

DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY DIVISION

FCE Summary Report

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| Facility : U S STEEL GREAT LAKES WORKS | SRN : A7809 |
| Location : 1 QUALITY DR | District : Detroit |
| | County : WAYNE |
| City : ECORSE State: MI Zip Code : 48229 | Compliance Status : Non Compliance |
| Source Class : MEGASITE | Staff : Katherine Koster |
| FCE Begin Date : 8/17/2017 | FCE Completion Date : 8/11/2020 |
| Comments : At the time of the completion of this FCE report, US Steel had not entered into a final consent decree to resolve violations at the pickle line. As such, non compliance was chosen. | |

List of Partial Compliance Evaluations :

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|--------------------|-------------------|--|
| 08/11/2020 | On-site Inspection | Compliance | FY20 Targeted Inspection - CGL |
| 07/13/2020 | ROP SEMI 2 CERT | Compliance | No deviations were reported for Delray Connecting Railroad Company, Section 2 of the USS ROP, for the semi annual period July - December 2019. |
| 07/13/2020 | ROP Annual Cert | Compliance | No deviations were reported for Delray Connecting Railroad Company, Section 2 of the USS ROP, for the CY2019. |
| 07/07/2020 | ROP Annual Cert | Compliance | 2019 annual deviation report received for TMS International (A7809- Section 3). No deviations reported. |
| 07/07/2020 | ROP SEMI 2 CERT | Compliance | Semi annual deviation report received for TMS International (A7809- Section 3) for July through December 2018. No deviations reported. Baghouse compartment pressure drops and VE readings were attached. Note, facility requested a change to the pressure drop minimum (from 5 to 4) during the ROP renewal process which was accepted by AQD and put into the draft ROP. The range is allowed to be changed per the permit condition. |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|---------------|-------------------|---|
| 07/07/2020 | CO/CJ | Compliance | <p>Quarterly pickle line maintenance records are required to be submitted per Paragraph 9.B.2 of CO AQD No. 22-2016. The 1st quarter 2020 records were received on May 12, 2020. Reported flow rates and pressure drop appear to be in compliance with the minimum flow rates and pressure drop range set during December 2019 compliant stack testing. Minimum recirculation rate is 574 gpm and minimum makeup water rate is 48 GPM. Also, pressure drop was between 1.0 and 10.0 in. H₂O.</p> <p>Also, inspection records are included. Records indicate spray nozzles were replaced on 3/19.</p> |
| 07/06/2020 | CO/CJ | Compliance | <p>Quarterly fugitive dust report submitted for the 3rd quarter 2019 from US Steel (Section 1). Company certified that all fugitive dust requirements were met during the quarter.</p> |
| 06/30/2020 | Other | Non Compliance | <p>USS GLW July - December 2018 Semi Annual ROP Deviation Report for Section 1 & 5 and MACT 5F deviation report for Section 1</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|-----------------|-------------------|---|
| 06/29/2020 | MACT (Part 63) | Non Compliance | <p>Deviations related to the Integrated Iron and Steel MACT (Subpart FFFFF) for the semi annual period of January - June 2019 were included in the ROP semi annual report for the same time period. Report was postmarked September 13, 2019. Deviations were reviewed in Compliance Activity report CA_A780954060. 6 deviations were listed in the ROP deviation report (16 individual instances in the MACT report) However, facility has entered into CD 2:12-cv-304 in March 2017 to address, in part, opacity exceedances at the BOP Shop and implemented improvements to the capture and control system based on the results of a 3rd party study. Improvements should be nearing completion.</p> <p>However, the MACT report also contained additional required information as outlined in 63.7841 and 63.10(d)(5) such as: there were no periods where the CPMS or the COMS were out of control, and report states that there were deviations from emission limits or operation and maintenance requirements. Report seems to be missing operating hours for the unit that had deviations as required by 63.7841(b)(7).</p> |
| 06/29/2020 | ROP Semi 1 Cert | Non Compliance | See Activity Report CA_A780954060 |
| 06/29/2020 | ROP Semi 1 Cert | Compliance | No deviations reports for Semi Annual period of January- June 2019 for Section 5 of the USS ROP. |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|----------------|-------------------|---|
| 06/29/2020 | MACT (Part 63) | Compliance | <p>Deviations related to the Integrated Iron and Steel MACT (Subpart FFFFF) for the semi annual period of July - December 2019 were included in the ROP semi annual report for the same time period. Report was postmarked March 13, 2020. Deviations were reviewed in Compliance Activity report CA_A780954042 and were listed as 2 deviations in the ROP report; however counting each individual instance as a deviation results in 7 deviations. However, the MACT report also contained additional required information as outlined in 63.7841 and 63.10(d)(5) such as: there were no periods where the CPMS or the COMS were out of control, and report states that there were deviations from emission limits or operation and maintenance requirements. Report seems to be missing operating hours for the unit that had deviations as required by 63.7841(b)(7).</p> |
| 06/29/2020 | Other | Compliance | <p>Review of July - December 2019 semi annual deviation report for USS Great Lakes Works. Report includes MACT 5F deviations.</p> |
| 06/29/2020 | CO/CJ | Compliance | <p>City of Detroit Vegetative Particulate Buffer Project Completion Report per CD 2:12-cv-304 was received from US Steel on April 23, 2019. Letter is dated April 18, 2019. Vegetative buffers were installed and completed at Kemeny Playfield, Beard Park, and Riverside Park. Supplemental information including pricing, location, and photos were attached to the report.</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|-----------------|-------------------|---|
| 06/29/2020 | CO/CJ | Compliance | <p>January through June 2019 semi annual report per CD 2:12-cv-304 was received from US Steel on September 18, 2019. Large bell on B2 was inspected quarterly as required and inspection is included in the report. No issues were noted. There is also a compliance update section; of note, final portion of BOP improvements were completed and a table of activities and dates was provided; as such, enhanced VEO observations started on August 6, 2019. CD terms were modified to include rec centers for lighting improvements. USS removed and replaced three PCB transformers at the Main Plant. Roof monitor VEOs were also included. Four VE exceedances were observed during the semi annual period.</p> <p>Compliance was chosen as it relates to the fulfillment of consent order requirements to date. Deviations are related to the opacity exceedances but they are not deviations/violations of the CD provisions.</p> |
| 06/29/2020 | Other | Non Compliance | USS GLW January - June 2019 Semi Annual ROP Deviation Report for Section 1 & 5 and MACT 5F deviation report for Section 1 |
| 06/22/2020 | ROP SEMI 2 CERT | Compliance | See Compliance Activity Report CA_A780954042 |
| 06/22/2020 | ROP SEMI 2 CERT | Compliance | No deviations reported for USS GLW ROP, Section 5, for the semi annual period of July - December 2019. |
| 06/22/2020 | ROP Annual Cert | Compliance | No deviations reported for USS GLW ROP, Section 5, for the annual period of 2019. |
| 06/22/2020 | ROP Annual Cert | Compliance | 2019 Annual ROP certification for USS GLW was postmarked March 13, 2020. Non compliance issues in the 1st half of 2019 appear to have been addressed in the 2nd half of 2019. As such, compliance was chosen at this time. |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|---------------|-------------------|--|
| 06/08/2020 | CO/CJ | Compliance | <p>Semi Annual report for the period of July 1 - Dec 31, 2019 was submitted by USS as required per CD 2:12-cv-304. The report contains three sections; Section 1- Blast Furnace Bell inspection, Section 2 - Compliance Updates, Section 3 - No. 2 BOP VE observations. Report states that no issues were found during the B2 bell inspections (two were conducted and reports were included); B2 has been idled since June 2019. For the 120 day time period of September 25, 2019 through January 22, 2020, US Steel had zero 30 days rolling periods with more than 4 exceedances. Therefore, US Steel reduced its monitoring requirements from 4 days per week to 3 days per week starting the week of January 27, 2020. However, report also states that US Steel will be indefinitely idling on or around April 1, 2020. For the SEP related to lighting ballast and bulbs, the company made "good progress" during the second half of 2019; approximately half of the lighting project has been completed. All VEO sheets for the BOP Shop were submitted and an explanation with corrective actions was included for the reported exceedances (5 exceedances over 4 days).</p> <p>"Compliance" was chosen as it relates to the facility adhering to the CD requirements.</p> |
| 06/08/2020 | CO/CJ | Compliance | <p>As required per CD 2:12-cv-304, USS submitted final documentation in the form of a final disposal certificate from the disposal facility regarding the replacement of lighting ballasts and light bulbs which is part of the SEP project for this CD. Report was received on May 5, 2020. "Compliance" was chosen as it relates to the facility adhering to the CD requirements.</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|---------------|-------------------|--|
| 06/08/2020 | CO/CJ | Compliance | As required per CD 2:12-cv-304, USS submitted a replacement of lighting ballasts and light bulbs in public schools and public recreation centers in Detroit/Ecorse/River Rouge Michigan Project Completion report. Report was received on May 12, 2020. "Compliance" was chosen as it relates to the facility adhering to the CD requirements. |
| 05/18/2020 | CO/CJ | Compliance | Quarterly fugitive dust report submitted for the 1st quarter 2020 from US Steel (Section 1). Company certified that all fugitive dust requirements were met during the quarter. |
| 04/30/2020 | ROP Other | Compliance | ROP/MAERS certification form. Form postmarked 3/14/20. |
| 04/30/2020 | ROP Other | Compliance | ROP/MAERS certification form. Form postmarked 3/14/20. |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|---------------|-------------------|--|
| 04/21/2020 | Stack Test | Compliance | <p>Test report for the PCI transport and injection fabric filters at USS GLW was received on 1/28/20. Test was performed on 11/26/19 and is required once every five years. Montrose performed the test. Mark Dziadosz, TPU, and Katie Koster, Detroit Office, witnessed the test. DTE River Rouge pulverizes coal and transports it through a pipeline to a silo on Zug Island. Air and coal are separated using a baghouse/fabric filter and then the coal is conveyed by rotary valve into a silo (transport side). When coal is needed in the blast furnaces, it is conveyed via the injection side. Results were as follows (based on a three run average):</p> <p>PCI transport 0.051 lb/hr (0.26 lb/hr permit limit); 6.7 mg/dscm (21.9 mg/dscm)</p> <p>PCI injection 0.002 lb/hr (0.14 lb/hr permit limit); 0.7 mg/dscm (21.9 mg/dscm)</p> <p>Production data was included: Transport tons were 29.9, 34.6, and 47.7 and differential pressure was 0.001, 0.004, and 0.01. Injected tons were 17.5, 17.6, and 19 and differential pressure was 0.007, 0.008, and 0.006.</p> <p>On 2/26/20, I received a test review memo from Matt Karl, TPU staff. TPU arrived at the same emission results as the stack testers.</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|----------------|-------------------|--|
| 04/20/2020 | MACT (Part 63) | Compliance | <p>U S Steel - GLW, Section 1, submitted a semi-annual SSM report for the HCI steel pickling lines per 40 CFR Part 63 Subpart CCC for the reporting period July 1, - December 31, 2019. Report was received on January 28, 2020. Facility reported 2 start up/shut down events due to planned maintenance. Company certified that they followed procedures in their SSM plans for each event. Flow meters and pressure differential meter were most recently calibrated in December 2019; this calibration is required annually.</p> <p>Note, the report referenced 63.1164(c) which only requires a report if there are scrubber malfunctions. This is the language from the MACT regarding the semi annual reporting requirement: 63.1164(c) Reporting malfunctions. The number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded shall be stated in a semiannual report. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with § 63.1159(c), including actions taken to correct a malfunction. The report, to be certified by the owner or operator or other responsible official, shall be submitted semiannually and delivered or postmarked by the 30th day following the end of each calendar half.</p> <p>However, the ROP 199600132d has a requirement with a UAR of 63.1164(c)(2) which also addresses start up and shutdowns due to an older version of the MACT which has since been removed. But, since it is still a condition in the ROP, the information is still required.</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|---------------|-------------------|---|
| 04/20/2020 | Stack Test | Compliance | <p>Stack test report for the No. 2 Baghouse at the No. 2 BOPSHOP at USS GLW was received on 1/16/20. Testing for particulate matter (PM) was conducted on 11/14/19 and 11/15/19. ROP certification form signed by the Responsible Official accompanied the results. Results were as follows (based on a 3 run average): 0.014 gr/dscf (permit limit is 0.029 gr/dscf); 2.697 lb/hr (permit limit is 4.65 lb/hr. Testing is required once every 5 years. The No 2 baghouse controls desulfurization and hot metal transfer. Operational data was recorded during the testing and submitted with the results. Pressure drop for all three runs was fairly consistent across all compartments and all runs. Fan #2 was in operation at around 81 amps. VE readings of the BOPSHOP roof were taken by USS contractors for at least one hour per run for all three runs. No VE exceedances were observed. Test protocol was received on October 18, 2019. 7 day test notification was received on November 13, 2019.</p> |
| 04/20/2020 | CO/CJ | Compliance | <p>Quarterly inspection records for the No. 5 Pickle Line for the 4th Quarter 2019 were received on February 3, 2020 in accordance with Paragraph 9.B.2 of CO AQD No. 22-2016. Reported flow rates and pressure drop appear to be in compliance with the minimum flow rates and pressure drop range set during December 2019 compliant stack testing. Minimum recirculation rate is 574 gpm and minimum makeup water rate is 48 GPM. Also, pressure drop was between 1.0 and 10.0 in. H₂O. Also, inspection records are included. New nozzles installed on 12/24/19 (work order 6282959). Other work in this set of records includes flow calibration and belts replaced and routine visual inspections.</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|---------------|-------------------|--|
| 04/08/2020 | MAERS | Compliance | <p>MAERS report was submitted electronically on time. A hard copy "back up" submittal was postmarked March 16, 2020. AQD District Office has to submit the electronic version on behalf of USS because several users input values into the database. USS submits a hard copy to ensure that the electronic data is correct and has not been altered by other users that access their database (namely Delray Connecting and IMS). Several EU's has significant emissions changes that did not correlate with throughput changes from the prior year. However, this was due to stack testing and the resulting "new" emission factors. The following EU's had stack tests in 2018 and 2019: PCI transport, #1CGL, D BF, No 1 BH at the BOP, VDG Baghouse, and No 5 Pickle Line. Also, I changed the emissions for IMS Scarfing as the company input the tons value for each pollutant instead of the pounds. I passed the audit on April 8, 2020. Due to the work performed at the BOP required by the USEPA/EGLE consent decree, capture and control efficiency values for the ESP and No 1 and No 2 baghouses are more justified.</p> <p>I still have concerns about the following: 100% capture for the ESP and 99% for the No 1 baghouse, operating hours for the BOPSHOP, calculation methodology for bleeder opening emissions planned and unplanned, fugitive dust from roads and slag pits seems underreported, building containment factor, and SO2 EF's for stove combustion. Compliance was chosen only as it relates to the submittal of the report. AQD staff disagrees with the accuracy and completeness of the emissions estimates.</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|---------------|-------------------|--|
| 03/30/2020 | ROP Other | Compliance | Request for revised fugitive dust plan during USS temporary idle was received on March 12, 2020. USS plans to idle the facility on March 31, 2020 and will cease all activities on Zug Island and most activities at the Main Plant presumably over the course of several months. Once fully idle, there is no timeline for a restart. As such, company requested a reduction and ultimate suspension in fugitive dust requirements during this time period. AQD approved the request which the exception that if dust issues are noted, company will be required to address the situation. See attached emails. |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|---------------|-------------------|---|
| 02/06/2020 | Stack Test | Compliance | <p>Stack test results for the No. 5 Pickle Line were received on February 6, 2020. Testing was conducted on December 9, 2019. Based on the reported results, the HCl emissions were 0.54 lb/hr (prior test was 0.21 lb/hr) and 9.1 ppmv, dry (4 ppmv, dry prior test) (based on a 3 run average). Collection efficiency was not required and was not reported. The emission limits for HCl are 1.64 lb/hr and 18 ppmv, dry or at least 97% collection efficiency. 7 day test notification was received on December 9, 2019.</p> <p>In the October 30, 2018 cover letter, facility listed the following minimum scrubber flow rates based on data recorded during the test: makeup water: 49.5 gpm, recirculation rate: 570.9 gpm, and pressure drop between 1 and 9 in w.c. These values will continue. Pressure drop during December test was around 3 in w.c. Production ranged from 356-449 tons per run (336-439 tons per run was the prior test).</p> <p>Note, pressure drop range in the ROP is listed as 3-10; however the permit condition states that operating outside of the range is not a deviation. The steel pickling MACT only requires monitoring of the pressure drop to identify changes that may indicate a need for maintenance. As the facility passed the test with the pressure drop below 3 in. w.c., USS has requested to modify the range. This is acceptable to AQD and will be addressed in the ROP renewal.</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|---------------|-------------------|---|
| 01/27/2020 | ROP Other | Compliance | <p>R801 report for USS GLW was received on 11/21/2019. Report is due within 60 days of the end of the ozone control season (September 30). Report was accompanied by an ROP certification form signed by the responsible official. Report shows 124.96 tons of NOx emissions during ozone season for 2019 from the 80" Hot Strip Mill. To calculate NOx emissions when burning natural gas, facility used a NOx emission factor of 0.172 lb/MMBtu which is based on October 2016 stack test results. AQD was not present for that testing but test report was submitted to TPU. Report indicates no coke oven gas is being burned at the Hot Strip Mill. USS is not subject to an emission limit from the reheat furnaces. As such, report is only required to include total emissions and hours of operation which it does. No further action necessary.</p> |
| 01/22/2020 | CO/CJ | Compliance | <p>Quarterly fugitive dust report submitted for the 4th Quarter 2019 from US Steel (Section 1). Company certified that all fugitive dust requirements were met during the quarter. Report notes that for October 3, Zug Island roads were only swept once due to precipitation.</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|--------------------|-------------------|---|
| 01/22/2020 | CO/CJ | Compliance | U.S. Steel Great Lakes Works submitted a notice of indefinite period of idling of ironmaking, steelmaking, and hot strip mill rolling facilities pursuant to paragraph XIII.89 of Consent Decree 2:12-cv-304, DJ# 90-5-2-1-06476/1. Iron and steel making activities are set to idle on or around April 1 2020 and the hot strip mill will idle before the end of 2020. The period of idling is indefinite. Letter states the assets will be preserved and maintained appropriately to allow for an efficient restart. Section V compliance requirements in the referenced decree will be postponed accordingly as allowed by paragraph XIII.89. Notification is required at least 20 days before the idle or the same day the Worker Adjustment and Retraining Notification (WARN) is provided; whichever comes first. According to the attached letter, it is being provided the same day as the WARN notice. |
| 01/22/2020 | Stack Test | Compliance | Stack test results for the No. 2 Argon/LMF were received on January 22, 2020. Testing was conducted on November 18 and 19, 2019. Test protocol was received on October 22, 2019. Results were 0.0005 gr/dscf PM (limit is 0.005 gr/dscf) and 0.057 lb/heat (limit is 0.180 lb/heat). Pressure drop was between 2.3 and 3.4 in w.c. and fan amps were between 45.8 and 50.2 for the #1 Fan. The #2 Fan was not in operation. |
| 12/09/2019 | On-site Inspection | Non Compliance | FY20 Targeted Inspection - No. 5 Pickle Line |
| 10/21/2019 | ROP Semi 1 Cert | Compliance | TMS International, Section 3 of the USS ROP, submitted the Semi-Annual 1 ROP Certification for January - June 2019 for their slab scarfing operations. No deviations were reported. |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|----------------|-------------------|--|
| 10/03/2019 | MACT (Part 63) | Compliance | <p>U S Steel - GLW, Section 1. Semi-annual SSM report for the HCl steel pickling lines per 40 CFR Part 63 Subpart CCC for the reporting period Jan - June 2019 was received on July 23, 2019. Facility reported 3 start up/shut down events due to planned maintenance. Company certified that they followed procedures in their SSM plans for each event. Flow meters and pressure differential meter were most recently calibrated in September 2018; this calibration is required annually.</p> <p>Compliance was chosen as it relates to the requirement to submit an SSM report semi annually.</p> <p>Note, the report referenced 63.1164(c) which only requires a report if there are scrubber malfunctions. However, the ROP 199600132d has a requirement with a UAR of 63.1164(c)(2) which also addresses start up and shutdowns which is not longer a part of the CCC MACT.</p> |
| 10/03/2019 | CO/CJ | Compliance | <p>US Steel - GLW, Section 1. Quarterly inspection records for the No. 5 Pickle Line for the 2nd Quarter 2019 were received on July 23, 2019, in accordance with Paragraph 9.B.2 of CO AQD No. 22-2016. Reported flow rates and pressure drop appear to be in substantial compliance with the minimum flow rates and pressure drop range set during stack testing.</p> |
| 10/03/2019 | CO/CJ | Compliance | <p>US Steel - GLW, Section 1. US Steel is submitting a notice of completion that all improvements to No. 2 BOP required by Consent Decree 2:12-cv-304, DJ# 90-5-2-1-06476/1 have been completed on time or ahead of schedule. Facility also states that Enhanced Visible Emissions Observations of the No. 2 BOP Roof Monitor will begin no later than September 18, 2019.</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|-----------------------|-------------------|---|
| 10/03/2019 | ROP Semi 1 Cert | Compliance | Delray Connecting RR, Section 2. Semi-Annual 1 ROP Certification for time period January 1-June 30, 2019 was received on August 29, 2019. Facility reported no deviations and that all VE readings are performed as required. |
| 08/05/2019 | ROP R215 Notification | Compliance | Notification is regarding installation of new portable screener and a new fixed screener located at the Delray Connecting Railroad Company, Section 2 of USS ROP. Installed under PTI 29-19. |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|---------------|-------------------|--|
| 07/22/2019 | Stack Test | Compliance | <p>Results of testing to determine particulate emission rates from the No. 2 BOP ESP to demonstrate compliance with the Iron and Steel MACT was received on July 12, 2019. Testing was performed on May 14, 2019 by Montrose Air Quality Services and observed by Mark Dziadosz, AQD-TPU. The test plan was received on March 19, 2019, and approval letter sent on April 23, 2019. 7-day notification was provided via email by the company on May 6, 2019.</p> <p>Results show a PM emission rate of 0.003 gr/dscf and 11.3 lb/hr, below the allowable emission rate of 0.02 gr/dscf in the MACT and Table E-01.18 of ROP No. 199600132d. Visible emission readings were performed during all three test runs by Paul Krystyniak of Veolia; no 6-minute average opacity exceeding 20% were observed.</p> <p>- Run 1: 9:20 AM - 11:07 AM, 3 steel production cycles. Steel production rate was 243-251 tons. Average blow rate 19,510-20,092 scf. 24 active chambers in ESP.</p> <p>- Run 2: 12:28 PM - 2:31 PM, 2 steel production cycles. Steel production rate was 243-246 tons. Average blow rate was 18,543-18,584 scfm. 24 active chambers in ESP.</p> <p>- Run 3: 3:20 PM - 5:00 PM, 2 steel production cycles. Steel production rate was 243-247 tons. Average blow rate was 18,236-18,243 scfm. 24 active chambers in ESP.</p> |
| 07/22/2019 | CO/CJ | Compliance | <p>Quarterly inspection records for the No. 5 Pickle Line for the 1st Quarter 2019 were received on May 1, 2019, in accordance with Paragraph 9.B.2 of CO AQD No. 22-2016. Reported flow rates and pressure drop appear to be in substantial compliance with the minimum flow rates and pressure drop range set during stack testing.</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|--------------------|-------------------|---|
| 06/07/2019 | Other | Compliance | Calendar Year (CY) 2018 MAERS Review. Compliance designation is based on timely submittal of MAERS. |
| 04/22/2019 | CO/CJ | Compliance | Quarterly fugitive dust report submitted for the 1st quarter 2019 from US Steel (Section 1). Company certified that all fugitive dust requirements were met during the quarter. |
| 04/19/2019 | Stack Test | Compliance | A test was performed on the ESP on 2/19/19-2/20/19 for particulate matter. This test is required every other year. Facility had requested to delay the testing until the ESP was completely rebuilt which was received on December 3, 2018. AQD denied this request. Test results were received on April 9, 2019. Montrose performed the testing. TPU staff, Regina Angellotti, reviewed the results and issued a memo on April 19, 2019. Based on her review, the results were as follows: 0.005 lbs/1000 lbs dry (permit limit is 0.057) and 0.003 gr/dscf (permit limit is 0.02). Also reported by the testing company was 12.218 lb/hr. There is no lb/hr limit for the ESP. COMS data was provided during the testing period. No exceedances of the 20% 6 minute average limit were recorded by the COMS. Each run was comprised of 4 heats and each run was compliant with the limit. Note, compliance is based on a three run average. |
| 04/15/2019 | ROP Other | Compliance | Notification received that Dan Brown is now the responsible official for the facility as of April 1, 2019. |
| 03/25/2019 | On-site Inspection | Non Compliance | FY2019 Targeted Inspection - Iron Ore Screening |
| 03/15/2019 | ROP Annual Cert | Non Compliance | Non compliance chosen due to ongoing issues at the BOP Shop that are being addressed through the joint EPA/DOJ/DEQ CD but are not fully resolved. |
| 03/15/2019 | ROP Annual Cert | Compliance | No deviations reported for Section 5 of the USS ROP |
| 03/15/2019 | ROP SEMI 2 CERT | Non Compliance | See Compliance Activity Report CA_A780954053 |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|-----------------|-------------------|--|
| 03/15/2019 | ROP SEMI 2 CERT | Compliance | No deviations reported for USS Section 5 |
| 03/15/2019 | MACT (Part 63) | Non Compliance | <p>MACT Subpart FFFFF deviations are included in the semi annual deviation report for July - December 2018. See ROP deviation activity report for more details. 5 deviations were identified as MACT deviations (10 separate incidents were identified in the MACT report). Non compliance was chosen due to ongoing BOP roof monitor violations and other operational issues at the BOP. However, facility has entered into CD 2:12-cv-304 in March 2017 to address, in part, opacity exceedances at the BOP Shop and is implementing improvements to the capture and control system based on the results of a 3rd party study.</p> <p>However, the MACT report also contained additional required information as outlined in 63.7841 and 63.10(d)(5) such as: there were no periods where the CPMS or the COMS were out of control, and report states that there were deviations from emission limits or operation and maintenance requirements. Report seems to be missing operating hours for the unit that had deviations as required by 63.7841(b)(7).</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|-----------------|-------------------|---|
| 03/15/2019 | CO/CJ | Compliance | <p>July through December 2018 semi annual report per CD 2:12-cv-304 was received from US Steel on March 15, 2019. Large bell on B2 was inspected quarterly as required and inspection is included in the report. There is also a compliance update section; of note, US Steel executed the BOP outage in the 2nd half of 2018 and included a list of completed items and completion date. For the three vegetative buffers, installation was complete on May 31, 2018 (Beard), June 26, 2018 (Kemeny), and December 12, 2018 (Riverside). Also, transformers were removed from the HSM and PCB fluids were removed and disposed of. Documentation was attached to the report. Roof monitor VEOs were also included. Nine VE exceedances were observed during the semi annual period.</p> <p>Compliance was chosen as it relates to the fulfillment of consent order requirements to date.</p> |
| 03/15/2019 | ROP SEMI 2 CERT | Compliance | <p>Semi annual deviation report received for TMS International (A7809- Section 3) for July through December 2018. No deviations reported. Baghouse compartment pressure drops and VE readings were attached. Note, facility requested a change to the pressure drop minimum (from 5 to 4) during the ROP renewal process which was accepted by AQD and put into the draft ROP. The range is allowed to be changed per the permit condition.</p> |
| 03/15/2019 | ROP Annual Cert | Compliance | <p>2018 annual deviation report received for TMS International (A7809- Section 3). No deviations reported.</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|---------------|-------------------|--|
| 03/12/2019 | CO/CJ | Compliance | <p>An update regarding part of the required SEP for CD 2:12-cv-304 was received from US Steel on March 12, 2019. The letter claims that Elevate recently advised USS that it could not complete the SEP as proposed. Additionally, the letter claims a phone call was conducted between USEPA, DOJ, Elevate, and USS and it was determined that the SEP could not be completed as written in the CD. AQD was not invited to participate in this meeting. Therefore, USS is submitting an alternative proposal and deadline for the lighting replacement project; essentially the scope of potential locations was expanded to include rec and family centers in Detroit. As AQD has not been involved in these discussions, AQD is deferring to EPA regarding this matter.</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|---------------|-------------------|---|
| 02/14/2019 | Stack Test | Compliance | <p>Flow meter RATA in the exhaust duct work from the east desulfurization station top and bottom and west station was performed on December 17, 2018. 7 day notification was received on December 12, 2018. AQD field staff was not available to witness the test. This test is required per the NSPS Na 60.143a(c) which reads "(c) All monitoring devices required by paragraph (a) of this section are to be certified by the manufacturer to be accurate to within ± 10 percent compared to Method 2 of appendix A of this part. The owner or operator shall recalibrate and check the device (s) annually and at other times as the Administrator may require, in accordance with the written instructions of the manufacturer and by comparing the device against Method 2." Results from the December 2018 test indicated the east station top and bottom ducts and west station were all below 10% variance (4.0%, 6.7%, 2.8% respectively). On March 1, 2019, TPU staff, Mark Dziadosz, issued a letter that the flow monitors have meet the requirements of 40 CFR Part 60, Appendix B. The test is required annually. The prior test was conducted in November 2017. Compliance was chosen.</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|---------------|-------------------|---|
| 02/14/2019 | Stack Test | Compliance | <p>Stack test results for the Material Handling baghouse at the RH Degasser building were received. Testing for PM was conducted on November 8, 2018. The test protocol was received on September 26, 2018. The test plan approval letter was issued on October 5, 2018. Results of the test were 0.0003 gr/dscf. The permit limit is 0.005 gr/dscf. This is a positive pressure baghouse. Process data was included with the results. For Run #1, scrap and aluminum was handled; Run 2 was aluminum and Mn, and Run 3 was flake (low carbon Mn) and scrap. Baghouse overall pressure drop throughout the testing was between 6.9 and 8.1 in w.c. No VE's were observed from the degasser roof between 11:00 a.m. and 12:27 p.m. when the certified readings were conducted.</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|---------------|-------------------|---|
| 02/14/2019 | Stack Test | Compliance | <p>Test results for PM from the No. 1. baghouse at the No. 2 BOPSHOP were received on February 12, 2019. Testing was conducted on December 11 and 12, 2018. Test protocol was submitted on November 13, 2018. 7 day test notification was received on December 11.</p> <p>This is a positive pressure baghouse. Cover letter states that no major maintenance work has been performed on the baghouse in the last three months. The PM limits are 0.005 gr/dscf (ROP), 0.01 gr/dscf (MACT), and 0.038 lb/1000 lbs. exhaust gas, dry. Test results, based on a three run average, were 0.001 gr/dscf (train A), 0.008 gr/dscf (train B) and 0.002 lb/1000 lbs (train A and train B). Results were not reviewed by TPU staff. VE readings of the BOPSHOP roof were taken during testing; no exceedances were observed. Overall pressure drop throughout the test was between 5.5 and 6.1. Compartment 1 was isolated to simulate maintenance. Fan amps for Fan #1 were between 124 and 136, for Fan #2 amps were between 131 and 144. Results from Run 3 were double the results from Runs 1 and 2 but all runs were in compliance. At this time, there is no obvious explanation from the process or test data for the higher result in Run 3.</p> |
| 02/04/2019 | CO/CJ | Compliance | <p>Quarterly inspection records for the No. 5 Pickle Line for the 4th quarter of 2018, as required per CO 22-2016, Paragraph 9.B.2, were received by AQD on February 4, 2019.</p> <p>A review of the daily records indicates that the scrubber is operating above the correct minimum parameters set by the September 27, 2018 stack test (min values: recirc: 570.9 gpm, make-up: 49.5 gpm). It appears that the spray nozzles were replaced December 25, 2018 as required per the CO.</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|----------------|-------------------|--|
| 02/01/2019 | MACT (Part 63) | Compliance | <p>U S Steel - GLW, Section 1, submitted a semi-annual SSM report for the HCI steel pickling lines per 40 CFR Part 63 Subpart CCC for the reporting period July 1 through December 31, 2018. Report was received on February 1, 2019. Facility reported 2 start up/shut down events due to planned maintenance. Company certified that they followed procedures in their SSM plans for each event. Flow meters and pressure differential meter were most recently calibrated in September 2018; this calibration is required annually.</p> <p>Note, the report referenced 63.1164(c) which only requires a report if there are scrubber malfunctions. This is the language from the MACT regarding the semi annual reporting requirement: 63.1164(c) Reporting malfunctions. The number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded shall be stated in a semiannual report. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with § 63.1159(c), including actions taken to correct a malfunction. The report, to be certified by the owner or operator or other responsible official, shall be submitted semiannually and delivered or postmarked by the 30th day following the end of each calendar half.</p> <p>However, the ROP 199600132d has a requirement with a UAR of 63.1164(c)(2) which also addresses start up and shutdowns due to an older version of the MACT which has since been removed. But, since it is still a condition in the ROP, the information is still required.</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
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| 01/24/2019 | CO/CJ | Compliance | Quarterly fugitive dust report submitted for the 4th quarter 2018 from US Steel (Section 1). Company certified that all fugitive dust requirements were met during the quarter. |
| 01/22/2019 | Stack Test | Compliance | Flow meter RATA in the exhaust duct work from the east desulfurization station top and bottom and west station was performed on November 20, 2019. Test protocol was received on October 22, 2019. AQD staff was not available to witness the test. This test is required per the NSPS Na 60.143a(c) which reads "(c) All monitoring devices required by paragraph (a) of this section are to be certified by the manufacturer to be accurate to within ±10 percent compared to Method 2 of appendix A of this part. The owner or operator shall recalibrate and check the device(s) annually and at other times as the Administrator may require, in accordance with the written instructions of the manufacturer and by comparing the device against Method 2." Results from the November 2019 test indicated the east station top and bottom ducts and west station were all below 10% variance (8.4%, 5.1%, 7.1% respectively). Test is required annually. Prior test was conducted in December 2018. Compliance was chosen. |
| 01/10/2019 | ROP Other | Compliance | R801 report received 12/03/2018. Report shows 136.31 tons of NOx emissions during ozone season for 2018. To calculate NOx emissions when burning natural gas, facility used a NOx emission factor of 0.172 lb/MMBtu, based on October 2016 stack test results. USS is not subject to a total tons limit from the reheat furnaces. No further action necessary. |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|---------------|-------------------|---|
| 01/10/2019 | CO/CJ | Unknown | <p>Quarterly inspection records for the No. 5 Pickle Line for the 1st quarter of 2018, as required per CO 22-2016, Paragraph 9.B.2, were received by AQD on April 27, 2018.</p> <p>A review of the daily records indicates that the scrubber is operating above the correct minimum parameters set by the February 14, 2017 stack test. It appears that the spray nozzles were replaced December 24, 2017 as required per the CO. Also, there are some issues with the scrubber that are documented in the March inspection. Work orders were apparently created to address these issues (WO numbers are listed at the bottom of the form). UNKNOWN was chosen as compliance status due to issues documented in March. The next quarterly report should demonstrate whether the issues were adequately addressed.</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|---------------|-------------------|---|
| 01/09/2019 | Stack Test | Compliance | <p>Stack test results for the No. 5 Pickle Line were received on October 30, 2018. Testing was conducted on September 27, 2018. The was a retest as the facility failed the prior test in April 2018. Test results were reviewed by Ms. Gina Angellotti, TPU, on November 14, 2018. Based on the TPU review, the HCl emissions were 0.21 lb/hr and 4 ppmv, dry and 99.8% collection efficiency (based on a 3 run average). The emission limits for HCl are 1.64 lb/hr and 18 ppmv, dry or at least 97% collection efficiency.</p> <p>In the October 30, 2018 cover letter, facility listed the following minimum scrubber flow rates based on data recorded during the test: makeup water: 49.5 gpm, recirculation rate: 570.9 gpm, and pressure drop between 1 and 9 in w.c. Production ranged from 336-439 tons per run.</p> <p>Note, pressure drop range in the ROP is listed as 3-10; however the permit condition states that operating outside of the range is not a deviation. The steel pickling MACT only requires monitoring of the pressure drop to identify changes that may indicate a need for maintenance. As the facility passed the test with the pressure drop below 3 in. w.c., USS has requested to modify the range. This is acceptable to AQD and will be addressed in the ROP renewal.</p> |

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| 12/26/2018 | Stack Test | Compliance | <p>Stack test results for the CGL Annealing Furnace and Pre-Cleaner Scrubber were received on June 4. Testing was conducted on April 5, 2018. Test plan was received on February 23, 2018 and approval letter was issued on March 15, 2018. Results were reviewed by Ms. Gina Hines, TPU, on July 9. The test was originally scheduled for March but according to USS, the furnace broke down, and the test had to be rescheduled. Based on the TPU review, the Pre-Cleaner Scrubber results were 0.03 lb PM/hr, the permit limit is 0.26 lb/hr. For the Annealing Furnace, the NOx was 0.3 lb/hr; the permit limit is 6.6 lb/hr. The ammonia was 0.84 lbs/hr; the permit limit is 1.44 lb/hr.</p> <p>For the precleaner scrubber, the report also states that 35 gpm is the new minimum make up water flow rate for the scrubber. The pressure drop was around 0.7 in. w.c. Production ranged from 62-90 tons per hour.</p> <p>A review of the process data for the annealing furnace indicates urea injection rate between 6.22 and 7.46 gal/hr (prior test was 5.66 and 6.83 gal/hr). Edge burners were in use. Natural gas combusted by the furnace, including the edge burners, was approximately 73,000- 97,000 scf per test run. Inlet temperature for the SCR system was between 718 and 744F. The line speed was around 89 tons/hr for each run.</p> <p>Note, for the scrubber, the first run was cancelled. This is because the stack testers were getting very high moisture (approx. 25%). After pausing the test and troubleshooting, it was determined that a scrubber fan was flooded with water and the dampers that draw exhaust from the precleaner tanks were not fully open. Fan was drained and dampers were opened. It was speculated that maintenance forgot to reopen the dampers to their normal position at the conclusion of the maintenance activities. Stack flow increased as well as pressure</p> |
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| 12/26/2018 | Stack Test | Compliance | drop across the scrubber. |
| 12/13/2018 | Stack Test Observation | Compliance | Stack test of No 2 BOP No 1 BH |
| 11/28/2018 | CO/CJ | Compliance | Quarterly fugitive dust report submitted for the 3rd quarter 2018 from US Steel (Section 1). Company certified that all fugitive dust requirements were met during the quarter. ROP certification was signed by the Environmental Manager. This is not the designated Responsible Official. However, the RO (Plant Manager) recently resigned and the position has not yet been filled. |
| 11/08/2018 | On-site Inspection | Compliance | FY2019 Targeted Inspection - Vacuum Degasser |
| 10/30/2018 | CO/CJ | Non Compliance | Quarterly inspection records for the No. 5 Pickle Line for the 3rd quarter of 2018, as required per CO 22-2016, Paragraph 9.B.2, were received by AQD on October 30, 2018. Facility failed a stack test on April 27, 2018 and during this quarter was still out of compliance until a September 27, 2018 stack test showed compliance. Records indicate that the spray nozzles were changed on 8/8/18 as required per the CO. However, in the beginning of the quarter and before the compliance stack test was performed, the maintenance records indicate issues with the scrubber such as "emitting condensate to atmosphere." A VN was already issued for the failed stack test in April and improper operation and maintenance of the scrubber. |
| 10/24/2018 | ROP Annual Cert | Compliance | Annual deviation report received for Delray Connecting Railroad (A7809- Section 2) for CY2017 received. No deviations reported. |
| 10/24/2018 | ROP SEMI 2 CERT | Compliance | Semi annual deviation report received for Delray Connecting Railroad (A7809- Section 2) for July through December 2017. No deviations reported. |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|-----------------|-------------------|---|
| 10/24/2018 | ROP SEMI 2 CERT | Compliance | Semi annual deviation report received for TMS International (A7809- Section 3) for July through December 2017. No deviations reported. Baghouse compartment pressure drops and VE readings were attached. Accounting for rounding, all pressure drops were between 5 and 9 as required in the ROP. |
| 10/24/2018 | ROP Annual Cert | Compliance | TMS International, Section 3 of the USS ROP, submitted the annual deviation report for calendar year 2017 for their slab scarfing operations. No deviations were reported. Pressure drop readings and VEO sheets were attached to the report. All pressure drops were 4.0 or above. The minimum pressure drop has been changed from 5 to 4 during the ROP renewal application. A change to the pressure drop range is allowed per the wording of the condition. |
| 10/24/2018 | ROP Semi 1 Cert | Compliance | Semi annual deviation report received for Delray Connecting Railroad (A7809- Section 2) for January through June 2018. No deviations reported. |
| 10/24/2018 | ROP Semi 1 Cert | Compliance | TMS International, Section 3 of the USS ROP, submitted the deviation report for January - June 2018 for their slab scarfing operations. No deviations were reported. No VE readings or baghouse pressure drops were attached as they have been in the past. As this is not a requirement, I did not request this information at this time. |
| 10/24/2018 | ROP Other | Compliance | Notification received that there was a change in RO at Delray Connecting Railroad. The new RO is Joseph Campeau. |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|-----------------|-------------------|---|
| 10/24/2018 | CO/CJ | Non Compliance | Quarterly inspection records for the No. 5 Pickle Line for the 2nd quarter of 2018 were submitted per CO 22-2016. A review of the daily records of scrubber parameters indicates that the scrubber is not operating above the required minimum flow rates established in the February 14 stack testing. Additionally, many weeks are listed as having an issue with acid condensate coming out of the stack and facility failed a stack test during this quarter. A violation notice was issued for Rule 910 and the stack test violations. |
| 10/24/2018 | ROP Semi 1 Cert | Compliance | Semi annual deviation report received for TMS International (A7809- Section 3) for January through June 2017. It was postmarked 9/14/17. No deviations reported. Baghouse compartment pressure drops and VE readings were attached. Pressure drop readings and VEO sheets were attached to the report. All pressure drops were 4.0 or above. The minimum pressure drop has been changed from 5 to 4 during the ROP renewal application. A change to the pressure drop range is allowed per the wording of the condition. |
| 10/23/2018 | ROP Semi 1 Cert | Non Compliance | Semi Annual Deviation Report for Jan - June 2017 for USS ROP, Section 1. Report includes deviations from the Iron and Steel MACT. See activity report CA_A780946743. |
| 10/23/2018 | ROP Semi 1 Cert | Compliance | No deviations were reported for USS Section 5 |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|-----------------|-------------------|--|
| 10/23/2018 | MACT (Part 63) | Non Compliance | <p>MACT Subpart FFFFF - Semi Annual deviation report was included with the Semi Annual ROP deviation report for USS ROP Section 1. See activity report CA_A780946743. 4 deviations of the MACT were listed in the ROP deviation report (17 individual exceedances in the MACT report). However, facility has entered into CD 2:12-cv-304 in March 2017 to address, in part, opacity exceedances at the BOP Shop and will be implementing improvements to the capture and control system based on the results of a 3rd party study.</p> <p>However, the MACT report also contained additional required information as outlined in 63.7841 and 63.10(d)(5) such as: the deviation report includes SSM events, there were no periods where the CPMS or the COMS were out of control, and report states that there were deviations from emission limits or operation and maintenance requirements. Report seems to be missing operating hours for the unit that had deviations as required by 63.7841(b)(7). Non compliance was chosen due to ongoing opacity exceedances at the BOP roof monitor. Facility has entered into a CD to resolve this issue.</p> |
| 10/23/2018 | ROP SEMI 2 CERT | Non Compliance | Semi Annual Deviation Report for July - December 2017 for USS ROP, Section 1. Report includes deviations from the Iron and Steel MACT. See activity report CA_A780946745. |
| 10/23/2018 | ROP SEMI 2 CERT | Compliance | No deviations were reported for USS Section 5 |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|-----------------|-------------------|--|
| 10/23/2018 | ROP Annual Cert | Non Compliance | Non compliance is based on the compliance status after review of each of the semi annual reports. Facility did not identify any new deviations in the annual report. See activity report for each semi annual period for more details. AQD has requested an explanation from USS of the compliance Y/N column. The facility is listing Y even from ROP conditions that has associated deviations. |
| 10/23/2018 | ROP Annual Cert | Compliance | No deviations were reported for USS Section 5 |
| 10/23/2018 | MACT (Part 63) | Non Compliance | <p>MACT Subpart FFFFF deviations are included in the semi annual deviation report for July - December 2017. 3 deviations are listed in the semi annual report (8 separate incidents per the MACT letter). See activity report for the ROP semi annual period for more details. Non compliance was chosen due to ongoing BOP roof monitor violations. Subpart FFFFF. However, facility has entered into CD 2:12-cv-304 in March 2017 to address, in part, opacity exceedances at the BOP Shop and is implementing improvements to the capture and control system based on the results of a 3rd party study.</p> <p>However, the MACT report also contained additional required information as outlined in 63.7841 and 63.10(d)(5) such as: there were no periods where the CPMS or the COMS were out of control, and report states that there were deviations from emission limits or operation and maintenance requirements. Report seems to be missing operating hours for the unit that had deviations as required by 63.7841(b)(7).</p> |
| 10/23/2018 | ROP Semi 1 Cert | Non Compliance | Semi Annual Deviation Report for Jan - June 2018 for USS ROP Section 1. Report includes deviations from the Iron and Steel MACT. See activity report |
| 10/23/2018 | ROP Semi 1 Cert | Compliance | No deviations were reported for USS Section 5 |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|---------------|-------------------|--|
| 10/23/2018 | Other | Non Compliance | USS GLW Jan - June 2017 Semi Annual ROP Deviation Report for Section 1 & 5 and MACT 5F deviation report for Section 1 |
| 10/23/2018 | Other | Non Compliance | USS GLW July - December 2017 Semi Annual ROP Deviation Report for Section 1 & 5 and MACT 5F deviation report for Section 1 |
| 10/23/2018 | Other | Non Compliance | USS GLW Jan - June 2018 Semi Annual ROP Deviation Report for Section 1 & 5 and MACT 5F deviation report for Section 1 |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|----------------|-------------------|---|
| 10/23/2018 | MACT (Part 63) | Compliance | <p>USS - Facility submitted semi annual SSM report for the HCl steel pickling lines per 40 CFR Part 63 Subpart CCC for Jan - June 2018. They reported 3 start up/shut downs and no malfunctions. Company certified that they followed procedures in their SSM plans. Also, flow meters and pressure differential meter were calibrated in January 2018. The prior calibration occurred in January 2017. This calibration is required annually.</p> <p>The report also references the failed stack test that occurred on April 27, 2018. Facility outlined their "corrective actions" and "precautionary measures" in response to the test. These include installing a grating that was tied down to hold the packing for effectively, increase the drain size on the scrubber which will help accommodate a higher flow rate, replaced all packing media and cleaned inside of the scrubber tower, and raise the spray bar up and away from the packing to allow more uniform distribution of flow.</p> <p>Compliance was chosen as it relates to the requirement to submit an SSM report semi annually.</p> <p>Note, the report referenced 63.1164(c) which only requires a report if there are scrubber malfunctions. However, the ROP 199600132d has a requirement with a UAR of 63.1164(c)(2) which also addresses start up and shutdowns which is not longer a part of the CCC MACT.</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|------------------------------|-------------------|---|
| 10/01/2018 | Stack Test | Compliance | <p>Stack testing was performed on D4 furnace on April 3, 2018. Results were received on May 31, 2018. The test is required once every 5 years per the Iron and Steel MACT and the facility has to determine a lb PM/ton iron cast emission factor. Test results were (as reported by USS) PM: 0.002 gr/dscf, 4.52 lb/hr and 0.019 lb PM/ton of iron cast. The emission limit from the MACT is 0.01 gr/dscf. Testing was performed over integral casts as the MACT requires. Run 1 encompassed one cast, Run 2 was one cast, and Run 3 was two casts. TPU staff reviewed the results and issued a memo dated July 9, 2018. The TPU tabulated PM result was 0.0019 gr/dscf.</p> <p>BTEC submitted the report with numerous blank pages. TPU staff, Ms. Regina Hines, contacted BTEC and requested the missing pages. They are clipped to the end of the stack test report.</p> <p>I reviewed the operational data. The fan amps for fan #1 and #2 were between 79 and 81 and the pressure drop was between 11 and 14. This is higher than the pressure drop range listed in the ROP (12 in w.c.maximum) but since the facility passed the test at this higher pressure drop, discretion is being applied. However, facility needs to apply to modify the pressure drop range in the permit.</p> <p>Visible emissions readings of the casthouse roof monitor were also taken by USS's certified VE readers. While there were some visible emissions observed, none resulted in a violation of the 20%, 6 minute average limit.</p> |
| 09/28/2018 | CO/CJ | Compliance | <p>Quarterly fugitive dust report submitted for the 2nd quarter 2018 from US Steel (Section 1). Company certified that all fugitive dust requirements were met during the quarter.</p> |
| 09/19/2018 | Visible Emissions Evaluation | Non Compliance | <p>VE readings of the No. 2 BOP Shop roof monitor</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|---------------|-------------------|--|
| 09/15/2018 | CO/CJ | Compliance | <p>January through June 2018 semi annual report per CD 2:12-cv-304 was received from US Steel on September 15, 2018. Large bell on B2 was inspected quarterly as required and inspection is included in the report. No issues were noted. There is also a compliance update section; of note, parts were ordered for the BOP project, 2 of 3 vegetative buffers have been completed, facility having difficulty identifying areas in the CD that were in need of the project, Roof monitor VEOs were also included. Five VE exceedances were observed during the semi annual period.</p> <p>Compliance was chosen as it relates to the fulfillment of consent order requirements to date. Deviations are related to the opacity exceedances but they are not deviations/violations of the CD provisions.</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|------------------------------|-------------------|--|
| 09/14/2018 | MACT (Part 63) | Non Compliance | <p>MACT Subpart FFFFF deviations are included in the semi annual deviation report for January - June 2018. 4 MACT violations were listed in the ROP report (6 individual instances in the MACT report). See ROP deviation activity report for more details. Non compliance was chosen due to ongoing BOP roof monitor violations and operational issues at the BOP. However, facility has entered into CD 2:12-cv-304 in March 2017 to address, in part, opacity exceedances at the BOP Shop and is implementing improvements to the capture and control system based on the results of a 3rd party study.</p> <p>However, the MACT report also contained additional required information as outlined in 63.7841 and 63.10(d)(5) such as: there were no periods where the CPMS or the COMS were out of control, and report states that there were deviations from emission limits or operation and maintenance requirements. Report seems to be missing operating hours for the unit that had deviations as required by 63.7841(b)(7).</p> |
| 08/13/2018 | Visible Emissions Evaluation | Unknown | Surveillance - 8/13/18 |
| 07/30/2018 | On-site Inspection | Non Compliance | Zug Island Boilerhouses and VE readings |
| 07/26/2018 | On-site Inspection | Non Compliance | B2 and D4 blast furnaces and VE readings |

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| 07/23/2018 | Stack Test | Non Compliance | <p>Stack test results for the No. 5 Pickle Line were received on June 28, 2018. Testing was conducted on April 27, 2018. The test was required per ROP 199600132d and AQD CO 22-2016. The test plan was received on March 30, 2018. Test results were reviewed by Ms. Gina Hines, TPU, on July 23, 2018. Based on the TPU review, the HCl emissions were 3.55 lb/hr and 54 ppmv, dry and 96% collection efficiency (based on a 3 run average). The emission limits for HCl are 1.64 lb/hr and 18 ppmv, dry or at least 97% collection efficiency. 4 runs were conducted; Run #2 was voided due to improper assembly of the impingers on the outlet sampling train.</p> <p>Facility was to establish scrubber minimum flow rates but due to the failed test they were unable to do so. Based on data recorded during the test, production ranged from 328-371 tons per run. Makeup water flow rate was between 51.6 and 53.6 gpm, recirculation rate was between 587 and 589 gpm, and pressure drop was between 3.2 and 4.5 in w.c.</p> <p>In the June 28, 2018 cover letter than accompanied the stack test report, USS outlined corrective measures it has taken and will take including:</p> <ul style="list-style-type: none"> - Installed a full surface area fiberglass grating tied together to hold down the packing more effectively - Increased the drain size on the scrubber to accommodate higher water flow rates. This will reduce spent water residence time in the scrubber by allowing faster drainage of spent water. - As "precautionary" measures, the facility replaced all of the packing, cleaned the inside of the scrubber tower, and raised the internal spray bar away from the packing to allow more uniform distribution of the water spray. <p>A violation notice was issued for the failed stack test and referred to the Enforcement Unit.</p> |
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| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|---------------|-------------------|--|
| 07/12/2018 | MAERS | Compliance | Hard copy was received prior to March 15th; submittal not considered late. See Activity Report. Compliance status relates to the submission of the required report. |
| 07/12/2018 | MAERS | Compliance | Hard copy was received prior to March 15th; submittal not considered late. See Activity Report |
| 07/12/2018 | Other | Compliance | 2018 MAERS review (for CY 2017) |
| 06/12/2018 | CO/CJ | Non Compliance | <p>Quarterly baghouse inspections for the No. 2 baghouse for the 4th quarter of 2017 at the #2 BOP were received on 1/23/2018. These records are required to be submitted quarterly per Consent Order No. 50-2014, Condition 9.C.2. The No. 2 baghouse controls hot metal transfer and desulfurization operations.</p> <p>10/25 notation that all hopper boxes looked full. Still full on 11/9/17. Still full on 11/30/17. No issues noted on the 12/6/17 inspection. Appears to be a failure to confirm that dust is being removed from hoppers. Inspection also notes that 9 of the chambers are getting no draft. This appears to be a failure to operate baghouse properly. Need further comment from the facility. Non compliance chosen.</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|---------------|-------------------|---|
| 06/12/2018 | CO/CJ | Compliance | <p>Quarterly baghouse inspections for the No. 2 baghouse for the 1st quarter of 2018 at the #2 BOP were received on 5/01/2018. These records are required to be submitted quarterly per Consent Order No. 50-2014, Condition 9.C.2. The No. 2 baghouse controls hot metal transfer and desulfurization operations. Some minor maintenance was conducted. No recurring issues with the baghouse were noted aside from "worn VEE blocks." At this time, it is unclear what the purpose of this item is and I will follow up with company on plan to replace. It appears to related to the system of hanging the bags. At this time, compliance was chosen.</p> <p>10/25 notation that all hopper boxes looked full. Still full on 11/9/17. Still full on 11/30/17. No issues noted on the 12/6/17 inspection. Appears to be a failure to confirm that dust is being removed from hoppers. Inspection also notes that 9 of the chambers are getting no draft. This was not ongoing in this quarter so compliance was chosen.</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|------------------------|-------------------|--|
| 06/11/2018 | Stack Test | Compliance | Flow meter RATA in the exhaust duct work from the east desulfurization station top and bottom and west station was performed on November 13, 2017. AQD staff was not available to witness the test. This test is required per the NSPS Na 60.143a(c) which reads "(c) All monitoring devices required by paragraph (a) of this section are to be certified by the manufacturer to be accurate to within ±10 percent compared to Method 2 of appendix A of this part. The owner or operator shall recalibrate and check the device(s) annually and at other times as the Administrator may require, in accordance with the written instructions of the manufacturer and by comparing the device against Method 2." Results from the November 2017 test indicated the east station top and bottom ducts and west station were all below 10% variance (5.3%, 7.7%, 1.5% respectively). Test is required annually. Prior test was conducted in December 2016. Compliance was chosen. |
| 06/11/2018 | CO/CJ | Compliance | Quarterly fugitive dust report submitted for the 1st quarter 2018 from US Steel (Section 1). Company certified that all fugitive dust requirements were met during the quarter. |
| 04/05/2018 | Stack Test Observation | Compliance | CGL pre scrubber and annealing furnace stack test |
| 04/03/2018 | Stack Test Observation | Compliance | D4 Blast Furnace Casthouse Baghouse PM and opacity testing |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|---------------|-------------------|--|
| 03/20/2018 | CO/CJ | Compliance | <p>July through December 2017 semi annual report per CD 2:12-cv-304 was received from US Steel on March 20, 2018. Large bell on B2 was inspected quarterly as required and inspection is included in the report. No issues were noted. There is also a compliance update section; of note, BOP study third party report was submitted, proposal regarding replacement lighting is still undergoing final review, and purchase order was issued to Greening of Detroit for vegetative buffers. Roof monitor VEOs were also included. Eight VE exceedances were observed during the semi annual period.</p> <p>Compliance was chosen as it relates to the fulfillment of consent order requirements to date.</p> |
| 02/16/2018 | CO/CJ | Compliance | <p>Quarterly fugitive dust report submitted for the 3rd quarter 2017 from US Steel (Section 1). Company certified that all fugitive dust requirements were met during the quarter. However, the report lists one instance on Zug Island where sweeping of a road did not occur due to the repaving the road. While this scenario is not specifically allowed in the CO, enforcement discretion is being used.</p> |
| 02/16/2018 | CO/CJ | Compliance | <p>Quarterly fugitive dust report submitted for the 4th quarter 2017 from US Steel (Section 1). Company certified that all fugitive dust requirements were met during the quarter. However, the report lists several instances on Zug Island where sweeping of a road did not occur due to construction activity/road work. While this scenario is not specifically allowed in the CO, enforcement discretion is being used.</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|----------------|-------------------|--|
| 02/02/2018 | ROP Other | Compliance | R801 report received 11/22/2017. Report shows 164.46 tons of NOx emissions during ozone season for 2017. To calculate NOx emissions when burning natural gas, facility used a NOx emission factor of 0.172 lb/MMBtu, based on October 2016 stack test results. USS is not subject to a total tons limit from the reheat furnaces. No further action necessary. |
| 02/02/2018 | MACT (Part 63) | Compliance | Facility submitted semi-annual SSM report for the HCl steel pickling lines for July - December 2017, per 40 CFR Part 63, Subpart CCC. Facility reported 4 startup/shutdowns of the wet scrubber for planned maintenance; no malfunctions were reported. Company certified that they followed procedures in their SSM plans. Facility also reported that the flow meters and pressure differential meter were calibrated in July 2017. This calibration is required annually. |

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| 01/31/2018 | Stack Test | Non Compliance | <p>Stack testing for PM emissions and opacity from B2 Blast Furnace Casthouse Baghouse was performed on October 24 and 25, 2017, to demonstrate compliance with conditions of ROP No. 199600132d, Section 1, EGBLAST-FCE-B, and 40 CFR Part 63, Subpart FFFFF - Iron and Steel MACT. BTEC performed the PM testing of the baghouse, while Method 9 visible emission readings were performed by Veolia on the baghouse stack and casthouse roof monitor. VE readings were performed for the duration of PM testing, per the approved test protocol. AQD staff Jon Lamb, AQD Detroit Office, and Mark Dziadosz, AQD-TPU, were on site on October 24 during testing; AQD staff was not on site during testing on October 25. At AQD's request, US Steel included copies of the past 3 months of B2 baghouse maintenance records with the test results.</p> <p>Particulate Matter: Results show the following PM emission rates: <0.0003 gr/dscf, <0.477 lb/hr, and <0.67 lb/cycle. Testing also determined a PM emission rate of <0.0016 lb/ton iron. The PM emission rate of <0.0003 gr/dscf is in compliance with the allowable emission rates of 0.0075 gr/dscf, set in ROP No. 199600132d, Section 1, EGBLAST-FCE-B, S.C. II.B, and the MACT limit of 0.01 gr/dscf set in 40 CFR Part 63, Subpart FFFFF, Appendix Table 1.7a.</p> <p>Visible Emissions: Based on the results of Method 9 visible emission readings performed by Veolia during the stack testing, the B2 blast furnace casthouse roof monitor exceeded an opacity of 20% on a 6-minute average a total of five times during testing, with a high of 29% opacity on a 6-minute average. This is in noncompliance with the allowable opacity limit of 20% on a 6-minute average set in ROP No. 199600132d, Section 1, EGBLAST-FCE-B, S.C. II.B, and 40 CFR Part 63, Subpart FFFFF, Appendix Table 1.7b. As a result, US Steel was issued a violation</p> |
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| 01/31/2018 | Stack Test | Non Compliance | <p>notice on January 31, 2018. Method 9 VE readings performed on the B2 blast furnace casthouse baghouse stack did demonstrate compliance with the opacity limit of 10% on a 6-minute average set in ROP No. 199600132d, Section 1, EGBLAST-FCE-B, S.C. II.B.</p> <p>Further evaluation of test results and baghouse maintenance records may be performed a later date.</p> <p>*****</p> <p>UPDATE: TPU memo received on 1/31/18. TPU results were FPM < 0.0004 gr/dscf; limits are 0.0075 gr/dscf (permit) and 0.01 gr/dscf (MACT). This is slightly different that the stack testers result of <0.0003 gr/dscf. Also, lb PM /ton of iron cast is <0.002. BTEC calculated the lb/ton based on ton of iron ore and scrap charged during the run which was incorrect.</p> <p>I reviewed the baghouse maintenance records. Records did not indicate any issues with the baghouse.</p> <p>During the test, fan amps were above the minimum of 159 amps per fan for B2 furnace as stated in the October 20, 2006 MACT O&M plan. Pressure drop was within the normal range for the baghouse (between 1 and 22 in w.c. as specified in the ROP). - KRK</p> |
| 01/22/2018 | CO/CJ | Compliance | <p>Quarterly inspection records for the No. 5 Pickle Line for the 4th quarter of 2017, as required per CO 22-2016, Paragraph 9.B.2, were received by AQD on January 22, 2018.</p> <p>A review of the daily records indicates that the scrubber is operating above the correct minimum parameters set by the February 14, 2017 stack test. It appears that the spray nozzles were replaced December 24, 2017 as required per the CO.</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|------------------------|-------------------|--|
| 12/26/2017 | CO/CJ | Compliance | Proposed improvements of the No. 2 BOP and schedule of completion, as required per Consent Decree 2:12-cv-304, was received on December 26, 2017, in a report titled "BOP Roof Opacity Assessment - FEL-2 Level Cost Estimate of Recommendations", dated December 13, 2017. This proposal is a follow-up to the initial No. 2 BOP Third Party Study, received by AQD on October 4, 2017, in a report titled "BOP Roof Opacity Assessment - Emission Control Systems and Opacity Evaluation", dated September 21, 2017. |
| 10/31/2017 | CO/CJ | Compliance | <p>Quarterly inspection records for the No. 5 Pickle Line for the 3rd quarter of 2017, as required per CO 22-2016, Paragraph 9.B.2, were received by AQD on October 31, 2017.</p> <p>A review of the daily records indicates that the scrubber is operating above the correct minimum parameters set by the February 14, 2017 stack test. It appears that the spray nozzles were replaced September 15, 2017 as required per the CO.</p> |
| 10/24/2017 | Stack Test Observation | Compliance | B2 Blast Furnace Casthouse Baghouse PM and opacity testing |
| 10/16/2017 | CO/CJ | Compliance | <p>Quarterly baghouse inspections for the No. 2 baghouse for the 3rd quarter of 2017 at the #2 BOP were received on 10/16/2017. These records are required to be submitted quarterly per Consent Order No. 50-2014, Condition 9.C.2. The No. 2 baghouse controls hot metal transfer and desulfurization operations. Compliance status only relates to the fulfillment of the requirement to submit records. Note, bad bags from prior quarter appear to have been replaced.</p> |

| Activity Date | Activity Type | Compliance Status | Comments |
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| 10/04/2017 | CO/CJ | Compliance | No. 2 BOP Roof Opacity Assessment, as required per Consent Decree 2:12-cv-304, was received by AQD on October 4, 2017. Assessment was performed by Hatch and included opacity observations of the BOP roof monitor June 13-16 and June 19-22, 2017, with the results and assessment compiled in a report dated September 21, 2017. |
| 09/18/2017 | CO/CJ | Compliance | January through June 2017 semi annual report per CD 2:12-cv-304 was received from US Steel on September 18, 2017. Large bell on B2 was inspected quarterly as required and inspection is included in the report, but the top of the B2 blast furnace was replaced on May 12, 2017 and production resumed on June 9, 2017. There is also a compliance update section; of note Hatch was chosen to conduct the BOP Shop study. The study began on May 29, 2017 and was ongoing through June 30. VE readings were conducted as part of the study and VEO sheets were attached; about 51 exceedances were observed. As was negotiated through the CD, stipulated penalties do not accrue until after the BOP improvements are completed and enhanced VEO start. Compliance was chosen as it relates to the fulfillment of consent order requirements to date. |
| 08/17/2017 | CO/CJ | Compliance | Quarterly fugitive dust report submitted for 2nd quarter 2017 from US Steel (Section 1). Company certified that all fugitive dust requirements were met during the quarter. However, the report lists some instances on Zug Island where sweeping of roads did not occur due to the road being blocked off for maintenance work in the area. While this scenario is not specifically allowed in the CO, enforcement discretion is being used. |

| Activity Date | Activity Type | Compliance Status | Comments |
|---------------|----------------|-------------------|---|
| 08/17/2017 | MACT (Part 63) | Compliance | <p>USS - Facility submitted semi annual SSM report for the HCl steel pickling lines per 40 CFR Part 63 Subpart CCC for Jan - June 2017. They reported 7 start up/shut downs and no malfunctions. Company certified that they followed procedures in their SSM plans. Also, flow meters and pressure differential meter were last calibrated in January 2017. This calibration is required annually. Note, in the previous report, the facility reported that the calibrations were missed for 2016 and did not occur until Jan 20,2017. At this time, discretion is being used as facility identified the deviation and readily corrected it. However, it should appear in the Title V deviation report.</p> <p>Note, the report referenced 63.1164(c) which only requires a report if there are scrubber malfunctions. However, the ROP 199600132d has a requirement with a UAR of 63.1164(c)(2) which also addresses start up and shutdowns which is not longer a part of the CCC MACT.</p> |

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Date: 3/25/2021

Supervisor: April Wendling