DEQ

State Registration Number

A7809

Michigan Department Of Environmental Quality
Air Quality Division

RENEWABLE OPERATING PERMIT STAFF REPORT

RO Permit Number

MI-ROP-A7809-20XX

United States Steel Corporation, Great Lakes Works

SRN: A7809

located at

No. 1 Quality Drive, Ecorse, Michigan, 48229

Permit Number:

Staff Report Date: May 5, 2014 - DRAFT

This Staff Report is published in accordance with Part 5506 and 5511 of Article II, Chapter 1, Part 55 (Air Pollution Control) of P.A. 451 of 1994. Specifically, R 336.1214(1) requires that the Department of Environmental Quality, (Department), Air Quality Division (AQD), shall prepare a report that sets forth the factual basis for the terms and conditions of the Renewable Operating (RO) Permit.

TABLE OF CONTENTS

Facility

United States Steel Corporation, Great Lakes Works
No. 1 Quality Drive
Ecorse, MI 48229

Purpose

Major stationary sources of air pollutants are required to obtain and operate in compliance with a Renewable Operating (RO) permit pursuant to Title V of the Federal Clean Air Act of 1990 and Michigan's administrative rules for air pollution control pursuant to Section 5506(1) of Article II, Chapter I, Part 55 of P.A. 451 of 1994. Major stationary sources are defined by criteria in administrative rule R 336.1211(1). The RO permit is intended to simplify and clarify a facility's applicable requirements and compliance with them by consolidating all state and federal air quality requirements into one document.

This report, as required by R 336.1214(1), sets forth the applicable requirements and factual basis for the draft permit terms and conditions including citations of the applicable requirements, an explanation of any equivalent requirements included in the draft permit pursuant to R 336.1212(6), and any determination made pursuant to R 336.1213(6)(a)(ii) regarding requirements that are not applicable to the stationary source.

General Information

Facility Mailing Address:	No. 1 Quality Drive Ecorse, Michigan 48229
Source Registration Number (SRN):	A7809
Standard Industrial Classification (SIC) Code:	3312
Number of Stationary Source Sections:	5
Application Number:	200900140
Responsible Official:	Section No. 1 United States Steel, Great Lakes Works – Iron and Steel Making Operations Mr. James Gray, General Manager Phone: 313-749-2210 Section No. 2 Delray Connecting Railroad Company Mr. William Bacon, General Superintendent Phone: 313-841-2851 Section No. 3 Tube City IMS Mr. Michael Connolly, Director Environmental Engineering Phone: 215-956-5618 Section No. 4 Harsco Metals

	Mr. Marcelino Martinez, Site Manager Phone: 313-842-2120 Section No. 5 United States Steel, Great Lakes Works – Pulverized Coal Storage and Transport Mr. James Gray, General Manager Phone: 313-749-2210
AQD Permit Contact Person:	Katherine Koster, Senior Environmental Engineer Phone: 313-456-4678
Date Permit Application Submitted:	August 31, 2009
Date Application Administratively Complete:	September 1, 2009
Is Application Shield in Effect?:	Yes
Date Public Comment Begins:	May 5, 2014
Deadline for Public Comment:	June 4, 2014

Source Description

United States Steel, Great Lakes Works operates an integrated iron and steel mill that has been in existence since August 1930. It is located just south of the City of Detroit. The site consists of approximately 1100 acres that span along the Detroit River through the cities of Ecorse and River Rouge. The facility includes the Main Plant Area, the 80-inch Hot Strip Mill, and the iron making and coke making operations on Zug Island. The plant produces flat-rolled steel products for the automotive, appliance, container, and piping and tubing industries.

The primary iron producing facility is located on Zug Island, in the City of River Rouge, which is bordered by the Rouge River on the north, south, and west sides and the Detroit River on the east side. The Zug Island facility includes, but is not limited to, three blast furnaces (two are in operation), one coke oven, a coke oven gas byproducts recovery plant, three boiler houses, and iron ore, limestone, and coal storage piles. The facility site is zoned heavy industrial. The nearest residential area is approximately 0.6 miles from the facility.

The 80 inch (80") Hot Strip Mill facility is located in the City of River Rouge between the Zug Island and Main Plant location. The 80" Hot Strip Mill facility includes the hot strip finishing and shipping building, scale pit, coil storage and shipping building, slab yard, and 80" hot strip mill. The facility site is zoned heavy industrial. The nearest residential area is approximately 1.5 miles from the facility.

The Main Plant is located on a 682 acre site in the City of Ecorse. It is bordered by the Detroit River on the east, the 80" Hot Mill Strip facility on the north, the Edward C. Levy Plant No. 3 to the south and Jefferson Avenue to the west. The following steel making operations are located at the Main Plant: No. 2 Basic Oxygen Process (#2 BOP), Vacuum Degasser, Ladle Metallurgical Facility (LMF), No.5 Pickle Line, Electrogalvanizing Line, No. 4 tandem cold mill, Continuous Annealing Line, and a Boiler House. The plant site is zoned heavy industrial. The nearest residential area is approximately 0.5 mile from the facility.

There are six facilities, in addition to US Steel, that have equipment and/or processes with permits to install that are located inside or adjacent to United States Steel, Great Lakes Works (USSGLW). These facilities/processes are used to support the main iron and steel making activities of USSGLW and meet the regulatory criteria to be considered a single stationary source as defined in R336.1119(r). The facilities that make up the stationary source are as follows:

1. United States Steel Great Lakes Works (USSGLW) iron and steel making operations located on Zug Island, River Rouge, and in Ecorse.

2. Delray Connecting Railroad Company is located on Zug Island. It operates a coke screening facility consisting of screen machines, conveyors for unscreened coke, furnace coke, nut coke, and coke breeze, and coke handling and storage. It is a subsidiary of U.S. Steel.

3. Tube City IMS is located at the USSGLW's 80" Hot Strip Mill. It operates a slab scarfing machine with a baghouse for pollution control.

4. Harsco Metals is located on Zug Island. It operates one stationary screen and two portable screens for screening iron ore pellets prior to use in the blast furnaces.

5. USSGLW Pulverized Coal Storage and Transport System is located on Zug Island and operates a pulverized coal transport system consisting of pulverized coal/air collection system, storage bin and air transport system.

6. AKJ Industries, Inc. is located at the EES Coke Battery on Zug Island. It operates a tar sludge recycling process. The tar sludge from the No. 3 Coke Byproducts recovery plant is liquefied and homogenized with diluent until it is flowable. The recycled product is sprayed onto the coal belt.

7. DTE Energy Services/EES Coke Battery LLC on located on Zug Island and owns and operates the No. 5 Coke Battery and the No. 3 Coke By-products recovery plant.

However, for administrative purposes only, these seven facilities have been separated into two groups with two SRN's (State Registration Numbers). This separation was mutually agreed upon by US Steel and DTE Energy/EES Coke Battery. SRN: A7809 includes facilities #1-5 for which this is the associated staff report. DTE/EES Coke Battery and AKJ Industries are under SRN: P0408. Separate Title V ROP's will be issued to each SRN although all seven facilities will remain as one stationary source.

Additionally, Edward C. Levy Company Plant 3 (Plant 3) is located on contiguous and adjacent property and processes steel slag generated by US Steel. Plant 3 is wholly dependent on USSGLW for raw material and was determined by the AQD to meet the criteria under Rule 336.1119(r) of a facility that should be also be a part of the single stationary source with United States Steel, Great Lakes Works (USSGLW). The AQD believes that the two facilities should be considered in the same industrial grouping regardless of whether the first two digits of the SIC codes for the two entities are the same because Plant 3 is considered a support facility for USSGLW. As indicated in the August 7, 1980, Federal Register (45 FR 52695), "one source classification encompasses both primary and support facilities, even when the latter includes units with a different two-digit SIC code. Support facilities are typically those which convey, store, or otherwise assist in the production of the principal product." While Plant 3 is considered part of the stationary source for Title V applicability, a separate Title V ROP was issued to Edward C. Levy Company Plant 3 under SRN B4364. Through negotiations that arose from the court judgment of the suit filed by the company against the AQD contesting the aggregation of the Levy Plant 6 with Rouge Steel Company ROP, now Severstal Dearborn LLC, Edward C. Levy Company Plant 3 agreed to submit a separate ROP application and is issued its own ROP (ROP No MI-ROP-B4364-2009).

According to a letter received on April 15, 2014, Great Lakes Recovery Systems had been removed from U.S. Steel property in Ecorse. It operated a briquetting facility consisting of a rotary drum drier with cyclone and baghouse, pug mills with baghouse, briquette screen with baghouse, and silo farm transfer system with baghouse dust collector. These conditions have been removed from the draft ROP. Section 4 has been replaced by Harsco Metals which operates an iron ore screening process.

The following table lists emission information as estimated for **2013** for the facilities associated with SRN A7809.

2013 TOTAL FACILITY EMISSIONS for SRN: A7809
Criteria Pollutants

Pollutant	Tons per Year
Nitrogen Oxides-(NO_x)	1,264
Particulate Matter	245
Particulate Matter-(PM10)	213
Sulfur Dioxide-(SO_2)	2,294
Volatile Organic Compounds(VOCs)	56
Carbon Monoxide	15,083

** As listed pursuant to Section 112(b) of the Clean Air Act.

See Sections C & D in the attached draft RO Permit for summary tables of all processes at the facility that are subject to process-specific emission limits or standards in any applicable requirement.

Regulatory Analysis

The following is a general description and history of the stationary source which includes facilities #1-7 described above. Any determinations of regulatory non applicability for this source are addressed in the non-applicable requirement section of the staff report and section E of the ROP.

The stationary source is located in Wayne County, which is currently designated by the U.S. Environmental Protection Agency (USEPA) as attainment/unclassified for all criteria pollutants except for a portion of Wayne County designated as non attainment for sulfur dioxide (SO_2).

The stationary source is considered a major Title V 40 CFR Part 70 source due to actual or potential emissions of the criteria pollutants carbon monoxide, nitrogen oxides, sulfur dioxide, volatile organic compounds, and particulate matter exceeding 100 tons per year and due to the potential to emit of any single HAP regulated by the federal Clean Air Act, Section 112, equal to or more than 10 tons per year and/or the potential to emit of all HAPs combined of more than 25 tons per year.

The stationary source is subject to Prevention of Significant Deterioration of Title 40 of the Code of Federal Regulations, Part 52.21, regulations because its potential to emit of criteria pollutants is greater than 100 tons per year.

For facilities associated with SRN A7809, the following Maximum Achievable Control Technology (MACT) Standards are applicable:

1. Steel acid pickling promulgated in 40 CFR Part 63, Subpart CCC which took effect June 22, 2001 is applicable to EU5-PICKLE-LINE-S1
2. Integrated Iron and Steel Manufacturing promulgated in 40 CFR Part 63, Subpart FFFFF which took effect May 20, 2003 is applicable to EUBLAST-FCE-A1-S1, EUBLAST-FCE-B2-S1, EUBLAST-FCE-D4-S1, EU2BOP-HMTDESULF-S1, EU2BOF-CHARGING-S1, EU2BOF-TAPPING-S1, EU2BOF-VESSELS-S1, EUARGON-STIR-S1, EULMF-OPERATIONS-S1
3. Stationary Reciprocating Internal Combustion Engines (RICE) promulgated in 40 CFR 63, Subparts ZZZZ is applicable to EU-EMERGENCYGEN 1-S1, EU-EMERGENCYGEN 2-S1, EU-EMERGENCYGEN 4-S1, EU-EMERGENCYGEN 5- S1, EU EMERGENCY GEN 3-S1, EU EMERGENCY GEN 8-S1, EU EMERGENCY GEN 9-S1
4. Industrial, Commercial and Institutional Boilers and Process Heaters promulgated in 40 CFR Part 63 DDDDD is applicable to EUBHZI3-1-BOILER-S1, EUBHZI3-2-BOILER-S1, EUBHMP-1-8-S1, EUBHMP-1-9-S1, EUVDG-DGAS-BLR-S, EUEGL-OPERATIONS-S1, Continuous

Galvanizing Line Furnace (96 MMVTU/hr), J building HPH Annealing Furnaces No 1-7 (6 MMBTU/hr each), F building Annealing Furnaces No 31-35, 39 (11.3 MMBTU/hr each), B building Annealing furnaces No 60-69 (11.04 MMBTU/hr each)

For facilities associated with SRN A7809, the following New Source Performance Standards (NSPS) are applicable:

1. Standards of Performance for Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for Which Construction is Commenced After January 20, 1983, 40 CFR Part 60 , Subpart Na, applies only to the skimming operation at the Double Desulfurization Station in the Basic Oxygen Plant (EU2BOP-HMTDESULF)
2. Stationary Compression Ignition Internal Combustion Engines as promulgated in 40 CFR Part 60, Subpart IIII is applicable to EU-EMERGENCYGEN 7- S1

There are four outstanding Consent Orders entered into by USSGLW, Section 1, with Wayne County. These are: SIP CO No. 27-1993 revised September 9, 1994; WCAPCD Consent Order No. 0035-97, effective June 3, 1999; WCAPCD Consent Order No. 96-10, effective December 6, 1996; and WCAPCD Consent Order No. 94-10, effective August 22, 1995. There is one outstanding Consent Order entered into by the company with the State which is Consent Order No. 1-2005.

Delray Connecting Railroad, Section 2, is operating under SIP CO No. 28-1993. Facilities in Sections 3, 4, and 5 are not operating under any Consent Orders.

EUCON-GALV-LINE-S1, Section 1, at the stationary source is subject to the federal Compliance Assurance Monitoring (CAM) rule under 40 CFR, Part 64. This emission unit has a control device and potential pre-control emissions of NOx greater than the major source threshold level. The monitoring for the control device is the NOx outlet concentration, urea feed rate and inlet gas temperature for the SCR system as the urea is needed to react with the NOx and a minimum temperature is needed for the reaction to occur.

EU-IMS-SCARFING-S3, Section 3, at the stationary source is subject to the federal Compliance Assurance Monitoring (CAM) rule under 40 CFR, Part 64. This emission unit has a control device and potential pre-control emissions of PM greater than the major source threshold level. The monitoring for the control device is pressure drop and opacity readings to determine that the baghouse is operating properly.

EUPCI-COAL-TRANS-S5, Section 5, at the stationary source is subject to the federal Compliance Assurance Monitoring (CAM) rule under 40 CFR, Part 64. This emission unit has a control device and potential pre-control emissions of PM greater than the major source threshold level. The monitoring for the control device is pressure drop and opacity readings to determine that the baghouse is operating properly.

Additionally, the following emission units have presumptively acceptable CAM due to the Integrated Iron and Steel Manufacturing MACT promulgated in 40 CFR Part 63, Subpart FFFFF: EUBLAST-FCE-A1-S1, EUBLAST-FCE-B2-S1, EUBLAST-FCE-D4-S1, EU2BOP-HMTDESULF-S1, EUARGON-STIR-S1, EULMF-OPERATIONS-S1, FG2BOP-SECONDARY-S1.

Please refer to Parts B, C and D in the draft ROP for detailed regulatory citations for the stationary source. Part A contains regulatory citations for general conditions.

Streamlined Requirements

The following table lists explanations of any streamlined/subsumed requirements included in the ROP pursuant to Rules 213(2) and 213(6). All subsumed requirements are enforceable under the streamlined requirement that subsumes them.

STREAMLINED AND SUBSUMED REQUIREMENTS SUMMARY

EUARGON-STIR-S1: S.C. I.1 – The PM limit of 0.01 gr/dscf (UAR 40 CFR 63.7790) is more stringent than the PM limit established in SIP CO NO. 27-1993 Exhibit B Paragraph 4 and R336.1201(3) which have a limit of 0.02 gr/dscf. SIP CO NO 27-1993 and R336.1201(3) have been subsumed by 40 CFR 63.7790.

EUBLAST-FCE-A1-S1: S.C. I.1 – The PM limit of 0.0075 gr/dscf (UAR R336.1331 and R336.1201(3)) is more stringent than the SIP CO 27-1993 limit of 0.0076 gr/dscf. SIP CO 27-1993 has been subsumed by UAR R336.1331 and R336.1201(3)).

S.C. III.3 – The Iron and Steel MACT O&M plan requirements per 40 CFR 63.7800(b) are equivalent to AQD CO 1-2005. Both require the following:

a. Monthly inspections of the equipment that is important to the performance of the total capture system (*e.g.,* pressure sensors, dampers, and damper switches). This inspection must include observations of the physical appearance of the equipment (*e.g.,* presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in the ductwork, and fan erosion). The operation and maintenance plan also must include requirements to repair any defect or deficiency in the capture system before the next scheduled inspection.
b. Preventative maintenance for each control device, including a preventative maintenance schedule that is consistent with the manufacturer's instructions for routine and long-term maintenance

As such, AQD CO 1-2005 has been subsumed by 40 CFR 63.7800(b)

S.C. VI.7 – 40 CFR 63.7830(b)(4) contains the same requirements as CO No. 96-10, Section 5(i), Paragraph 2, plus additional measures. CO 96-10 requires weekly differential pressure drop monitoring and weekly check of the operation of screw conveyors. 40 CFR 63.7830(b)(4) is more stringent as it requires continuous pressure drop monitoring and weekly inspections of dust removal mechanisms for A1 blast furnace baghouse (which would include screw conveyors).
As such, CO No. 96-10, Section 5(i), Paragraph 2 has been subsumed by 40 CFR 63.7830(b)(4).

EU2BOF-VESSELS-S1 III.7 - The Iron and Steel MACT O&M plan requirements per 40 CFR 63.7800(b) are equivalent to AQD CO 1-2005. Both require the following:

a. Monthly inspections of the equipment that is important to the performance of the total capture system (*e.g.,* pressure sensors, dampers, and damper switches). This inspection must include observations of the physical appearance of the equipment (*e.g.,* presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in the ductwork, and fan erosion). The operation and maintenance plan also must include requirements to repair any defect or deficiency in the capture system before the next scheduled inspection.
b. Preventative maintenance for each control device, including a preventative maintenance schedule that is consistent with the manufacturer's instructions for routine and long-term maintenance

As such, AQD CO 1-2005 has been subsumed by 40 CFR 63.7800(b)

FGBOPSECONDARY-S1 S.C III.3 and **EU2BOF-VESSELS III.7** - The Iron and Steel MACT O&M plan requirements per 40 CFR 63.7800(b) are equivalent to AQD CO 1-2005. Both require the following:

a. Monthly inspections of the equipment that is important to the performance of the total capture system (*e.g.,* pressure sensors, dampers, and damper switches). This inspection must include observations of the physical appearance of the equipment (*e.g.,* presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in the ductwork, and fan erosion). The operation and maintenance plan also must include requirements to repair any defect or deficiency in the capture system before the next scheduled inspection.

b. Preventative maintenance for each control device, including a preventative maintenance schedule that is consistent with the manufacturer's instructions for routine and long-term maintenance

As such, AQD CO 1-2005 has been subsumed by 40 CFR 63.7800(b)

Please refer to Sections B, C, and D in the enclosed draft permit for detailed regulatory citations for the stationary source. Section A contains regulatory citations for General Conditions.

Non-applicable Requirements

Section G of the draft ROP lists requirements that are not applicable to this source as determined by the AQD, if any were proposed in the application. These determinations are incorporated into the permit shield provision set forth in Part A (general conditions 26 through 29) of the draft ROP pursuant to Rule 213(6)(a)(ii).

Processes in Application Not Identified in Draft RO Permit

The following table lists processes that were included in the RO permit application as exempt devices under R 336.1212(3) and (4). These processes are not subject to any process-specific emission limits or standards in any applicable requirement.

Exempt Emission Unit ID	Description of Exempt Emission Unit	ROP Exemption	NSR Permit Exemption
EUANNEAL-F-BLDG	F Bldg Annealing Furnaces (11 units)	R336.1212(3)(c)	R336.1282(a)(i)
EUANNEAL-E-BLDG	B Bldg Annealing Furnaces (10 units)	R336.1212(3)(c)	R336.1282(a)(i)
EUSANDBLASTING	Sandblasting	R336.1212(3)(b)	R336.1281(d)
EUANNEAL-H2-BLDG	J Bldg H2 Annealing Furnaces (9 units; 14 bases)	R336.1212(3)(c)	R336.1282(a)(i)
EUBOTTLE-CAR-REP	Bottle Car Repair Operations	R336.1212(4)(b)	R336.1282(b)(i)
EUCARPENTRY-SHOP	Carpenter Shop Operations	R336.1212(4)(d)	R336.1285(l)(iv)
EUFUEL-STORAGE	Fuel Station, Dispensing	R336.1212(4)(c)	R336.1284(g)
EULADLE-DRYOUT	Steel Ladle Maintenance Operations	R336.1212(4)(b)	R336.1282(b)(i)
EUINSIGNIFCNT-NG	Numerous Space Heaters	R336.1212(4)(b)	R336.1282(b)(i)
EUNo.4TANDEMCOLD	No.4 Tandem Cold Rolling Mill	R336.1212(3)(f)	R336.1285(l)(i)
EU1&2CONCASTER	Nos. 1 and 2 Continuous Casters	R336.1212(3)(f)	R336.1285(l)(i)
EUEMERGENCYGEN 6-S1	896 HP diesel emergency generator for CGL Hot Dip manufactured in 1999	R336.1212(4)(d)	R336.1285(g)

Draft RO Permit Terms/Conditions Not Agreed to by Applicant

The following table lists terms and/or conditions of the draft ROP that the AQD and the applicant did not agree upon and outlines the applicant's objections pursuant to Rule 214(2). The terms and conditions that the AQD believes are necessary to comply with the requirements of Rule 213 shall be incorporated into the ROP.

Section 1 – U.S. Steel

Visible emissions readings and associated recordkeeping

EUVDG-OPERATIONS-S1 V.1.; EUVDG-OPERATIONS-S1 VI.5.; EUBLAST-FCE-A1-S1 V.2.; EUBLAST-FCE-A1-S1 V.4; EUBLAST-FCE-A1-S1 V.5; EUBLAST-FCE-A1-S1 VI.3; EUBLAST-FCE-A1-S1 VI. 5.; EUBLAST-FCE-A1-S1 VI. 6; EUBLAST-FCE-B2-S1 V.2; EUBLAST-FCE-B2-S1 V.4; EUBLAST-FCE-B2-S1 V.5; EUBLAST-FCE-B2-S1 VI.4; EUBLAST-FCE-B2-S1 VI. 6; EUBLAST-FCE-B2-S1 VI.7; EUBLAST-FCE-D4-S1 V.2; EUBLAST-FCE-D4-S1 V.4; EUBLAST-FCE-D4-S1 V.5; EUBLAST-FCE-D4-S1 VI.3.; EUBLAST-FCE-D4-S1 VI.5; EUBLAST-FCE-D4-S1 VI.6; EU2BOP-

HMTDDESULF-S1 V.1; EU2BOP-HMTDDESULF-S1 V.3; EU2BOP-HMTDDESULF-S1 VI.3; EU2BOP-FLUX-SYS-S1 V.1; EU2BOP-FLUX-SYS-S1 VI.2; EUKISHWETTINGSTATION-S1; FG2BOP-SHOP-S1 V.1; FG2BOP-SHOP-S1 V.3; FG2BOP-SECONDARY-S1 V.1; FG2BOP-SECONDARY-S1 VI.1

Most of the above requirements relate to non-certified visible emissions observations and associated recordkeeping. In the May 5, 2014 working draft, AQD modified the conditions in the current ROP to require a certified visible emission reading if emissions are observed during a non certified reading.

U.S. Steel position: "Requiring Method 9 observations for every visible emission observation is overly burdensome and unnecessary…Recognizing DEQ's desire to have more frequent monitoring, however, USS maintains that its previously proposed normal/ abnormal observations by trained employees would ensure proper performance and should alleviate the DEQ's concerns."

> *U.S. Steel proposes the following "The permittee shall perform a non-certified visible notation of the No. 2 BOP roof monitors, including hot metal transfer, desulfurization operations, and slag skimming, for fugitive emissions at least once a week during the BOP shop operations. A trained employee shall record whether emissions are normal or abnormal.*
>
> *For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.*
>
> *In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.*
>
> *A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.*
>
> *If abnormal emissions are observed, the permittee shall take reasonable response. Failure to take response steps shall be considered a deviation of this permit.* ***(R336.1213(3))"***

AQD response: Assigning visible emissions as "abnormal" or "normal" is vague and unenforceable and USS cannot reasonably certify compliance with visible emission limits based on these terms. In addition, at very restrictive levels of opacity, such as 5%, the presence of any visible emissions is already at or above the limit.

The following special conditions: EUBLAST-FCE-A1-S1 V.4; EUBLAST-FCE-A1-S1 V.5; EUBLAST-FCE-A1-S1 VI. 5.; EUBLAST-FCE-A1-S1 VI. 6; EUBLAST-FCE-B2-S1 V.4; EUBLAST-FCE-B2-S1 V.5; EUBLAST-FCE-B2-S1 VI.5; EUBLAST-FCE-B2-S1 VI. 6; EUBLAST-FCE-D4-S1 V.4; EUBLAST-FCE-D4-S1 V.5; EUBLAST-FCE-D4-S1 VI.5.; EUBLAST-FCE-D4-S1 VI.6; FG2BOP-SHOP-S1 V.3 and FG2BOP-SHOP-S1 VI.6 are certified visible emissions requirements and associated recordkeeping that AQD added to the May 5, 2014 draft to determine compliance with visible emission limits for blast furnace safety valves (bleeder stacks) during start up, shut down, and unplanned events, the blast furnace stove stacks, and hot metal beaching activities.

U.S. Steel position: "Severstal is a separate facility from Great Lakes Works and accordingly, MDEQ has prepared a separate Title V for them. It is not appropriate to assign Severstal requirements to Great Lakes Works and vice versa simply for consistency. These facilities are not identical and requirements should be assessed on an individual basis. These additional requirements are overly burdensome and the requirements of the March 7, 2014 draft ROP are adequate."

AQD response: Blast furnace bleeder stacks, stove stacks, and beaching activities are all known emission sources at integrated iron and steel mills that have a high potential to release visible emissions and particulate matter. Additionally, AQD has documented visible emissions exceedances from each of

these activities from steel mill operations in the past. Furthermore, citizen complaints about US Steel operations related to Zug Island have been generally attributable to visible emissions from bleeder stacks. As such, the requirement to take certified visible emissions readings and maintain a log of openings is necessary to demonstrate compliance with opacity limits. Finally, the other integrated iron and steel mill in Wayne County is subject to these same requirements.

Deviation reporting
EUVDG-OPERATIONS-S1 VI.4 and EUEGL-STO-TANKS-S1 VI.1

These conditions define normal operating ranges/values for pressure drop and water flow rates. The current ROP states that operating outside of the specified ranges is not a deviation if appropriate corrective action is subsequently taken. AQD has removed this language in the May 5, 2014 draft renewal so that operating outside of or below these values is a deviation.

U.S. Steel position: "U. S. Steel requests that the deviation language be re-inserted into the current ROP draft. This language/concept has been deemed appropriate by EPA Region 5 for other U. S. Steel facilities for certain processes/equipment. In the case of the above equipment, as long as corrective action is taken as appropriate to maintain the pressure drop range and water flow rate then the equipment is meeting permitting requirements and reporting of deviations would be excessive."

AQD's response: Correcting a deviation after it occurs does not expunge the deviation. Additionally, these conditions require a reading to be recorded once per day. At this frequency, AQD does not see a reason why "excessive" deviations would be reported under this scenario.

CAM requirements
EUCON-GALV-LINE-S1 VI.1; EUCON-GALV-LINE-S1 VI.3; EUCON-GALV-LINE-S1 VI.4

AQD added these requirements directly from the Compliance Assurance Monitoring (CAM) plan submitted by U.S. Steel with their Title V renewal application.

U.S. Steel Position: "Inlet temperature of the gas entering the SCR is routinely below 475F so the minimum indicator range cannot be specified at 475F. These temperatures are seen when the furnace is in idle conditions. Additionally the furnace is regularly tuned to efficiently combust natural gas, reducing the amount of natural gas required and lowering exhaust temperatures. U. S. Steel is unable to continuously monitor NOx. There is not a certified CEMS to continuously monitor NOx at the annealing furnace. U. S. Steel requests that the existing ROP language remain."

AQD response: Facility is not permitted to operate the annealing furnace without the SCR in operation and injecting urea. Facility has specified that 475F is the minimum temperature needed for a reaction to occur. Additionally, the facility has recently demonstrated through stack testing that the NOx hourly limits cannot be met without SCR injection. Until the permit to install is modified to allow operation without the SCR, deviations must be reported. Facility already continuously monitors the NOx outlet concentration. AQD has simply added a corresponding recordkeeping requirement.

Stack Testing
FGBLASTFURNACES-A1,B2&D4-S1 V.2

AQD added the requirement to derive emission factors (lb/ton) through stack testing for each operating blast furnace from PTI 256-02.

U.S. Steel position: "The performance testing of the blast furnace baghouses are accounted for under the individual blast furnace unit requirements. Therefore, the testing requirement should be removed from this section."

AQD response: Performance testing required in the individual blast furnace emission units only requires testing to show compliance with the associated emission limits which are in the units of lb/hr and gr/dscf. PTI 256-02 created the FLEXGROUP FGBLASTFURANCES and included a requirement to calculate yearly emissions using a lb/ton PM emission factor which is memorialized in the Appendix to the PTI. There is an associated stack testing requirement in PTI 256-02 that requires testing to derive a lb/ton emission factor. This is why AQD has included this condition in the FGBLASTFURNACES.

Consent Order Conditions

FG2BOP-SECONDARY-S1 III.1 - The permittee shall maintain methods to further control emissions from hot metal charging which are captured by the secondary hoods and baghouse system. These methods include hot metal pouring technique and vessel angle to improve emission capture[1]. **(CO No. 0035-97, Section F, Paragraph 26, R336.1901)**

U.S. Steel position: "Consent order No. 0035-97 became effective June 3, 1999. This condition was required when the consent order was required and is no longer applicable. USS demonstrates compliance with the limits established in the permit with existing controls; therefore, further control of emissions is not required. It is unnecessary to include this requirement in the permit when the actions required by the consent order have already been completed."

AQD response**:** Company should void consent order if conditions are no longer valid. No demonstration has been provided that methods including hot metal pouring technique and vessel angle are not necessary to demonstrate compliance and should therefore be maintained.

Emission Calculations

Appendix 7-S1 Fugitive (Roof Monitor) Emissions - Appendix 7-S1 is the fugitive emissions calculations that are from PTI 256-02, Appendix A.

U.S. Steel position: Instead of using the AP-42 factor found on table 12.5-2, fugitive dust at the roof monitor is more accurately calculated by using known efficiencies at the casthouse(s) and baghouse(s). Using an AP-42 overall average of industry standards does not estimate PM and PM_{10} emissions as accurately as the method detailed above.

AQD response: The Appendix 7-S1 is the agreed upon methodology for calculating emissions that was included in PTI 256-02. If the facility wants to change the calculation, a permit to install modification is needed.

Section 2 - None

Section 3 - None

Section 4 - None

Section 5 - EUPI-COAL-TRANS VI.4

Visible emissions readings and associated recordkeeping

This requirement relates to non-certified visible emissions observations and associated recordkeeping. In the May 5, 2014 working draft, AQD modified the conditions in the current ROP to require a certified visible emission reading if emissions are observed during a non certified reading.

U.S. Steel position: "Requiring Method 9 observations for every visible emission observation is overly burdensome and unnecessary. The semi-annual certified Method 9 visible emission observation requirement is sufficient to monitor compliance with the permit limits. Recognizing DEQ's desire to have more frequent monitoring, however, USS maintains that its previously proposed normal/ abnormal

observations by trained employees would ensure proper performance and should alleviate the DEQ's concerns."

U.S. Steel proposes the following "The permittee shall perform a non-certified visible notation of the No. 2 BOP roof monitors, including hot metal transfer, desulfurization operations, and slag skimming, for fugitive emissions at least once a week during the BOP shop operations. A trained employee shall record whether emissions are normal or abnormal.

For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

If abnormal emissions are observed, the permittee shall take reasonable response. Failure to take response steps shall be considered a deviation of this permit. ***(R336.1213(3))"***

AQD position: Assigning visible emissions as "abnormal" or "normal" is vague and unenforceable and USS cannot reasonably certify compliance with visible emission limits based on these terms. In addition, at very restrictive levels of opacity, such as 5%, the presence of any visible emissions is already at or above the limit.

Compliance Status

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements at the time of issuance of the ROP except for requirements listed in Appendix 2 of the draft ROP. The table in Appendix 2 contains a Schedule of Compliance developed pursuant to Rule 119(a)(i). The applicant must adhere to this schedule and provide the required certified progress reports at least semiannually or in accordance with the schedule in the table. A Schedule of Compliance for any applicable requirement that the source is not in compliance with at the time of permit issuance is supplemental to, and shall not sanction non-compliance with, the applicable requirements on which it is based.

Action Taken by the Department

The AQD proposes to approve this permit. A final decision on the ROP will not be made until the public and affected states have had an opportunity to comment on the AQD's proposed action and draft permit. In addition, the U.S. Environmental Protection Agency (USEPA) is allowed up to 45 days to review the draft permit and related material. The AQD is not required to accept recommendations that are not based on applicable requirements. The delegated decision maker for the AQD is Teresa Seidel, Field Operations Supervisor. The final determination for ROP approval/disapproval will be based on the contents of the permit application, a judgment that the stationary source will be able to comply with applicable emission limits and other terms and conditions, and resolution of any objections by the USEPA.