d. No. 2 Secondary Primary Pulverizer
 - i. None – the operation is enclosed.

22. Surge Bins and Bunkers (Coal)

- a. Approximately 14 LBS/YR PM₁₀
- b. Approximately 14 LBS/YR PM_{2.5}
- c. Nothing feasible

23. Coke Transfer and Screening Activities - 5% Reduction based on extended coking times

- a. Coke Transfer (1st Unit)
- b. Coke Transfer (2nd Unit)
- c. Coke Transfer (C Battery)
- d. Coke Screening Station No. 1 (Batteries 1-3)
- e. Coke Screening Station No. 2 (Batteries 13-15, 19 and 20)
- f. Coke Screening Station No. 4 (Batteries B and C)

24. Boom Conveyor (Coal Pile Destocking) – Approximate 5% reduction

- a. 49 LBS/YR PM₁₀
- b. 7 LBS/YR PM_{2.5}
- c. Curtail operation on a case-by-case inversion event - feasible

25. Coal and Coke recycle Screening- Approximate 5% reduction
 - a. Curtail coal and coke screening as appropriate - Feasible
26. Coke Screening – Peters Creek
 - a. Suspend Peters Creek coke screening operations - feasible
27. Boiler No. 1
 - a. None – necessary for plant operation
28. Boiler No. 2
 - a. None – necessary for plant operation
29. R1 Boiler
 - a. None – necessary for plant operation
30. R2 Boiler
 - a. None – necessary for plant operation
31. T1 Boiler
 - a. None – necessary for plant operation
32. T2 Boiler
 - a. None – necessary for plant operation
33. Ammonia Flare
 - a. None – safety device that needs to operate when pressure setpoint is exceeded.
 - b. Operating hours limited to 2,920 hours per year for the wastewater surge tanks and 1,400 hours per year for the ammonia loading station.
34. Coal Storage Piles
35. Coke Storage Pile – Peters Creek
36. Coke Storage Pile – South Yard
37. Fugitive Emissions (Plant Roadways)
 - a. Water roadways during event – Feasible if the temperature is above 32 degrees F.
38. Misc. Fugitive Emissions (Abrasive Blasting of Coke Oven Doors)
 - a. Curtail abrasive blasting activities - Feasible

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):

1. **Check all pollution control equipment for normal operation and initiate corrective actions as necessary.**
 - a. Check baghouse suction (Coking). _____
 - b. Check baghouse fan amps (Coking). _____
 - c. Check quench tower baffle washing (4-hr email updates). _____
 - d. Check status of gas blanketing system (Chemicals). _____

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. **Coke Batteries (Info will be provided on the Plant DRO)**
 - i. Ensure proper oven dampering and adherence to Soaking Work Practice Plan on all battery units. _____
 - ii. Remind topside workers to follow practices for good charging, gooseneck and standpipe cleaning, sealing, and proper lid replacement. _____
 - iii. Optimize all cleaning practices of machines, collector mains, screening stations, bunkers, standpipe platforms, etc., and any coal spillage. _____
 - iv. Evaluate current operations for potential mitigation (i.e. Battery outage). _____
 - v. Check/verify proper steam and gas pressures on the batteries. _____
 - b. **Byproducts (No. 1, 2, and 5 Control Rooms) including Sulfur Plant (Chemicals)** _____

3. **Evaluate current contractor operations for normal operating conditions, and initiate any corrective actions as necessary (Coking and Chemicals)**
 - a. Sand blasting _____
 - b. Tar loading _____
 - c. Light oil loading _____
 - d. Heavy mobile equipment use _____
 - e. Screening _____
 - i. Truck loading at screening stations _____
 - ii. Verify dust suppressant is operational in Screen Station operation _____

4. **Coking will contact Mid Continent (233-0626) and advise them of the PM2.5 inversion so they can:**
 - a. Shut down their screening operation, if appropriate, _____
 - b. Reduce trucking, _____
 - c. Assure proper watering of baghouse dust prior to dumping and only dump when absolutely necessary to maintain baghouse operation. _____

5. **Eliminate or postpone the following (Coking):**
 - a. Use of road sweeper _____
 - b. Cleaning of pusher pads _____
 - c. Use of track sweeper _____

6. **Water necessary paved and unpaved roads and lots (Coking Maintenance).** _____

ACHD Episode Rule: Warning 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. Any non-essential plant or contractor activity contributing to airborne dust will be curtailed (Chemicals and Coking).**
 - a. Contractor or USS ceramic welding _____
 - b. Sandblast activity _____
 - c. Other contractor activity as determined during the evaluation conducted in the Watch Phase _____

- 2. Notify third party railroad company (724-579-9289) to eliminate engine idling, any engine unnecessary movement if possible, and/or reduce speeds (Coking).** _____
 - a. Include diesel loco switchers at screening station _____

- 3. Optimize use of tarps on baghouse roll-off boxes before moving (Coking and Chemicals).** _____

- 4. Implement operational adjustments evaluated in the watch phase to minimize pushing and quenching emissions and take corrective actions including coking time extensions or battery outage(s), if necessary (Coking and Chemicals).**
 - a. Actions impacting operations during each Warning Phase will be implemented on a case by case inversion event. _____
 - b. Actions considered will include:
 - i. short-term stops on individual batteries/units, _____
 - ii. longer term maintenance outages on individual batteries/units _____
 - iii. Curtail coal/coke stocking/destocking activity. _____
 - iv. Apply dust suppressant on the following unpaved roads and lots:
 1. Coal stocking haul roads, _____
 2. #1 & #2 screening station roads, _____
 3. Berms on plant roads, _____
 4. Parking lots, _____
 5. All Peter's Creek roads, _____
 6. Any other non-paved areas that are being utilized. _____
 7. Evaluate loading/unloading of the following and determine which actions can be minimized, if any:
 - a. Ammonia
 - b. Tar
 - c. Light oil
 - d. Coal (including terminals)

- 5. Plant protection will enforce ACHD's diesel-idling rule.** _____

Source	PM10 (tons/yr)	PM2.5 (tons/yr)
Charging - Battery 1	0.025234162	0.020177009
Charging - Battery 2	0.032272556	0.025804845
Charging - Battery 3	0.026289198	0.021020606
Charging - Battery 7	0	0
Charging - Battery 8	0	0
Charging - Battery 9	0	0
Charging - Battery 13	0.023969365	0.019165688
Charging - Battery 14	0.026110754	0.020877924
Charging - Battery 15	0.019674755	0.015731757
Charging - Battery 19	0.020723107	0.01657001
Charging - Battery 20	0.019363511	0.015482889
Charging - Battery B	0.077224058	0.061747662
Charging - Battery C	0.076969873	0.061544418
Total - Charging	0.347831339	0.278122809
Door Leaks - Battery 1	1.039602354	0.831256688
Door Leaks - Battery 2	1.013828814	0.810648397
Door Leaks - Battery 3	1.063393315	0.850279726
Door Leaks - Battery 7	0	0
Door Leaks - Battery 8	0	0
Door Leaks - Battery 9	0	0
Door Leaks - Battery 13	0.756554818	0.604934425
Door Leaks - Battery 14	0.784899517	0.627598591
Door Leaks - Battery 15	0.828361388	0.662350312
Door Leaks - Battery 19	1.087106015	0.869240188
Door Leaks - Battery 20	1.108666573	0.886479816
Door Leaks - Battery B	1.106763883	0.884958442
Door Leaks - Battery C	0.567745049	0.453963833
Total - Door Leaks	9.356921725	7.481710418

Lid Leaks - Battery 1	0.000690126	0.000551818
Lid Leaks - Battery 2	0.001380251	0.001103637
Lid Leaks - Battery 3	0.002070377	0.001655455
Lid Leaks - Battery 7	0	0
Lid Leaks - Battery 8	0	0
Lid Leaks - Battery 9	0	0
Lid Leaks - Battery 13	0.001315552	0.001051904
Lid Leaks - Battery 14	0	0
Lid Leaks - Battery 15	0.000657776	0.000525952
Lid Leaks - Battery 19	0.004690698	0.00375064
Lid Leaks - Battery 20	0.003752558	0.003000512
Lid Leaks - Battery B	0.100315321	0.000252128
Lid Leaks - Battery C	0.002792267	0.0018
Total - Lid Leaks	0.117664927	0.013692045
Offtake Leaks - Battery 1	0.026569838	0.021245004
Offtake Leaks - Battery 2	0.028640215	0.022900458
Offtake Leaks - Battery 3	0.038301975	0.030625914
Offtake Leaks - Battery 7	0	0
Offtake Leaks - Battery 8	0	0
Offtake Leaks - Battery 9	0	0
Offtake Leaks - Battery 13	0.022035497	0.017619385
Offtake Leaks - Battery 14	0.026639929	0.021301048
Offtake Leaks - Battery 15	0.027955481	0.022352951
Offtake Leaks - Battery 19	0.06754605	0.054009214
Offtake Leaks - Battery 20	0.060979073	0.048758318
Offtake Leaks - Battery B	0.115487327	0.0158
Offtake Leaks - Battery C	0.009165133	0.006
Total - Offtake Leaks	0.423320518	0.260612292
Soaking - Battery 1	0.4692805	0.4692805
Soaking - Battery 2	0.4692805	0.4692805
Soaking - Battery 3	0.4692805	0.4692805
Soaking - Battery 7	0	0
Soaking - Battery 8	0	0
Soaking - Battery 9	0	0

Soaking - Battery 13	0.056824488	0.056824488
Soaking - Battery 14	0.056824488	0.056824488
Soaking - Battery 15	0.056824488	0.056824488
Soaking - Battery 19	1.0152513	1.0152513
Soaking - Battery 20	1.0152513	1.0152513
Soaking - Battery B	2.9162673	2.9162673
Soaking - Battery C	1.6419537	1.6419537
Total - Soaking	8.167038565	8.167038565
Decarbonizing - Battery 1	---	---
Decarbonizing - Battery 2	---	---
Decarbonizing - Battery 3	---	---
Decarbonizing - Battery 7	---	---
Decarbonizing - Battery 8	---	---
Decarbonizing - Battery 9	---	---
Decarbonizing - Battery 13	---	---
Decarbonizing - Battery 14	---	---
Decarbonizing - Battery 15	---	---
Decarbonizing - Battery 19	---	---
Decarbonizing - Battery 20	---	---
Decarbonizing - Battery B	---	---
Decarbonizing - Battery C	---	---
Total - Decarbonizing	---	---
Battery Underfiring Stack 1 - COG	5.103000758	4.777277306
Battery Underfiring Stack 2 - COG	5.965537002	5.584758044
Battery Underfiring Stack 3 - COG	22.41973063	21.47574197
Battery Underfiring Stack 7 - COG	0	0
Battery Underfiring Stack 8 - COG	0	0
Battery Underfiring Stack 9 - COG	0	0
Battery Underfiring Stack 13 - COG	1.618116447	1.204179682
Battery Underfiring Stack 14 - COG	1.742494032	1.35752442
Battery Underfiring Stack 15 - COG	1.515166957	1.280844626
Battery Underfiring Stack 19 - COG	3.780267706	3.476108235
Battery Underfiring Stack 20 - COG	3.40641137	3.225301263
Battery Underfiring Stack B - COG	10.00065959	9.362319619

Battery Underfiring Stack C - COG	21.01208197	15.63689821
Total - Battery Underfiring - COG	76.56346646	67.38095337
Battery Underfiring Stack 1 - NG	0.011510723	0.011510723
Battery Underfiring Stack 2 - NG	0.011865056	0.011865056
Battery Underfiring Stack 3 - NG	0.01187441	0.01187441
Battery Underfiring Stack 7 - NG	0	0
Battery Underfiring Stack 8 - NG	0	0
Battery Underfiring Stack 9 - NG	0	0
Battery Underfiring Stack 13 - NG	0.006711205	0.006711205
Battery Underfiring Stack 14 - NG	0.008180952	0.008180952
Battery Underfiring Stack 15 - NG	0.009846741	0.009846741
Battery Underfiring Stack 19 - NG	0.013173472	0.013173472
Battery Underfiring Stack 20 - NG	0.013799875	0.013799875
Battery Underfiring Stack B - NG	0.030312203	0.030312203
Battery Underfiring Stack C - NG	0.03973124	0.03973124
Total - Battery Underfiring - NG	0.157005876	0.157005876
PEC Baghouse - Batteries 1-3	0.838200323	0.461481076
PEC Baghouse - Batteries 7-9	0	0
PEC Baghouse - Batteries 13-15	0.431029088	0.237308149
PEC Baghouse - Batteries 19-20	0.381272022	0.381272022
PEC Baghouse - Batteries B	0.6075	0.174786015
PEC Baghouse - Batteries C	0.573920181	0.573920181
Total - PEC Baghouse	2.831921613	1.828767444
PEC Traveling Hot Car - Batteries 1-3	6.054416456	2.229562885
PEC Traveling Hot Car - Batteries 7-9	0	0
PEC Traveling Hot Car - Batteries 13-15	5.029293591	1.852057322
PEC Traveling Hot Car - Batteries 19-20	5.252216634	1.934149618
PEC Traveling Hot Car - Batteries B	0	0
PEC Traveling Hot Car - Batteries C	5.145415158	1.89481955
Total - PEC Traveling Hot Car	21.48134184	7.910589376
PEC Pre-Push - Batteries 1-3	2.98029216	2.75503752
PEC Pre-Push - Batteries 7-9	0	0
PEC Pre-Push - Batteries 13-15	2.49544136	2.30683242
PEC Pre-Push - Batteries 19-20	2.58701072	2.39148084

PEC Pre-Push - Batteries B	0.025598346	0.014014285
PEC Pre-Push - Batteries C	0.576508188	0.315619989
Total - PEC Pre-Push	8.664850774	7.782985054
PEC Fugitives - Batteries 1-3	67.22784907	33.61392453
PEC Fugitives - Batteries 7-9	0	0
PEC Fugitives - Batteries 13-15	55.6493799	27.82468995
PEC Fugitives - Batteries 19-20	58.43199547	29.21599774
PEC Fugitives - Batteries B	9.224452632	4.612226316
PEC Fugitives - Batteries C	36.6015805	14.1165449
Total - PEC Fugitives	227.1352576	109.3833834
PEC Uncontrolled Pushing - Batteries 1-3	2.587509329	1.293754665
PEC Uncontrolled Pushing - Batteries 7-9	0	0
PEC Uncontrolled Pushing - Batteries 13-15	4.10308988	2.05154494
PEC Uncontrolled Pushing - Batteries 19-20	1.127156371	0.563578185
PEC Uncontrolled Pushing - Batteries B	0	0
PEC Uncontrolled Pushing - Batteries C	0	0
Total - PEC Uncontrolled Pushing	7.81775558	3.90887779
PEC Ball Mill - Batteries 1-3	0.007852713	0.007852713
PEC Ball Mill - Batteries 7-9	0	0
PEC Ball Mill - Batteries 13-15	0.006523082	0.006523082
PEC Ball Mill - Batteries 19-20	0.006812238	0.006812238
PEC Ball Mill - Batteries B	0.002299632	0.002299632
PEC Ball Mill - Batteries C	0.004624764	0.004624764
Total - PEC Ball Mill	0.028112428	0.028112428
Quench Tower #1	12.4756416	10.396368
Quench Tower #3	0	0
Quench Tower #5	1.147501296	0.95625108
Quench Tower #7	2.495286106	2.079405089
Quench Tower B	7.839695659	4.703817395
Quench Tower C	11.25766508	7.505110055
Quench Tower #5a	7.723118237	3.276598531
Quench Tower #7a	10.75138	5.781650003
Total - Quenching	35.21578974	25.64095162
Boiler #1 - COG	15.5929418	15.5929418

Boiler #1 - NG	0.387041644	0.387041644
Boiler #2 - COG	6.088025664	6.088025664
Boiler #2 - NG	0.260844152	0.260844152
Boiler #13 - COG	---	---
Boiler #13 - NG	---	---
Boiler #14 - COG	---	---
Boiler #14 - NG	---	---
Boiler R-1 - COG	0.024317057	0.024317057
Boiler R-1 - NG	0	0
Boiler R-2 - COG	0.607487187	0.607487187
Boiler R-2 - NG	0	0
Boiler T-1 - COG	0.581157456	0.581157456
Boiler T-1 - NG	0	0
Boiler T-2 - COG	0.581157456	0.581157456
Boiler T-2 - NG	0	0
Total - Boilers COG	23.47508662	23.47508662
Total - Boilers NG	0.647885796	0.647885796
BPR Tar/FL Decanters	0.539743347	0.539743347
BPR FL Circ./Surge Tanks	0.539743347	0.539743347
BPR FL Pumphouse Sumps	0.539743347	0.539743347
BPR Tar Storage/Sep Tanks	0.009086422	---
BPR Tar Collecting Tanks	0.009086422	---
BPR Final Cooler Sump	0.018774925	---
BPR Equipment Leaks	0.1	---
Total - Byproducts Recovery	1.619230041	1.619230041
MH #1 Unloader	0.665227755	0.100734489
MH #2 Unloader	0.310561697	0.047027914
MH Pedestal Crane	0.027275935	0.004130356
MH Clamshell Unloader	0.026347371	0.003989745
MH Coal Transfer	0.97570327	0.147749352
MH Boom Conveyor	0.052694741	0.007979489
MH #1 Pulverizer - Primary	0.021894999	0.00547375
MH #1 Pulverizer - Secondary	0	0
MH #2 Pulverizer - Primary	0.001447529	0.000361882

MH #2 Pulverizer - Secondary	0	0
MH Coal Storage Bins/Bunkers	0.009280364	0.009280364
MH Coal Storage Pile Erosion	---	---
MH Coke Transfer 1-3, 7-9, B	1.730556368	0.262055679
MH Coke Transfer 13-15, 19-20	1.321609375	0.20012942
MH Coke Transfer C	1.072546542	0.162414191
MH Coke Pile Load/Unload	0.065495439	0.009917881
MH Screening Station #1 (1-3, 7-9)	0.118525613	0.008008487
MH Screening Station #1 (1-3, 7-9) Loadout	0.112118823	0.03203395
MH Screening Station #2 (13-15, 19-20)	0.201278243	0.013599881
MH Screening Station #2 (13-15, 19-20) Loadout	0.190398338	0.054399525
MH Screening Station #3 (B) - Fugitive	0	0
MH Screening Station #3 (B) - Stack	0	0
MH Screening Station #3 (B) Loadout	0	0
MH Screening Station #4 (C) - Fugitive/Stack	0.366723212	0.365027117
MH Screening Station #4 (C) - Stack	0	0
MH Screening Station #4 (C) Loadout	0.058342329	0.016669237
MH Coke Pile Erosion	1.025	0.41
Total - Material Handling	8.353027943	1.860982708
Misc. Blasting - Black Beauty	0.24	0.024
Misc. DUSTREAT & CitriKleen	---	---
Misc. Roads - Paved	0.822629696	0.201918198
Misc. Roads - Unpaved	1.424166042	0.142416604
Misc. Heavy Duty Motor Vehicle Exhaust	---	---
Misc. Tug Boat Exhaust	---	---
Misc. Safety Kleen Solvent	---	---
Misc. Paints & Thinners	---	---
Misc. SCOT Stack	0.71566848	0.70075872
Misc. Cooling Tower	121.2165	101.01375
Misc. COG Venting	0	---
Misc. Flaring	0.00018924	---
Misc. Aeration Basins - WWTP	1.312252982	---
Misc. Methanol Usage - Lid Slurry	---	---
Misc. Methanol Usage - Tanks	---	---

Misc. Methanol Usage - Air Lines	---	---
Misc. WWT Surge Tank Ammonia Flare	---	---
Misc. Ammonia Tanker Loading Flare	0.016135	0.016135
Misc. LO Collecting Tanks	---	---
Misc. LO Barge Loading	---	---
Misc. LO Decanters	---	---
Total - Miscellaneous Operations	125.7475414	102.0989785
Battery Fugitives - Miscellaneous - All Batteries	3.008814751	---
BP Pitch Traps - All Batteries (ByProduct Recovery)	1.296877167	---
TDS Boxes - All Batteries (ByProduct Recovery)	0.0259022	---
Total Emissions	562.4826449	369.9249662
2015 ACHD Invoice Total Emissions	538.6115179	
2015 Submittal	538.6115179	

Source	PM10 (tons/yr)	PM2.5 (tons/yr)
Charging - Battery 1	0.024742728	0.019784062
Charging - Battery 2	0.034813103	0.027836244
Charging - Battery 3	0.027626065	0.022089553
Charging - Battery 7	0	0
Charging - Battery 8	0	0
Charging - Battery 9	0	0
Charging - Battery 13	0.034103897	0.02726917
Charging - Battery 14	0.039949832	0.031943526
Charging - Battery 15	0.027223562	0.021767715
Charging - Battery 19	0.031473209	0.025165695
Charging - Battery 20	0.028919297	0.02312361
Charging - Battery B	0.061837404	0.049444632
Charging - Battery C	0.067624094	0.054071617
Total - Charging	0.378313191	0.302495824
Door Leaks - Battery 1	0.896856593	0.717118462
Door Leaks - Battery 2	0.936508193	0.748823525
Door Leaks - Battery 3	0.946421093	0.75674979
Door Leaks - Battery 7	0	0
Door Leaks - Battery 8	0	0
Door Leaks - Battery 9	0	0
Door Leaks - Battery 13	0.792458103	0.633642369
Door Leaks - Battery 14	0.809464922	0.647240868
Door Leaks - Battery 15	0.834030328	0.666883145
Door Leaks - Battery 19	1.089801085	0.871395141
Door Leaks - Battery 20	1.095191224	0.875705048
Door Leaks - Battery B	0.992920421	0.793930234
Door Leaks - Battery C	0.517003392	0.41339126
Total - Door Leaks	8.910655354	7.124879843

Lid Leaks - Battery 1	0.001380251	0.001103637
Lid Leaks - Battery 2	0.000690126	0.000551818
Lid Leaks - Battery 3	0.000690126	0.000551818
Lid Leaks - Battery 7	0	0
Lid Leaks - Battery 8	0	0
Lid Leaks - Battery 9	0	0
Lid Leaks - Battery 13	0	0
Lid Leaks - Battery 14	0.000657776	0.000525952
Lid Leaks - Battery 15	0.001973328	0.001577855
Lid Leaks - Battery 19	0.00093814	0.000750128
Lid Leaks - Battery 20	0.00093814	0.000750128
Lid Leaks - Battery B	0.100315321	0.000252128
Lid Leaks - Battery C	0.002708696	0.0018
Total - Lid Leaks	0.110291904	0.007863464
Offtake Leaks - Battery 1	0.024499461	0.019589549
Offtake Leaks - Battery 2	0.022774147	0.018210003
Offtake Leaks - Battery 3	0.034506284	0.027590914
Offtake Leaks - Battery 7	0	0
Offtake Leaks - Battery 8	0	0
Offtake Leaks - Battery 9	0	0
Offtake Leaks - Battery 13	0.026639929	0.021301048
Offtake Leaks - Battery 14	0.034204354	0.027349493
Offtake Leaks - Battery 15	0.028942145	0.023141879
Offtake Leaks - Battery 19	0.060040933	0.04800819
Offtake Leaks - Battery 20	0.054881166	0.043882486
Offtake Leaks - Battery B	0.116946481	0.0158
Offtake Leaks - Battery C	0.008947884	0.006
Total - Offtake Leaks	0.412382784	0.250873562
Soaking - Battery 1	0.461364475	0.461364475
Soaking - Battery 2	0.461364475	0.461364475
Soaking - Battery 3	0.461364475	0.461364475
Soaking - Battery 7	0	0
Soaking - Battery 8	0	0
Soaking - Battery 9	0	0

Soaking - Battery 13	0.07760313	0.07760313
Soaking - Battery 14	0.07760313	0.07760313
Soaking - Battery 15	0.07760313	0.07760313
Soaking - Battery 19	1.321833654	1.321833654
Soaking - Battery 20	1.321833654	1.321833654
Soaking - Battery B	2.794495356	2.794495356
Soaking - Battery C	1.591247484	1.591247484
Total - Soaking	8.646312964	8.646312964
Decarbonizing - Battery 1	---	---
Decarbonizing - Battery 2	---	---
Decarbonizing - Battery 3	---	---
Decarbonizing - Battery 7	---	---
Decarbonizing - Battery 8	---	---
Decarbonizing - Battery 9	---	---
Decarbonizing - Battery 13	---	---
Decarbonizing - Battery 14	---	---
Decarbonizing - Battery 15	---	---
Decarbonizing - Battery 19	---	---
Decarbonizing - Battery 20	---	---
Decarbonizing - Battery B	---	---
Decarbonizing - Battery C	---	---
Total - Decarbonizing	---	---
Battery Underfiring Stack 1 - COG	5.33882738	4.998051164
Battery Underfiring Stack 2 - COG	5.856308748	5.482501807
Battery Underfiring Stack 3 - COG	3.106652947	2.975846507
Battery Underfiring Stack 7 - COG	0	0
Battery Underfiring Stack 8 - COG	0	0
Battery Underfiring Stack 9 - COG	0	0
Battery Underfiring Stack 13 - COG	19.48376225	14.499544
Battery Underfiring Stack 14 - COG	2.817266946	2.194847504
Battery Underfiring Stack 15 - COG	3.591272213	3.03587779
Battery Underfiring Stack 19 - COG	7.193800643	6.614989097
Battery Underfiring Stack 20 - COG	7.554745264	7.153078944
Battery Underfiring Stack B - COG	9.871477743	9.241383419

Battery Underfiring Stack C - COG	20.36286359	15.15375895
Total - Battery Underfiring - COG	85.17697773	71.34987918
Battery Underfiring Stack 1 - NG	0.049533389	0.049533389
Battery Underfiring Stack 2 - NG	0.048848323	0.048848323
Battery Underfiring Stack 3 - NG	0.047629701	0.047629701
Battery Underfiring Stack 7 - NG	0	0
Battery Underfiring Stack 8 - NG	0	0
Battery Underfiring Stack 9 - NG	0	0
Battery Underfiring Stack 13 - NG	0.045927052	0.045927052
Battery Underfiring Stack 14 - NG	0.049760096	0.049760096
Battery Underfiring Stack 15 - NG	0.050305506	0.050305506
Battery Underfiring Stack 19 - NG	0.06446002	0.06446002
Battery Underfiring Stack 20 - NG	0.072155904	0.072155904
Battery Underfiring Stack B - NG	0.14048976	0.14048976
Battery Underfiring Stack C - NG	0.174021963	0.174021963
Total - Battery Underfiring - NG	0.743131715	0.743131715
PEC Baghouse - Batteries 1-3	0.825382921	0.454424305
PEC Baghouse - Batteries 7-9	0	0
PEC Baghouse - Batteries 13-15	0.390840502	0.05001331
PEC Baghouse - Batteries 19-20	0.440966343	0.187723043
PEC Baghouse - Batteries B	0.6075	0.143646153
PEC Baghouse - Batteries C	0.563493038	0.563493038
Total - PEC Baghouse	2.828182803	1.399299848
PEC Traveling Hot Car - Batteries 1-3	5.9618349	2.19546936
PEC Traveling Hot Car - Batteries 7-9	0	0
PEC Traveling Hot Car - Batteries 13-15	6.88958865	2.53711836
PEC Traveling Hot Car - Batteries 19-20	6.8959485	2.5394604
PEC Traveling Hot Car - Batteries B	0	0
PEC Traveling Hot Car - Batteries C	5.051931813	1.860393937
Total - PEC Traveling Hot Car	24.79930386	9.132442057
PEC Pre-Push - Batteries 1-3	2.930019312	2.708564364
PEC Pre-Push - Batteries 7-9	0	0
PEC Pre-Push - Batteries 13-15	3.407933214	3.150356867
PEC Pre-Push - Batteries 19-20	3.368227978	3.113652607

PEC Pre-Push - Batteries B	0.024529459	0.013429103
PEC Pre-Push - Batteries C	0.558704672	0.305873127
Total - PEC Pre-Push	10.28941464	9.291876068
PEC Fugitives - Batteries 1-3	55.70338758	27.85169379
PEC Fugitives - Batteries 7-9	0	0
PEC Fugitives - Batteries 13-15	64.27206574	32.13603287
PEC Fugitives - Batteries 19-20	64.46264657	32.23132328
PEC Fugitives - Batteries B	12.5212	6.2606
PEC Fugitives - Batteries C	35.47126382	13.68060291
Total - PEC Fugitives	232.4305637	112.1602528
PEC Uncontrolled Pushing - Batteries 1-3	1.447013112	0.723506556
PEC Uncontrolled Pushing - Batteries 7-9	0	0
PEC Uncontrolled Pushing - Batteries 13-15	2.664453687	1.332226844
PEC Uncontrolled Pushing - Batteries 19-20	1.356645436	0.678322718
PEC Uncontrolled Pushing - Batteries B	0	0
PEC Uncontrolled Pushing - Batteries C	0	0
Total - PEC Uncontrolled Pushing	5.468112235	2.734056117
PEC Ball Mill - Batteries 1-3	0.00649846	0.00649846
PEC Ball Mill - Batteries 7-9	0	0
PEC Ball Mill - Batteries 13-15	0.007509674	0.007509674
PEC Ball Mill - Batteries 19-20	0.007516633	0.007516633
PEC Ball Mill - Batteries B	0.003121502	0.003121502
PEC Ball Mill - Batteries C	0.004481944	0.004481944
Total - PEC Ball Mill	0.029128213	0.029128213
Quench Tower #1	12.26519712	10.2209976
Quench Tower #3	0	0
Quench Tower #5	0.308128464	0.25677372
Quench Tower #7	1.069211621	0.891009684
Quench Tower B	38.83357433	32.36131194
Quench Tower C	11.05313267	7.368755111
Quench Tower #5a	4.495396416	0.845035699
Quench Tower #7a	6.757354135	3.308824962
Total - Quenching	63.52924421	51.09884806
Boiler #1 - COG	7.313889793	7.313889793

Boiler #1 - NG	0.482531827	0.482531827
Boiler #2 - COG	5.848366066	5.848366066
Boiler #2 - NG	0.31542511	0.31542511
Boiler #13 - COG	---	---
Boiler #13 - NG	---	---
Boiler #14 - COG	---	---
Boiler #14 - NG	---	---
Boiler R-1 - COG	2.31145E-05	2.31145E-05
Boiler R-1 - NG	0	0
Boiler R-2 - COG	0.608938694	0.608938694
Boiler R-2 - NG	0	0
Boiler T-1 - COG	0.591527205	0.591527205
Boiler T-1 - NG	0	0
Boiler T-2 - COG	0.591527205	0.591527205
Boiler T-2 - NG	0	0
Total - Boilers COG	14.95427208	14.95427208
Total - Boilers NG	0.797956937	0.797956937
BPR Tar/FL Decanters	0.597198098	0.597198098
BPR FL Circ./Surge Tanks	0.597198098	0.597198098
BPR FL Pumphouse Sumps	0.597198098	0.597198098
BPR Tar Storage/Sep Tanks	0.009086422	---
BPR Tar Collecting Tanks	0.009086422	---
BPR Final Cooler Sump	0.02055771	---
BPR Equipment Leaks	0.1	---
Total - Byproducts Recovery	1.791594293	1.791594293
MH #1 Unloader	0.643408729	0.097430465
MH #2 Unloader	0.41245065	0.062456813
MH Pedestal Crane	0.04572363	0.006923864
MH Clamshell Unloader	0	0
MH Coal Transfer	1.058778247	0.160329277
MH Boom Conveyor	0	0
MH #1 Pulverizer - Primary	0.021176858	0.005294215
MH #1 Pulverizer - Secondary	0	0
MH #2 Pulverizer - Primary	0.001922434	0.000480609

MH #2 Pulverizer - Secondary	0	0
MH Coal Storage Bins/Bunkers	0.010070528	0.010070528
MH Coal Storage Pile Erosion	---	---
MH Coke Transfer 1-3, 7-9, B	1.691291688	0.256109884
MH Coke Transfer 13-15, 19-20	1.772025193	0.268335244
MH Coke Transfer C	1.053060216	0.159463404
MH Coke Pile Load/Unload	0.276198765	0.041824384
MH Screening Station #1 (1-3, 7-9)	0.11671317	0.007886025
MH Screening Station #1 (1-3, 7-9) Loadout	0.11040435	0.0315441
MH Screening Station #2 (13-15, 19-20)	0.269875595	0.018234838
MH Screening Station #2 (13-15, 19-20) Loadout	0.255287725	0.07293935
MH Screening Station #3 (B) - Fugitive	0	0
MH Screening Station #3 (B) - Stack	0	0
MH Screening Station #3 (B) Loadout	0	0
MH Screening Station #4 (C) - Fugitive/Stack	0.3582381	0.356581249
MH Screening Station #4 (C) - Stack	0	0
MH Screening Station #4 (C) Loadout	0.056992425	0.01628355
MH Coke Pile Erosion	1.025	0.41
Total - Material Handling	9.178618304	1.982187798
Misc. Blasting - Black Beauty	0.24	0.024
Misc. DUSTREAT & CitriKleen	---	---
Misc. Roads - Paved	0.822629696	0.201918198
Misc. Roads - Unpaved	1.424166042	0.142416604
Misc. Heavy Duty Motor Vehicle Exhaust	---	---
Misc. Tug Boat Exhaust	---	---
Misc. Safety Kleen Solvent	---	---
Misc. Paints & Thinners	---	---
Misc. SCOT Stack	0.73281024	0.71754336
Misc. Cooling Tower	121.2165	101.01375
Misc. COG Venting	0	---
Misc. Flaring	0.000871478	---
Misc. Aeration Basins - WWTP	1.307089999	---
Misc. Methanol Usage - Lid Slurry	---	---
Misc. Methanol Usage - Tanks	---	---

Misc. Methanol Usage - Air Lines	---	---
Misc. WWT Surge Tank Ammonia Flare	---	---
Misc. Ammonia Tanker Loading Flare	0.0261835	0.0261835
Misc. LO Collecting Tanks	---	---
Misc. LO Barge Loading	---	---
Misc. LO Decanters	---	---
Total - Miscellaneous Operations	125.770251	102.1258117
Battery Fugitives - Miscellaneous - All Batteries	3.281996492	---
BP Pitch Traps - All Batteries (ByProduct Recovery)	1.407298075	---
TDS Boxes - All Batteries (ByProduct Recovery)	0.028107609	---
Total Emissions	600.96211	395.9231625
2015 ACHD Invoice Total Emissions	538.6115179	
2015 Submittal	538.6115179	

Source	PM10 (tons/yr)	PM2.5 (tons/yr)
Charging - Battery 1	0.018946646	0.015149568
Charging - Battery 2	0.021067539	0.016845415
Charging - Battery 3	0.022198683	0.017749867
Charging - Battery 7	0	0
Charging - Battery 8	0	0
Charging - Battery 9	0	0
Charging - Battery 13	0.01778193	0.014218271
Charging - Battery 14	0.022772116	0.018208379
Charging - Battery 15	0.017922499	0.014330669
Charging - Battery 19	0.025797068	0.020627103
Charging - Battery 20	0.023303671	0.018633406
Charging - Battery B	0.043038045	0.034412834
Charging - Battery C	0.05083358	0.040646073
Total - Charging	0.263661779	0.210821586
Door Leaks - Battery 1	0.843326932	0.674316627
Door Leaks - Battery 2	0.823501132	0.658464095
Door Leaks - Battery 3	0.815570812	0.652123083
Door Leaks - Battery 7	0	0
Door Leaks - Battery 8	0	0
Door Leaks - Battery 9	0	0
Door Leaks - Battery 13	0.773561637	0.618532925
Door Leaks - Battery 14	0.750885878	0.600401592
Door Leaks - Battery 15	0.736622112	0.588996413
Door Leaks - Battery 19	1.025119412	0.819676258
Door Leaks - Battery 20	1.04128983	0.832605978
Door Leaks - Battery B	0.851196927	0.680609404
Door Leaks - Battery C	0.532616209	0.425875128
Total - Door Leaks	8.193690882	6.551601503

Lid Leaks - Battery 1	0.000690126	0.000551818
Lid Leaks - Battery 2	0	0
Lid Leaks - Battery 3	0	0
Lid Leaks - Battery 7	0	0
Lid Leaks - Battery 8	0	0
Lid Leaks - Battery 9	0	0
Lid Leaks - Battery 13	0	0
Lid Leaks - Battery 14	0.000657776	0.000525952
Lid Leaks - Battery 15	0.000657776	0.000525952
Lid Leaks - Battery 19	0.00093814	0.000750128
Lid Leaks - Battery 20	0.00093814	0.000750128
Lid Leaks - Battery B	0.100788304	0.00063032
Lid Leaks - Battery C	0.002433387	0.0018
Total - Lid Leaks	0.107103648	0.005534298
Offtake Leaks - Battery 1	0.016563016	0.013243639
Offtake Leaks - Battery 2	0.017253142	0.013795457
Offtake Leaks - Battery 3	0.024154398	0.01931364
Offtake Leaks - Battery 7	0	0
Offtake Leaks - Battery 8	0	0
Offtake Leaks - Battery 9	0	0
Offtake Leaks - Battery 13	0.024008825	0.01919724
Offtake Leaks - Battery 14	0.029928809	0.023930807
Offtake Leaks - Battery 15	0.03486213	0.027875445
Offtake Leaks - Battery 19	0.041747211	0.033380695
Offtake Leaks - Battery 20	0.036587444	0.029254991
Offtake Leaks - Battery B	0.115375436	0.0158
Offtake Leaks - Battery C	1.008071728	0.006
Total - Offtake Leaks	1.348552139	0.201791913
Soaking - Battery 1	0.454635735	0.454635735
Soaking - Battery 2	0.454635735	0.454635735
Soaking - Battery 3	0.454635735	0.454635735
Soaking - Battery 7	0	0
Soaking - Battery 8	0	0
Soaking - Battery 9	0	0

Soaking - Battery 13	0.06907261	0.06907261
Soaking - Battery 14	0.06907261	0.06907261
Soaking - Battery 15	0.06907261	0.06907261
Soaking - Battery 19	1.370135912	1.370135912
Soaking - Battery 20	1.370135912	1.370135912
Soaking - Battery B	2.448036054	2.448036054
Soaking - Battery C	1.388150541	1.388150541
Total - Soaking	8.147583452	8.147583452
Decarbonizing - Battery 1	---	---
Decarbonizing - Battery 2	---	---
Decarbonizing - Battery 3	---	---
Decarbonizing - Battery 7	---	---
Decarbonizing - Battery 8	---	---
Decarbonizing - Battery 9	---	---
Decarbonizing - Battery 13	---	---
Decarbonizing - Battery 14	---	---
Decarbonizing - Battery 15	---	---
Decarbonizing - Battery 19	---	---
Decarbonizing - Battery 20	---	---
Decarbonizing - Battery B	---	---
Decarbonizing - Battery C	---	---
Total - Decarbonizing	---	---
Battery Underfiring Stack 1 - COG	3.10783196	2.909459708
Battery Underfiring Stack 2 - COG	5.208639635	4.876173276
Battery Underfiring Stack 3 - COG	3.000854598	2.874502825
Battery Underfiring Stack 7 - COG	0	0
Battery Underfiring Stack 8 - COG	0	0
Battery Underfiring Stack 9 - COG	0	0
Battery Underfiring Stack 13 - COG	16.32304891	12.14738523
Battery Underfiring Stack 14 - COG	2.32726402	1.813101039
Battery Underfiring Stack 15 - COG	2.672948586	2.259573979
Battery Underfiring Stack 19 - COG	6.729960767	6.188469671
Battery Underfiring Stack 20 - COG	7.325194272	6.935732585
Battery Underfiring Stack B - COG	7.250523427	6.787724059

Battery Underfiring Stack C - COG	14.71971024	10.95420297
Total - Battery Underfiring - COG	68.66597641	57.74632534
Battery Underfiring Stack 1 - NG	0.254292563	0.254292563
Battery Underfiring Stack 2 - NG	0.244160158	0.244160158
Battery Underfiring Stack 3 - NG	0.264839748	0.264839748
Battery Underfiring Stack 7 - NG	0	0
Battery Underfiring Stack 8 - NG	0	0
Battery Underfiring Stack 9 - NG	0	0
Battery Underfiring Stack 13 - NG	0.260235839	0.260235839
Battery Underfiring Stack 14 - NG	0.267693541	0.267693541
Battery Underfiring Stack 15 - NG	0.256383747	0.256383747
Battery Underfiring Stack 19 - NG	0.389629165	0.389629165
Battery Underfiring Stack 20 - NG	0.486557233	0.486557233
Battery Underfiring Stack B - NG	0.738385445	0.738385445
Battery Underfiring Stack C - NG	0.881213014	0.881213014
Total - Battery Underfiring - NG	4.043390452	4.043390452
PEC Baghouse - Batteries 1-3	0.216477018	0.119183976
PEC Baghouse - Batteries 7-9	0	0
PEC Baghouse - Batteries 13-15	0.382785247	0.045578394
PEC Baghouse - Batteries 19-20	0.455578913	0.195768166
PEC Baghouse - Batteries B	0.6075	0.129309199
PEC Baghouse - Batteries C	0.386133033	0.386133033
Total - PEC Baghouse	2.048474212	0.875972769
PEC Traveling Hot Car - Batteries 1-3	5.97025485	2.19857004
PEC Traveling Hot Car - Batteries 7-9	0	0
PEC Traveling Hot Car - Batteries 13-15	6.278656356	2.312140118
PEC Traveling Hot Car - Batteries 19-20	7.191483642	2.648292389
PEC Traveling Hot Car - Batteries B	0	0
PEC Traveling Hot Car - Batteries C	4.327288945	1.593541326
Total - PEC Traveling Hot Car	23.76768379	8.752543873
PEC Pre-Push - Batteries 1-3	2.887286634	2.669061482
PEC Pre-Push - Batteries 7-9	0	0
PEC Pre-Push - Batteries 13-15	3.03331632	2.80405404
PEC Pre-Push - Batteries 19-20	3.491309286	3.227431258

PEC Pre-Push - Batteries B	0.021488316	0.011764173
PEC Pre-Push - Batteries C	0.487395079	0.266833382
Total - PEC Pre-Push	9.920795635	8.979144335
PEC Fugitives - Batteries 1-3	27.00113181	13.5005659
PEC Fugitives - Batteries 7-9	0	0
PEC Fugitives - Batteries 13-15	43.39083005	21.69541502
PEC Fugitives - Batteries 19-20	43.3409272	21.6704636
PEC Fugitives - Batteries B	6.704136842	3.352068421
PEC Fugitives - Batteries C	30.94393208	11.93449574
Total - PEC Fugitives	151.380958	72.1530087
PEC Uncontrolled Pushing - Batteries 1-3	0.218237462	0.109118731
PEC Uncontrolled Pushing - Batteries 7-9	0	0
PEC Uncontrolled Pushing - Batteries 13-15	2.279032837	1.139516419
PEC Uncontrolled Pushing - Batteries 19-20	2.778061303	1.389030652
PEC Uncontrolled Pushing - Batteries B	0	0
PEC Uncontrolled Pushing - Batteries C	0	0
Total - PEC Uncontrolled Pushing	5.275331603	2.637665802
PEC Ball Mill - Batteries 1-3	0.00314438	0.00314438
PEC Ball Mill - Batteries 7-9	0	0
PEC Ball Mill - Batteries 13-15	0.005075458	0.005075458
PEC Ball Mill - Batteries 19-20	0.005075458	0.005075458
PEC Ball Mill - Batteries B	0.001671324	0.001671324
PEC Ball Mill - Batteries C	0.003909896	0.003909896
Total - PEC Ball Mill	0.018876515	0.018876515
Quench Tower #1	12.08631614	10.07193012
Quench Tower #3	0	0
Quench Tower #5	1.165244434	0.971037028
Quench Tower #7	1.076798699	0.897332249
Quench Tower B	34.957695	29.1314125
Quench Tower C	8.353839663	5.569226442
Quench Tower #5a	4.472897313	0.568081094
Quench Tower #7a	7.457274431	2.881062026
Total - Quenching	69.57006568	50.09008146
Boiler #1 - COG	4.874696033	4.874696033

Boiler #1 - NG	1.399047619	1.399047619
Boiler #2 - COG	4.653092453	4.653092453
Boiler #2 - NG	0.958095238	0.958095238
Boiler #13 - COG	---	---
Boiler #13 - NG	---	---
Boiler #14 - COG	---	---
Boiler #14 - NG	---	---
Boiler R-1 - COG	2.31145E-05	2.31145E-05
Boiler R-1 - NG	0	0
Boiler R-2 - COG	0.48372045	0.48372045
Boiler R-2 - NG	0	0
Boiler T-1 - COG	0.46202895	0.46202895
Boiler T-1 - NG	0	0
Boiler T-2 - COG	0.46202895	0.46202895
Boiler T-2 - NG	0	0
Total - Boilers COG	10.93558995	10.93558995
Total - Boilers NG	2.357142857	2.357142857
BPR Tar/FL Decanters	0.554894348	0.554894348
BPR FL Circ./Surge Tanks	0.554894348	0.554894348
BPR FL Pumphouse Sumps	0.554894348	0.554894348
BPR Tar Storage/Sep Tanks	0.009086422	---
BPR Tar Collecting Tanks	0.009086422	---
BPR Final Cooler Sump	0.019270341	---
BPR Equipment Leaks	0.1	---
Total - Byproducts Recovery	1.664683044	1.664683044
MH #1 Unloader	0.58318676	0.088311138
MH #2 Unloader	0.39861331	0.060361444
MH Pedestal Crane	0.042077866	0.006371791
MH Clamshell Unloader	0	0
MH Coal Transfer	0.982175184	0.148729385
MH Boom Conveyor	0.024553325	0.003718075
MH #1 Pulverizer - Primary	0.01919474	0.004798685
MH #1 Pulverizer - Secondary	0	0
MH #2 Pulverizer - Primary	0.001857938	0.000464485

MH #2 Pulverizer - Secondary	0	0
MH Coal Storage Bins/Bunkers	0.009341921	0.009341921
MH Coal Storage Pile Erosion	---	---
MH Coke Transfer 1-3, 7-9, B	1.600057774	0.242294463
MH Coke Transfer 13-15, 19-20	1.731483305	0.262196043
MH Coke Transfer C	0.902010557	0.13659017
MH Coke Pile Load/Unload	0.418722146	0.063406496
MH Screening Station #1 (1-3, 7-9)	0.116878005	0.007897163
MH Screening Station #1 (1-3, 7-9) Loadout	0.110560275	0.03158865
MH Screening Station #2 (13-15, 19-20)	0.263701153	0.017817646
MH Screening Station #2 (13-15, 19-20) Loadout	0.249447037	0.071270582
MH Screening Station #3 (B) - Fugitive	0	0
MH Screening Station #3 (B) - Stack	0	0
MH Screening Station #3 (B) Loadout	0	0
MH Screening Station #4 (C) - Fugitive/Stack	0.314161876	0.312708877
MH Screening Station #4 (C) - Stack	0	0
MH Screening Station #4 (C) Loadout	0.049980298	0.014280085
MH Coke Pile Erosion	1.025	0.41
Total - Material Handling	8.843003472	1.892147099
Misc. Blasting - Black Beauty	0.24	0.024
Misc. DUSTREAT & CitriKleen	---	---
Misc. Roads - Paved	0.822629696	0.201918198
Misc. Roads - Unpaved	1.424166042	0.142416604
Misc. Heavy Duty Motor Vehicle Exhaust	---	---
Misc. Tug Boat Exhaust	---	---
Misc. Safety Kleen Solvent	---	---
Misc. Paints & Thinners	---	---
Misc. SCOT Stack	0.312192	0.305688
Misc. Cooling Tower	121.2165	101.01375
Misc. COG Venting	0	---
Misc. Flaring	5.9163E-05	---
Misc. Aeration Basins - WWTP	1.305227802	---
Misc. Methanol Usage - Lid Slurry	---	---
Misc. Methanol Usage - Tanks	---	---

Misc. Methanol Usage - Air Lines	---	---
Misc. WWT Surge Tank Ammonia Flare	---	---
Misc. Ammonia Tanker Loading Flare	0.0219268	0.0219268
Misc. LO Collecting Tanks	---	---
Misc. LO Barge Loading	---	---
Misc. LO Decanters	---	---
Total - Miscellaneous Operations	125.3427015	101.7096996
Battery Fugitives - Miscellaneous - All Batteries	7.139334142	---
BP Pitch Traps - All Batteries (ByProduct Recovery)	1.305479452	---
TDS Boxes - All Batteries (ByProduct Recovery)	0.026074012	---
Total Emissions	510.3661526	338.9736045
2015 ACHD Invoice Total Emissions	538.6115179	
2015 Submittal	538.6115179	

Source	PM10 (tons/yr)	PM2.5 (tons/yr)
Charging - Battery 1	0.01349284	0.010788754
Charging - Battery 2	0.025242855	0.02018396
Charging - Battery 3	0.015629207	0.012496973
Charging - Battery 7	0	0
Charging - Battery 8	0	0
Charging - Battery 9	0	0
Charging - Battery 13	0.007314567	0.005848662
Charging - Battery 14	0.008406293	0.006721596
Charging - Battery 15	0.1	0
Charging - Battery 19	0.014571942	0.011651594
Charging - Battery 20	0.014571942	0.011651594
Charging - Battery B	0.032493489	0.025981502
Charging - Battery C	0.027094912	0.021664848
Total - Charging	0.258818047	0.126989481
Door Leaks - Battery 1	0.754188877	0.60304264
Door Leaks - Battery 2	0.754188877	0.60304264
Door Leaks - Battery 3	0.754188877	0.60304264
Door Leaks - Battery 7	0	0
Door Leaks - Battery 8	0	0
Door Leaks - Battery 9	0	0
Door Leaks - Battery 13	0.677150152	0.541443169
Door Leaks - Battery 14	0.684729447	0.547503504
Door Leaks - Battery 15	0.633024793	0.506160928
Door Leaks - Battery 19	0.984688702	0.787348226
Door Leaks - Battery 20	0.981986249	0.785187369
Door Leaks - Battery B	0.890804194	0.712279018
Door Leaks - Battery C	0.513201308	0.410351148
Total - Door Leaks	7.628151475	6.099401282

Lid Leaks - Battery 1	0.000690126	0.000551818
Lid Leaks - Battery 2	0	0
Lid Leaks - Battery 3	0	0
Lid Leaks - Battery 7	0	0
Lid Leaks - Battery 8	0	0
Lid Leaks - Battery 9	0	0
Lid Leaks - Battery 13	0	0
Lid Leaks - Battery 14	0.000657776	0.000525952
Lid Leaks - Battery 15	0.1	0
Lid Leaks - Battery 19	0.00093814	0.000750128
Lid Leaks - Battery 20	0	0
Lid Leaks - Battery B	0.100315321	0.000252128
Lid Leaks - Battery C	0.001974866	0.0018
Total - Lid Leaks	0.204576229	0.003880026
Offtake Leaks - Battery 1	0.015527828	0.012415911
Offtake Leaks - Battery 2	0.011594111	0.009270547
Offtake Leaks - Battery 3	0.014147576	0.011312275
Offtake Leaks - Battery 7	0	0
Offtake Leaks - Battery 8	0	0
Offtake Leaks - Battery 9	0	0
Offtake Leaks - Battery 13	0.017102177	0.013674747
Offtake Leaks - Battery 14	0.016115513	0.012885819
Offtake Leaks - Battery 15	0	0
Offtake Leaks - Battery 19	0.026736978	0.021378647
Offtake Leaks - Battery 20	0.020170001	0.016127751
Offtake Leaks - Battery B	0.114345988	0.0158
Offtake Leaks - Battery C	0.006507718	0.006
Total - Offtake Leaks	0.24224789	0.118865697
Soaking - Battery 1	0.353105643	0.353105643
Soaking - Battery 2	0.353105643	0.353105643
Soaking - Battery 3	0.353105643	0.353105643
Soaking - Battery 7	0	0
Soaking - Battery 8	0	0
Soaking - Battery 9	0	0

Soaking - Battery 13	0.034828124	0.034828124
Soaking - Battery 14	0.034828124	0.034828124
Soaking - Battery 15	0.034828124	0.034828124
Soaking - Battery 19	1.09556951	1.09556951
Soaking - Battery 20	1.09556951	1.09556951
Soaking - Battery B	1.922594671	1.922594671
Soaking - Battery C	1.049897293	1.049897293
Total - Soaking	6.327432282	6.327432282
Decarbonizing - Battery 1	---	---
Decarbonizing - Battery 2	---	---
Decarbonizing - Battery 3	---	---
Decarbonizing - Battery 7	---	---
Decarbonizing - Battery 8	---	---
Decarbonizing - Battery 9	---	---
Decarbonizing - Battery 13	---	---
Decarbonizing - Battery 14	---	---
Decarbonizing - Battery 15	---	---
Decarbonizing - Battery 19	---	---
Decarbonizing - Battery 20	---	---
Decarbonizing - Battery B	---	---
Decarbonizing - Battery C	---	---
Total - Decarbonizing	---	---
Battery Underfiring Stack 1 - COG	4.08345114	3.822805323
Battery Underfiring Stack 2 - COG	4.590272383	4.297276274
Battery Underfiring Stack 3 - COG	3.263633483	3.126217337
Battery Underfiring Stack 7 - COG	0	0
Battery Underfiring Stack 8 - COG	0	0
Battery Underfiring Stack 9 - COG	0	0
Battery Underfiring Stack 13 - COG	3.785058193	0.956322377
Battery Underfiring Stack 14 - COG	1.433334139	1.116667294
Battery Underfiring Stack 15 - COG	0.922212094	0.779590922
Battery Underfiring Stack 19 - COG	15.69953073	14.4363501
Battery Underfiring Stack 20 - COG	6.083453464	5.760011933
Battery Underfiring Stack B - COG	6.284589617	5.883445599

Battery Underfiring Stack C - COG	17.33967	12.90394046
Total - Battery Underfiring - COG	63.48520525	53.08262762
Battery Underfiring Stack 1 - NG	0.101210524	0.101210524
Battery Underfiring Stack 2 - NG	0.099025221	0.099025221
Battery Underfiring Stack 3 - NG	0.096817747	0.096817747
Battery Underfiring Stack 7 - NG	0	0
Battery Underfiring Stack 8 - NG	0	0
Battery Underfiring Stack 9 - NG	0	0
Battery Underfiring Stack 13 - NG	0.093607042	0.093607042
Battery Underfiring Stack 14 - NG	0.099536523	0.099536523
Battery Underfiring Stack 15 - NG	0.038308843	0.038308843
Battery Underfiring Stack 19 - NG	0.147370455	0.147370455
Battery Underfiring Stack 20 - NG	0.171494167	0.171494167
Battery Underfiring Stack B - NG	0.227751771	0.227751771
Battery Underfiring Stack C - NG	0.262630219	0.262630219
Total - Battery Underfiring - NG	1.337752512	1.337752512
PEC Baghouse - Batteries 1-3	0.172264546	0.094842278
PEC Baghouse - Batteries 7-9	0	0
PEC Baghouse - Batteries 13-15	0.428896624	0.070965557
PEC Baghouse - Batteries 19-20	0.390547587	0.104908222
PEC Baghouse - Batteries B	0.6075	0.135046014
PEC Baghouse - Batteries C	0.298094753	0.298094753
Total - PEC Baghouse	1.89730351	0.703856824
PEC Traveling Hot Car - Batteries 1-3	4.7509119	1.74954216
PEC Traveling Hot Car - Batteries 7-9	0	0
PEC Traveling Hot Car - Batteries 13-15	3.258622521	1.200000674
PEC Traveling Hot Car - Batteries 19-20	5.780657138	2.12874993
PEC Traveling Hot Car - Batteries B	0	0
PEC Traveling Hot Car - Batteries C	3.340667638	1.230214114
Total - PEC Traveling Hot Car	17.1308592	6.308506879
PEC Pre-Push - Batteries 1-3	2.24249245	2.073001741
PEC Pre-Push - Batteries 7-9	0	0
PEC Pre-Push - Batteries 13-15	1.529473364	1.413873633
PEC Pre-Push - Batteries 19-20	2.791673417	2.580674845

PEC Pre-Push - Batteries B	0.016876109	0.009239136
PEC Pre-Push - Batteries C	0.368630605	0.201813591
Total - PEC Pre-Push	6.949145944	6.278602945
PEC Fugitives - Batteries 1-3	20.91725414	10.45862707
PEC Fugitives - Batteries 7-9	0	0
PEC Fugitives - Batteries 13-15	21.96936624	10.98468312
PEC Fugitives - Batteries 19-20	34.81264037	17.40632019
PEC Fugitives - Batteries B	5.265174809	2.632587405
PEC Fugitives - Batteries C	23.40376606	9.026394764
Total - PEC Fugitives	106.3682016	50.50861255
PEC Uncontrolled Pushing - Batteries 1-3	0.708850628	0.354425314
PEC Uncontrolled Pushing - Batteries 7-9	0	0
PEC Uncontrolled Pushing - Batteries 13-15	0.242815552	0.121407776
PEC Uncontrolled Pushing - Batteries 19-20	0.651800542	0.325900271
PEC Uncontrolled Pushing - Batteries B	0	0
PEC Uncontrolled Pushing - Batteries C	0	0
Total - PEC Uncontrolled Pushing	1.603466723	0.801733361
PEC Ball Mill - Batteries 1-3	0.00314438	0.00314438
PEC Ball Mill - Batteries 7-9	0	0
PEC Ball Mill - Batteries 13-15	0.005075458	0.005075458
PEC Ball Mill - Batteries 19-20	0.005075458	0.005075458
PEC Ball Mill - Batteries B	0.001671324	0.001671324
PEC Ball Mill - Batteries C	0.002957165	0.002957165
Total - PEC Ball Mill	0.017923783	0.017923783
Quench Tower #1	9.387177696	7.82264808
Quench Tower #3	0	0
Quench Tower #5	0.575442649	0.479535541
Quench Tower #7	0.836156212	0.696796844
Quench Tower B	26.77297071	22.31080892
Quench Tower C	6.449165325	4.29944355
Quench Tower #5a	2.661993509	2.218327924
Quench Tower #7a	3.478607931	2.898839943
Total - Quenching	50.16151403	40.72640081
Boiler #1 - COG	4.079068102	4.079068102

Boiler #1 - NG	0.794723494	0.794723494
Boiler #2 - COG	2.654317246	2.654317246
Boiler #2 - NG	0.598551744	0.598551744
Boiler #13 - COG	---	---
Boiler #13 - NG	---	---
Boiler #14 - COG	---	---
Boiler #14 - NG	---	---
Boiler R-1 - COG	0	0
Boiler R-1 - NG	0	0
Boiler R-2 - COG	0.559528517	0.559528517
Boiler R-2 - NG	0	0
Boiler T-1 - COG	0.2969563	0.2969563
Boiler T-1 - NG	0	0
Boiler T-2 - COG	0.2969563	0.2969563
Boiler T-2 - NG	0	0
Total - Boilers COG	7.886826466	7.886826466
Total - Boilers NG	1.393275239	1.393275239
BPR Tar/FL Decanters	0.403648165	0.403648165
BPR FL Circ./Surge Tanks	0.403648165	0.403648165
BPR FL Pumphouse Sumps	0.403648165	0.403648165
BPR Tar Storage/Sep Tanks	0.009086422	---
BPR Tar Collecting Tanks	0.009086422	---
BPR Final Cooler Sump	0.014140931	---
BPR Equipment Leaks	0.1	---
Total - Byproducts Recovery	1.210944496	1.210944496
MH #1 Unloader	0.450332719	0.06819324
MH #2 Unloader	0.2641334	0.039997343
MH Pedestal Crane	0.042077866	0.006371791
MH Clamshell Unloader	0	0
MH Coal Transfer	0.714466119	0.108190584
MH Boom Conveyor	0.024553325	0.003718075
MH #1 Pulverizer - Primary	0.014822043	0.003705511
MH #1 Pulverizer - Secondary	0	0
MH #2 Pulverizer - Primary	0.001231127	0.000307782

MH #2 Pulverizer - Secondary	0	0
MH Coal Storage Bins/Bunkers	0.006795617	0.006795617
MH Coal Storage Pile Erosion	---	---
MH Coke Transfer 1-3, 7-9, B	1.248375676	0.189039745
MH Coke Transfer 13-15, 19-20	1.161930152	0.175949423
MH Coke Transfer C	0.69635227	0.105447629
MH Coke Pile Load/Unload	0.25628082	0.038808238
MH Screening Station #1 (1-3, 7-9)	0.09300727	0.006284275
MH Screening Station #1 (1-3, 7-9) Loadout	0.08797985	0.0251371
MH Screening Station #2 (13-15, 19-20)	0.176959443	0.011956719
MH Screening Station #2 (13-15, 19-20) Loadout	0.167394068	0.047826877
MH Screening Station #3 (B) - Fugitive	0	0
MH Screening Station #3 (B) - Stack	0	0
MH Screening Station #3 (B) Loadout	0	0
MH Screening Station #4 (C) - Fugitive/Stack	0.241608257	0.240490819
MH Screening Station #4 (C) - Stack	0	0
MH Screening Station #4 (C) Loadout	0.038437677	0.010982194
MH Coke Pile Erosion	1.025	0.41
Total - Material Handling	6.711737698	1.499202962
Misc. Blasting - Black Beauty	0.24	0.024
Misc. DUSTREAT & CitriKleen	---	---
Misc. Roads - Paved	0.822629696	0.201918198
Misc. Roads - Unpaved	1.424166042	0.142416604
Misc. Heavy Duty Motor Vehicle Exhaust	---	---
Misc. Tug Boat Exhaust	---	---
Misc. Safety Kleen Solvent	---	---
Misc. Paints & Thinners	---	---
Misc. SCOT Stack	0.421632	0.412848
Misc. Cooling Tower	121.2165	101.01375
Misc. COG Venting	0	---
Misc. Flaring	5.95237E-05	---
Misc. Aeration Basins - WWTP	1.309707839	---
Misc. Methanol Usage - Lid Slurry	---	---
Misc. Methanol Usage - Tanks	---	---

Misc. Methanol Usage - Air Lines	---	---
Misc. WWT Surge Tank Ammonia Flare	---	---
Misc. Ammonia Tanker Loading Flare	0.0528549	0.0528549
Misc. LO Collecting Tanks	---	---
Misc. LO Barge Loading	---	---
Misc. LO Decanters	---	---
Total - Miscellaneous Operations	125.48755	101.8477877
Battery Fugitives - Miscellaneous - All Batteries	6.27581533	---
BP Pitch Traps - All Batteries (ByProduct Recovery)	0.949648141	---
TDS Boxes - All Batteries (ByProduct Recovery)	0.018967083	---
Total Emissions	413.547363	286.2806229
2015 ACHD Invoice Total Emissions	538.6115179	
2015 Submittal	538.6115179	