



United States Steel Corporation
Mon Valley Works – Clairton Plant
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Clairton Plant

January 18, 2019

Ms. Jayme Graham
Air Quality Program Manager
Allegheny County Health Department
301 39th Street, Bldg. No. 7
Pittsburgh, PA 15201-1891

Via email

Dear Ms. Graham:

RE: United States Steel Corporation – Mon Valley Works – Clairton Plant
Weekly Update Regarding Breakdown Reports #21256, 2157, and 2158
No. 2 Control Room, No. 5 Control Room, and Battery Stacks

Pursuant to the Allegheny County Health Department's (ACHD) request, the following is the weekly update regarding the above-referenced breakdowns. This update supplements the Mitigation Plan that was submitted on January 7, 2019; and updates submitted on January 9 and 11, 2019.

As we discussed, U. S. Steel is employing significant resources around the clock to investigate the incident. While the investigation is being completed, we have expended and continue to expend substantial personnel and financial resources to employ mitigation efforts to reduce the potential impacts from the incident. We remain committed to employing actions only when such actions can be done in a manner that is safe for our employees, contractors, and the public and when potential impacts to the environment can be minimized. We are glad to have you visit the site today and we would be pleased to have the ACHD re-visit the facility at any time.

Significant work items completed the week of January 13-19

1. Additional natural gas added to the 2nd unit underfire system.
2. 3 more axial motors removed and sent for inspection and repair
3. No. 2 Control Room Building crane electrical components ordered
4. Begun installing new roof decking
5. 10 of 12 gas blanks installed

Significant work items planned for the week of January 20-26

1. Install remaining gas blanks
2. Begin removal of gas valves and piping
3. Continue evaluation of existing axial compressors
4. Continue repairs on axial compressors
5. Continue rebuild of lube oil systems
6. Continue installing new roof decking

To date, among other efforts, we have utilized natural gas (displacing coke oven gas) to the extent practicable.

Previous Mitigation Methods Implemented and Reported for SO2 Control:

1. Reconfiguration of the natural gas supply system to add additional natural gas supply to No. 1 and No. 2 Boilers at the Clairton facility and No. 1 Boiler and the Hot Strip Mill at the Irvin facility. These facilities are now operating on approximately 80% to 90% natural gas (see table 2 below for updated fuel supply) Complete 1/7.
2. Extended coking times on B, C, 13-15, 19, and 20 Batteries (see table 1 below). Complete 1/8
3. Began to supply additional natural gas to the underfire system. We displaced approximately 20 MMCF of coke oven gas with natural gas to the underfire system. The underfire gas system supplies all 10 batteries at the Clairton facility. This effort was completed this week.

Consideration of Possible Additional Mitigation Steps:

As we discussed, we understand ACHD's expectation that U. S. Steel consider additional mitigation steps in the event data indicate that such measures are warranted.

We are investigating other mitigation steps to be taken including:

1. Continue to evaluate processes and operations to identify ways to minimize environmental impact and ensure battery integrity and stack compliance.

Operating Data Summary

Table 1. Summary of coking times, normal vs. current operations.

Battery	Normal Coking Time (hrs)	Previously Reported Coking Times	Current Coking Times
1	22	22	23 (Increased on 1/14)
2	22	22	23(Increased on 1/14)
3	22	22	23(Increased on 1/14)
13	18	21.5	22
14	18	21.5	22
15	18	21.5	22
19	18	22.5	22.5
20	18	22.5	23.5 (Increased on 1/15)
B	18	20	20
C	18	20	21 (Increased from 20 on 1/17)

Please note that on January 14, 2019, we increased the coking time on Batteries 1, 2, and 3 from 22 hours to 23 hours. On January 17, we increased C Battery coking time from 20 to 21 hours,

and on January 15, we increased 20 Battery coking time from 22.5 to 23.5 hours as an additional mitigation measure. We continue to monitor the battery and environmental performance.

Table 2. Summary of fuel percentages, normal vs. current operations.

Emission Units	Normal Operating Fuel Usage				Current Operating Fuel Usage			
	Natural Gas	Coke Oven Gas	Blast Furnace Gas	Flow (MMCFD)	Natural Gas	Coke Oven Gas	Blast Furnace Gas	Flow (MMCFD)
Clairton Underfire Gas		100%	--	90	60%	40%	--	90
Clairton No. 1 Boiler	13%	87%	--	25	90-95%	5-10%	--	25
Clairton No. 2 Boiler		100%	--	11	80-90%	10-20%	--	11
ET Boilers		4%	96%	270	2-3%	2-3%	90-95%	270
ET Blast Furnaces	50%	50%		25	100%	--		25
ET No. 1 Stove		1-2%	98-100%	38	1%	1%	98-100%	38
ET No. 3 Stove		1-2%	98-100%	35	1%	1%	98-100%	35
Irvin No. 1 Boiler	5-10%	90-95%	--	1.3	90-95%	5-10%	--	1.3
Irvin Hot Strip Mill	25%	75%	--	21	80-90%	10-20%	--	21
Irvin No. 2 Boiler	5-10%	90-95%	--	1.4	90-95%	5-10%	--	1.4
Irvin No. 3 Boiler	5-10%	90-95%	--	0.5	90-95%	5-10%	--	0.5
Irvin No. 4 Boiler	5-10%	90-95%	--	0.5	90-95%	5-10%	--	0.5
Irvin HPH Annealing	5-10%	90-95%	--	1	90-95%	5-10%	--	1
Irvin OCA Annealing	5-10%	90-95%	--	1	90-95%	5-10%	--	1
Irvin Continuous Annealing	5-10%	90-95%	--	0.5	90-95%	5-10%	--	0.5
Irvin No. 1 Galvanize	100%		--	0.25	100%		--	0.25
Irvin No. 2 Galvanize	100%		--	0.14	100%		--	0.14

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As noted above, since our January 9, 2019 update, we increased the use of natural gas to offset coke oven gas at the Irvin Hot Strip Mill. In addition, on January 10, 2019, we increased the use of natural gas on Clairton Boiler No. 1. Clairton underfire natural gas percentage increased from 40% to 60%. We continue to monitor these efforts.

While we are expediting our efforts to bring the facility back to normal operation, we remain committed to employing actions only when such actions can be done in a manner that is safe for our employees, contractors, and the public; and when potential impacts to the environmental can be minimized.

Also, as has been discussed previously, we remain committed in openly communicating with the ACHD regarding this matter. We appreciate your site visit and we welcome your return to the facility. If you have any questions regarding this update, please contact Mike Dzurinko or me.

Sincerely,



Michael S. Rhoads

cc: Jim Kelly (ACHD)
Jason Willis, Esq. (ACHD)
Mike Dzurinko (USS)
Chip Babst, Esq. (Babst Calland)
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