NUCOR
BAR MILL GROUP
PLYMOUTH DIVISION

June 2, 2020

Utah Division of Air Quality
Attn: Bryce Bird
PO Box 144820
195 North 1950 West
Salt Lake City, Utah 84116

VIA Electronic Submittal Through UDAQ Web

Re: Notice of Intent – New Carbon and Flux Handling System

Dear Mr. Bird:

Enclosed please find our Notice of Intent for a planned system that will allow us to increase the efficiency of our recycling operation. This new installation would provide the ability to add coal and flux to our Electric Arc Furnace charge buckets in an automated system, as well as add an improved method of unloading delivered coal to existing storage silos.

The emissions from the new installations are negligible. Language in both the existing Approval Order and Title V permit require only slight modification to include a description of the equipment to be installed. Existing monitoring and recordkeeping requirements included in these permits already covers the installation.

If you have any questions please do not hesitate to contact Doug Jones at (435) 458-2415.

In accordance with UAC R307-415-5c and UAC R307-415-5d, I hereby certify that based on information and belief formed after reasonable inquiry that the statements and information in this document are true, accurate, and complete.

Sincerely,

Chris Locke
General Manager
Nucor Steel Utah

Notice of Intent

Flux and Coal Charge Bucket

Loading System

Introduction

Nucor Steel Utah is a steel recycling operation located in Northeastern Box Elder County, Utah, just outside of the town of Plymouth. Our facility utilizes scrap steel as the primary raw material to manufacture new steel products. Scrap steel recycling facilities are "Mini Mill's", as opposed to mills that manufacture steel from iron ore, referred to as "Integrated Mills". The Nucor Plymouth facility manufactures steel bar products including rebar and shapes. The Mini Mill process utilizes Electric Arc Furnaces to melt scrap steel and cast the steel into billets. Billets are stored in an inventory, then reheated in a reheat furnace and passed through a rolling mill where it is shaped into the final products.

In addition to scrap steel, other raw materials are necessary in the melting process. These materials include alloys, carbon, and fluxes, which assure proper chemistry of the final products manufactured. These additional materials can be added in a variety of ways including with the initial furnace charge, injected into a furnace, or in a ladle that has been tapped from the furnace.

Nucor Steel Utah historically has added the additional raw materials using all above methods. The material handling for these operations are conducted within a building, or in bulk operations outdoors. The building is evacuated to a baghouse which controls emissions from the furnaces, and ancillary operations associated with the meltshop operation, including material handling inside the building are also managed by the baghouse. An allowance is included for less than 100% capture by the building when previously estimating emissions. The Nucor operation will continue to utilize all methods for addition of alloys and fluxes.

This Notice of Intent specifically addresses a new system for adding fluxes and carbon (coal) to the arc furnaces. The system would add lime, dolomitic lime, and coal directly to a steel scrap charge bucket, which is loaded with scrap steel. The method of adding flux and carbon is not new and has historically been done at the operation within the building. However, the new location where the material will be added, while still within the building, is adjacent to an open doorway. It's anticipated that emissions to the atmosphere could result, and that control of these emissions is warranted. In addition, a new railcar/truck unloading point will be a part of the new installation. While this unloading system is completed within the building attached to the meltshop, it is anticipated that emissions to the atmosphere could occur. Nucor will be adding emission control to the unloading point as part of the design

This Notice of Intent addresses the emissions associated with the charge bucket flux and carbon loading system, the planned controls, and resulting emissions to the atmosphere.

Description of Proposal

The charge bucket loading system will consist of a hopper inside the existing building that will drop material into the charge bucket. The hopper is to be loaded with an ondoor conveyor system fed from existing silos for both carbon and fluxes. The conveyor includes scales for the materials that measure the amount of material to a predetermined amount. Scrap steel is loaded to a charge bucket outdoors. There will be no change to this procedure. Scrap steel from stockpiles is loaded to the bucket utilizing a crane on rail moving a scrap bucket on a railcar. Once loaded from outdoor scrap steel storage locations, the bucket is transferred to inside the building with the rail crane. With the new process, the bucket will first be located under the newly installed hopper. The flux and carbon will be loaded to the charge bucket from the hopper. The rail car mounted charge bucket will then be moved further inside the building where it can removed from the railcar with an overhead crane. The overhead crane transfers the steel with flux and carbon additives to the Electric Arc Furnace(s).

Coal and fluxes are currently received by railcar and by truck. They may be unloaded by end dump trucks where the material is added to stockpiles. They may also currently be received by belly dump railcars and trucks where the materials are added to silos or indoor stockpiles. The new system will add a new belly dump unloading point for bulk carbon where it would be transferred to existing silos. Lime will be unloaded to existing unloading points and transferred to existing silos.

It is anticipated that both the new unloading point and charge bucket loading point could result in emissions to the atmosphere. Each point, being located near open doorways, may have emissions that could be controlled by incorporating that intent into the design. The design therefore includes planned controls to aide in the capture of emissions.

The charge bucket loading system includes a hood surrounding the drop point. The hood includes an evacuation duct so that the hood is under negative pressure. Exhaust from the negative pressure system, which would include captured emissions, would be exhausted at a point in the building that is evacuated to the existing EAF baghouse. The fan to create negative pressure within the hood would operate if found necessary to meet visible emission requirements.

The carbon unloading point design will include an extension of the building that would increase the distance from an open doorway. The emissions from the unloading operation are substantially controlled at the onset by utilizing a drop to a below grade pit and a bucket elevator system to load existing silos. The belly dump to a pit method of unloading is effective in minimizing drop distances, as well as ambient wind exposure to falling material. The building extension to be completed as part of the installation further minimizes potential wind exposure, as well as increases containment of any resulting emissions to a building that is evacuated to the EAF baghouse.

See Attachment 1 for drawing s of the installations.

Emission Calculations

Emission Calculations are included in Attachment 2.

A summary of the resulting controlled emissions are:

	PM10	PM2.5	
Coal Unloading	0.908593	0.137587	lb/year
Coal Charge Bucket Loading	0.908593	0.137587	lb/year
Lime Charge Bucket Loading	13.61307	2.061407	lb/year
Total	15.43025	2.336581	lb/year

Note the units are in lbs/year (not tons per year). These emissions are negligible.

BACT Emission Controls

The Approval Order issued to Nucor already includes requirements for material handling that have been developed to meet BACT. Condition II.B.2.d of the existing Approval Order dated December 2018 includes the following language:

Water sprays shall be installed to ensure all conveyor transfer points and batching equipment drop points are adequately controlled for fugitive emissions.

An alternative to water sprays for items listed above may be to enclose the transfer points.

The Title V permit, dated March 2019, also contains BACT related language in condition II.B.1.e. This language is more specific in that it describes enclosure of transfer points.

All conveyor transfer points and batching equipment drop points shall either be enclosed (3 sides and a roof minimum) or be equipped with water sprays.....

Note: Adding water to material that is charged to EAF's is best avoided to avoid the possibilities of steam explosions.

Nucor is not adding new or added amounts of raw materials in the manufacture of its steel products. No new or additional fluxes or carbon is to be used to make the planned steel products. Both the unloading point and the charge bucket loading points would already meet the requirements of permit language without any further design considerations for emission controls other than locating them in the existing building. However, given the proximity to open doorways for both points without incorporation of added emission control considerations, Nucor anticipates that additional emissions

could occur. Improved emission control is achieved by increasing the building size to more thoroughly contain the unloading point, and incorporating a hood with evacuation to operate as necessary for the discharge point.

Further requirements related to emission control are already included in the permit(s) in the form of opacity limitations of 15% for fugitive emissions.

It is noted here too that while new emission points are being added, material is handled here as an alternative to locations where it is presently handled. The material throughput is not increased. Adding emission controls triggers Notice of Intent requirements.

Recommended Permit Language Modifications

Both the existing Approval Order and the Title V permit contain language that would be applicable to the control of emissions described in the BACT section above. Condition II.A.10 of the Approval Order language can be modified to:

II.A.10 Alloy, *Coal, and Flux* Unloading, Storage, and *Charge Bucket Loading*

A. Northeast Rail Station
B. Meltshop Station*(s)*

Condition II.A.6 of the Title V permit can be modified to:

II A.6. Unit #8 Alloy, *Flux, and Coal* Handling

Includes dust from *raw material*, delivery, storage, and transfer to charge bucket

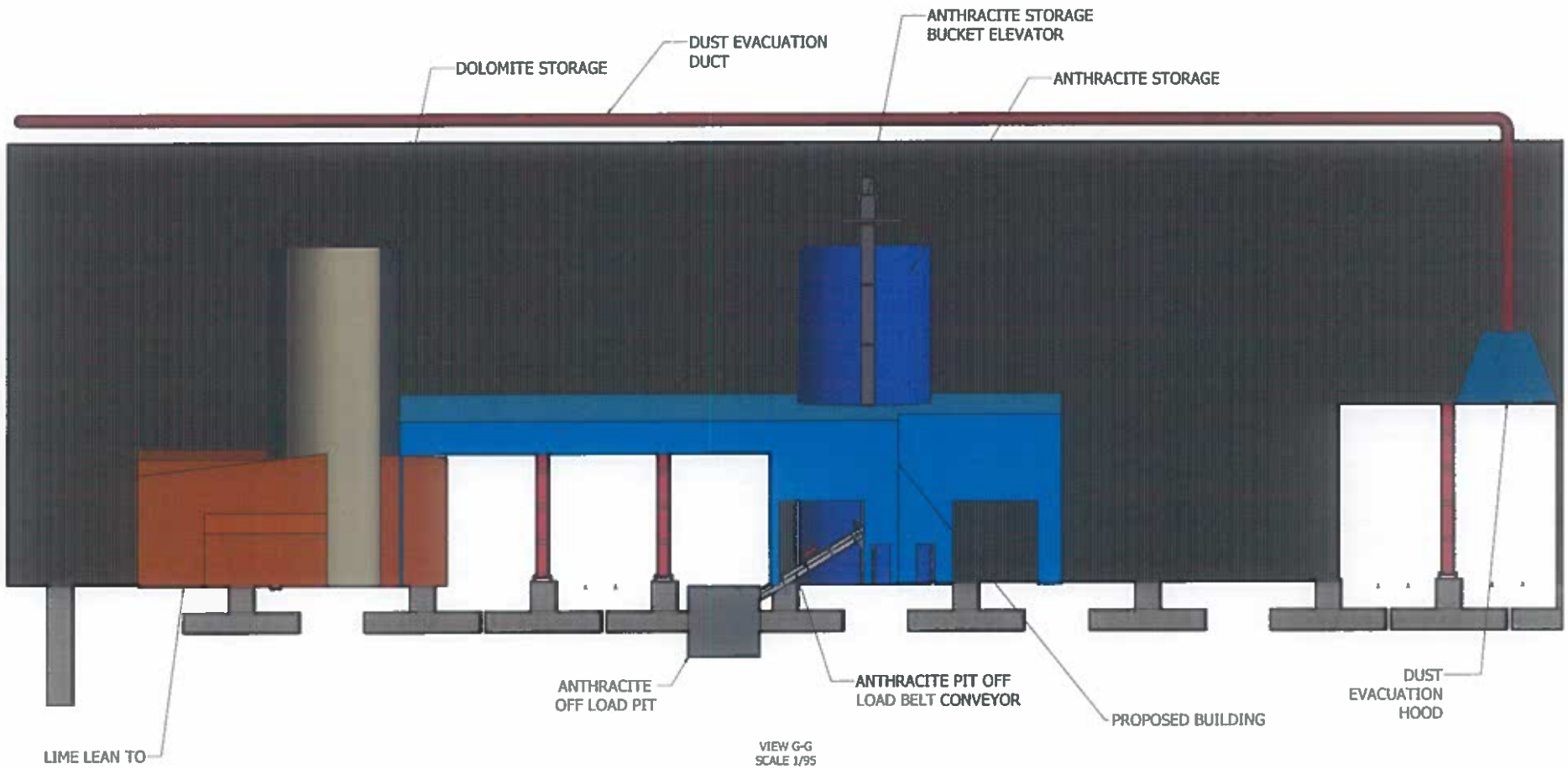
In both cases the addition of language in italics is a better, more complete, description of raw materials that are currently utilized.

Conclusion

Nucor proposes to add new material handling emission points to the Plymouth operations. The new points allow for alternative methods to be added for the addition of carbon and flux to be added to the EAF's. Emission control considerations are part of the new installations. These new material handling points include emission control in the design.

Attachment 1

Drawings Including New Installations



VIEW G-G
SCALE 1/95

GENERAL TOLERANCES

UNLESS OTHERWISE SPECIFIED

GENERAL NOTES

REMOVE ALL BURRS
BREAK ALL SHARP EDGES
DO NOT SCALE FROM DRAWING

REFERENCE DRAWINGS

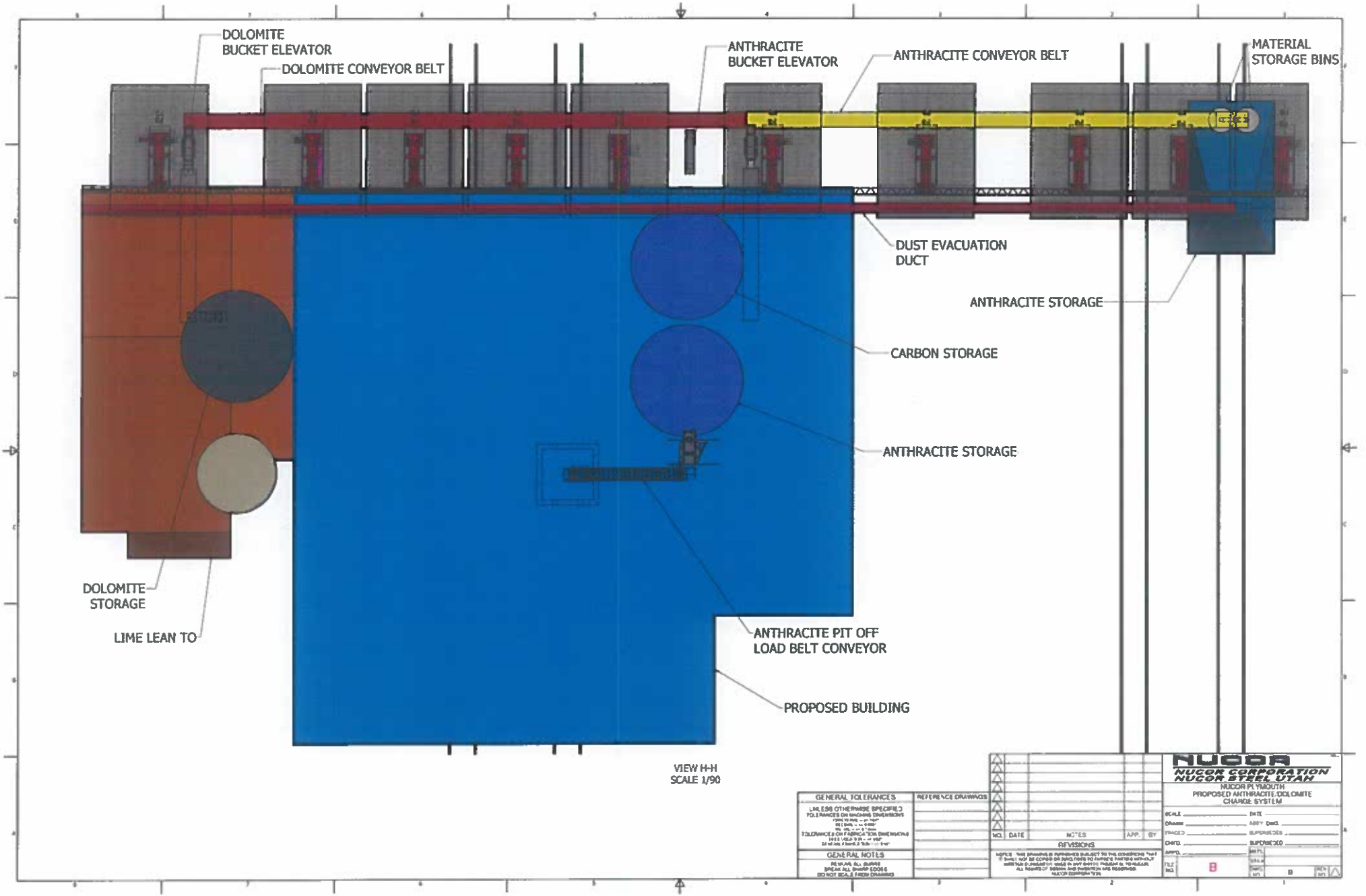
NO.	DATE	NOTES	APP.	BY

REVISIONS

NUCOR
NUCOR CORPORATION
NUCOR STEEL UTAH

NUCOR PLYMOUTH
PROPOSED ANTHRACITE/DOLO
CHARGE SYSTEM

SCALE _____ DATE _____
DRAWN _____ ASSY. DWG. _____
TRACED _____ SUPERVISOR _____
CHK'D. _____ SUPERVISOR _____
APP'D. _____ MATL. _____
FILE NO. A STK.# _____
DWG. NO. A REV NO.



VIEW H-H
SCALE 1/90

GENERAL TOLERANCES

GENERAL NOTES

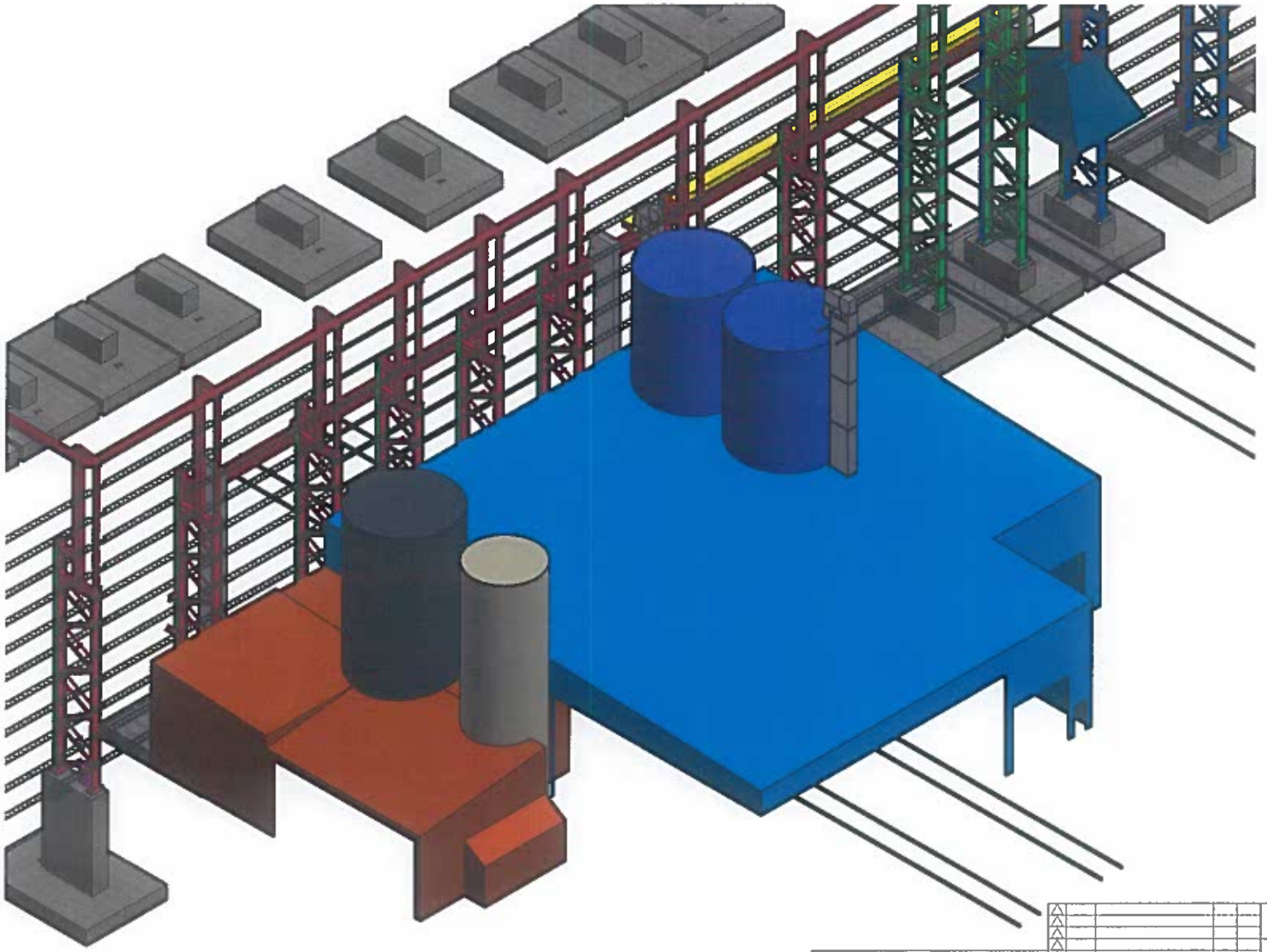
REFERENCE DRAWINGS

REVISIONS

NUCOR

NUCOR CORPORATION
NUCOR STEEL UTAH

NUCOR PLYMOUTH
PROPOSED ANTHRACITE/DOLOMITE
CHARGE SYSTEM



GENERAL TOLERANCES

UNLESS OTHERWISE SPECIFIED
TOLERANCES ON MACHINE DIMENSIONS
TOLERANCES ON FABRICATION DIMENSIONS

GENERAL NOTES

REMOVE ALL BURRS
BREAK ALL SHARP EDGES
DO NOT SCALE FROM DRAWING

REFERENCE DRAWINGS

NO.	DATE	NOTES	APP.	BY

REVISIONS

NUCOR
NUCOR CORPORATION
NUCOR STEEL UTAH

NUCOR PLYMOUTH
PROPOSED ANTHRACITE/DOLOMITE
CHARGE SYSTEM

SCALE
DRAWN
TRACED
CHK'D.
APP'D.
FILE NO.
C
DATE
ASSY (MK)
SUPERCEDES
SUPERCEDED
WEIGHT
SHEET
SIZE
C
REV

Attachment 2

Emission Calculations

New Railcar and Truck Coal Unloading Station
Charge Bucket Loading System
Maximum Annual Throughput Coal Unload/Load 15,000 tpy
Flux through new system 25,000 tpy
Emission Factor Reference

AP42 13.2.4 $E = k(0.0032)(U/5)^{1.3}/(M/2)^{1.4}$ lb/ton

K= particle Size 0.35 PM10
0.053 PM2.5

U= Wind Speed 8 mph unobstructed average assumed
M=Moisture 4.8 % Table 13.2.4-1 Coal - Average
1 % Estimated for Lime/Dolomitic Lime

Uncontrolled Emissions

	PM10	PM2.5	
Coal Unloading	9.085933	1.37587	lb/year
Coal Charge Bucket Loading	9.085933	1.37587	lb/year
Lime Charge Bucket Loading	136.1307	20.61407	lb/year
Total	154.3025	23.36581	lb/year

Controlled Emissions

90% Control estimated at unloading point by the hopper to pit unloading and wind exposure minimization due to building extension enclosure

90% Control estimated at charge bucket loading system by point being within a building, and a hood over the drop point and evacuated to main baghouse

	PM10	PM2.5	
Coal Unloading	0.908593	0.137587	lb/year
Coal Charge Bucket Loading	0.908593	0.137587	lb/year
Lime Charge Bucket Loading	13.61307	2.061407	lb/year
Total	15.43025	2.336581	lb/year

State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

Alan Matheson
Executive Director

DIVISION OF AIR QUALITY
Bryce C. Bird
Director

10008

Title V Operating Permit

PERMIT NUMBER: 300002003
DATE OF PERMIT: October 15, 2015
Date of Last Revision: March 8, 2019

This Operating Permit is issued to, and applies to the following:

Name of Permittee:

Nucor Steel
PO Box 100
Plymouth, UT 84330

Permitted Location:

Nucor Steel
West Nucor Rd
PO Box 100
Plymouth, UT 84330

UTM coordinates: 401000 m Easting, 4637500 m Northing
SIC code: 3312 (Steel Works, Blast Furnaces (Including Coke Ovens), & Rolling Mills)

By:

_____
Bryce C. Bird, Director

Prepared By:

_____
Mr. William Andes

195 North 1950 West • Salt Lake City, UT
Mailing Address: P.O. Box 144820 • Salt Lake City, UT 84114-4820
Telephone (801) 536-4000 • Fax (801) 536-4099 • T.D.D. (801) 903-3978
www.deq.utah.gov

ENFORCEABLE DATES AND TIMELINES

The following dates or timeframes are referenced in Section I: General Provisions of this permit.

Annual Certification Due:	January 28 and on that date of every calendar year that this permit is in force.
Renewal application due:	April 15, 2020
Permit expiration date:	October 15, 2020
Definition of "prompt":	written notification within 14 days.

ABSTRACT

Nucor Steel is an Electric Arc Furnace (EAF) shop, commonly known as a minimill. The facility is a recycling center which utilizes scrap steel as a raw feedstock. Scrap steel is purchased from a number of sources and sorted. The steel is loaded into charge buckets and transported to one of two EAFs. Oxyfuel burners and electricity are used to melt the steel into a liquid form. Alloys are added until the desired metallurgy is achieved. The molten material is then continuously molded and cut into billets for stockpiling. The billets are then reheated and transferred to the rolling mill to be shaped and shipped to the customer. Nucor is subject to 40 CFR 60, Subpart A, General Provisions; 40 CFR 60, Subpart AAa, Standards of Performance for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 17, 1983; 40 CFR 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI RICE); 40 CFR 60, Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (SI RICE); 40 CFR 63, Subpart A, General Provisions; 40 CFR 63, Subpart CCCCCC, Gasoline Dispensing Facility; 40 CFR 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines; 40 CFR 63, Subpart YYYYY, Electric Arc Furnace Steelmaking Facilities; and 40 CFR 64, CAM. Nucor is a major source of sulfur dioxide, oxides of nitrogen, PM_{10}, PM2.5, carbon monoxide, and VOC. Nucor is an area source of HAPs

OPERATING PERMIT HISTORY

Permit/Activity	Date Issued	Recorded Changes
Title V administrative amendment by DAQ (Project #OPP0100080017)	3/8/2019	Changes: Incorporates DAQE-AN100080043-18.
Title V administrative amendment by DAQ (Project #OPP0100080016)	08/28/2018	Changes: Incorporates DAQE-AN100080041-18.
Title V administrative amendment - enhanced AO (Project #OPP0100080015)	11/13/2017	Changes: Incorporates DAQE-AN100080040-17.
Title V administrative amendment by DAQ (Project #OPP0100080014)	02/14/2017	Changes: Update applicable requirements and incorporates DAQE-AN100080038-16 and State SIP requirements.
Title V administrative amendment by DAQ (Project #OPP0100080013)	02/08/2016	Changes: Update applicable requirements and incorporates DAQE-AN100080034-15
Title V renewal application (Project #OPP0100080012)	10/15/2015	Changes: Update applicable requirements and incorporates DAQE-AN100080034-15
Title V administrative amendment by DAQ (Project #OPP0100080011)	07/21/2014	Changes: Changes: Incorporates updated CAM Plan dated 6/4/2014
Title V administrative amendment - enhanced AO (Project #OPP0100080010)	03/27/2014	Changes: Changes: Incorporates DAQE-AN100080030-13
Title V renewal application (Project #OPP0100080009)	12/30/2010	Changes: Changes: Incorporates DAQE-AN0100080029-10; 40 CFR 63, Subpart CCCCCC; 40 CFR 63, Subpart ZZZZ; 40 CFR 63, Subpart YYYYY; and 40 CFR 64.
Title V administrative amendment by DAQ (Project #OPP0100080008)	08/09/2007	Changes: Incorporates changes approved in DAQE-AN0100080024-07, dated June 8, 2007, including the following: SO_2, NO_x, CO, VOC limit changes on the EAF Baghouse Vent (Unit #9); NO_x limit changes on the Billet Reheat Furnace #1 and #2 (Unit #13, 14); addition of CEM for SO_2, NO_x, CO limits on the EAF Baghouse Vent (Unit #9); addition of opacity limit on the Billet Reheat Furnace #1 and #2 (Unit #13, 14); removal of scrap steel feed limit and initial performance testing requirement on the Electric Arc Furnaces (Unit #EAF 1 & 2); clarification rather than referencing rule on abrasive blasting condition for Sandblasting operations (Unit #SAND). BLDS language from NSPS Subpart AAa was added to the opacity monitoring for EAF Baghouse Vent (Unit #9). Typographical and language errors in this permit were also corrected.
Title V administrative	11/15/2004	Changes: To incorporate changes to NSPS applicability by

amendment by source (Project #OPP0100080004)		changes already allowed by DAQE-787-01 (9/14/01).
Title V administrative amendment by source (Project #OPP0100080002)	10/23/2001	Changes: To incorporate new and modified requirements from DAQE-787-01. The changes are detailed in an engineering review comment in this permit.
Title V initial application (Project #OPP0100080001)	09/19/2000	Changes: Enter project description here.

Table of Contents

Issued under authority of Utah Code Ann. Section 19-2-104 and 19-2-109.1, and in accordance with Utah Administrative Code R307-415 Operating Permit Requirements.

All definitions, terms and abbreviations used in this permit conform to those used in Utah Administrative Code R307-101 and R307-415 (Rules), and 40 Code of Federal Regulations (CFR), except as otherwise defined in this permit. Unless noted otherwise, references cited in the permit conditions refer to the Rules.

Where a permit condition in Section I, General Provisions, partially recites or summarizes an applicable rule, the full text of the applicable portion of the rule shall govern interpretations of the requirements of the rule. In the case of a conflict between the Rules and the permit terms and conditions of Section II, Special Provisions, the permit terms and conditions of Section II shall govern except as noted in Provision I.M, Permit Shield.

SECTION I: GENERAL PROVISIONS

I.A **Federal Enforcement.**

All terms and conditions in this permit, including those provisions designed to limit the potential to emit, are enforceable by the EPA and citizens under the Clean Air Act of 1990 (CAA) except those terms and conditions that are specifically designated as "State Requirements". (R307-415-6b)

I.B **Permitted Activity(ies).**

Except as provided in R307-415-7b(1), the permittee may not operate except in compliance with this permit. (See also Provision I.E, Application Shield)

I.C **Duty to Comply.**

I.C.1 The permittee must comply with all conditions of the operating permit. Any permit noncompliance constitutes a violation of the Air Conservation Act and is grounds for any of the following: enforcement action; permit termination; revocation and reissuance; modification; or denial of a permit renewal application. (R307-415-6a(6)(a))

I.C.2 It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. (R307-415-6a(6)(b))

I.C.3 The permittee shall furnish to the Director, within a reasonable time, any information that the Director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director copies of records required to be kept by this permit or, for information claimed to be confidential, the permittee may furnish such records directly to the EPA along with a claim of confidentiality. (R307-415-6a(6)(e))

I.C.4 This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance shall not stay any permit condition, except as provided under R307-415-7f(1) for minor permit modifications. (R307-415-6a(6)(c))

I.D **Permit Expiration and Renewal.**

I.D.1 This permit is issued for a fixed term of five years and expires on the date shown under "Enforceable Dates and Timelines" at the front of this permit. (R307-415-6a(2))

I.D.2 Application for renewal of this permit is due on or before the date shown under "Enforceable Dates and Timelines" at the front of this permit. An application may be submitted early for any reason. (R307-415-5a(1)(c))

I.D.3 An application for renewal submitted after the due date listed in I.D.2 above shall be accepted for processing, but shall not be considered a timely application and shall not relieve the permittee of any enforcement actions resulting from submitting a late application. (R307-415-5a(5))

I.D.4 Permit expiration terminates the permittee's right to operate unless a timely and complete renewal application is submitted consistent with R307-415-7b (see also Provision I.E, Application Shield) and R307-415-5a(1)(c) (see also Provision I.D.2). (R307-415-7c(2))

I.E **Application Shield.**

If the permittee submits a timely and complete application for renewal, the permittee's failure to have an operating permit will not be a violation of R307-415, until the Director takes final action on the permit renewal application. In such case, the terms and conditions of this permit shall remain in force until permit renewal or denial. This protection shall cease to apply if, subsequent to the completeness determination required pursuant to R307-415-7a(3), and as required by R307-415-5a(2), the applicant fails to submit by the deadline specified in writing by the Director any additional information identified as being needed to process the application. (R307-415-7b(2))

I.F **Severability.**

In the event of a challenge to any portion of this permit, or if any portion of this permit is held invalid, the remaining permit conditions remain valid and in force. (R307-415-6a(5))

I.G **Permit Fee.**

I.G.1 The permittee shall pay an annual emission fee to the Director consistent with R307-415-9. (R307-415-6a(7))

I.G.2 The emission fee shall be due on October 1 of each calendar year or 45 days after the source receives notice of the amount of the fee, whichever is later. (R307-415-9(4)(a))

I.H **No Property Rights.**

This permit does not convey any property rights of any sort, or any exclusive privilege. (R307-415-6a(6)(d))

I.I **Revision Exception.**

No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit. (R307-415-6a(8))

I.J **Inspection and Entry.**

I.J.1 Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director or an authorized representative to perform any of the following:

I.J.1.a Enter upon the permittee's premises where the source is located or emissions related activity is conducted, or where records are kept under the conditions of this permit. (R307-415-6c(2)(a))

I.J.1.b Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit. (R307-415-6c(2)(b))

I.J.1.c Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practice, or operation regulated or required under this permit. (R307-415-6c(2)(c))

I.J.1.d Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with this permit or applicable requirements. (R307-415-6c(2)(d))

I.J.2 Any claims of confidentiality made on the information obtained during an inspection shall be made pursuant to Utah Code Ann. Section 19-1-306. (R307-415-6c(2)(e))

I.K **Certification.**

Any application form, report, or compliance certification submitted pursuant to this permit shall contain certification as to its truth, accuracy, and completeness, by a responsible official as defined in R307-415-3. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. (R307-415-5d)

I.L **Compliance Certification.**

I.L.1 Permittee shall submit to the Director an annual compliance certification, certifying compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. This certification shall be submitted no later than the date shown under "Enforceable Dates and Timelines" at the front of this permit, and that date each year following until this permit expires. The certification shall include all the following (permittee may cross-reference this permit or previous reports): (R307-415-6c(5))

I.L.1.a The identification of each term or condition of this permit that is the basis of the certification;

I.L.1.b The identification of the methods or other means used by the permittee for determining the compliance status with each term and condition during the certification period. Such methods and other means shall include, at a minimum, the monitoring and related recordkeeping and reporting requirements in this permit. If necessary, the permittee also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Act, which prohibits knowingly making a false certification or omitting material information;

I.L.1.c The status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the method or means designated in Provision I.L.1.b. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 occurred; and

I.L.1.d Such other facts as the Director may require to determine the compliance status.

I.L.2 The permittee shall also submit all compliance certifications to the EPA, Region VIII, at the following address or to such other address as may be required by the Director: (R307-415-6c(5)(d))

Environmental Protection Agency, Region VIII
Office of Enforcement, Compliance and Environmental Justice
(mail code 8ENF)
1595 Wynkoop Street
Denver, CO 80202-1129

I.M **Permit Shield.**

I.M.1 Compliance with the provisions of this permit shall be deemed compliance with any applicable requirements as of the date of this permit, provided that:

I.M.1.a Such applicable requirements are included and are specifically identified in this permit, or (R307-415-6f(1)(a))

I.M.1.b Those requirements not applicable to the source are specifically identified and listed in this permit. (R307-415-6f(1)(b))

I.M.2 Nothing in this permit shall alter or affect any of the following:

I.M.2.a The emergency provisions of Utah Code Ann. Section 19-1-202 and Section 19-2-112, and the provisions of the CAA Section 303. (R307-415-6f(3)(a))

I.M.2.b The liability of the owner or operator of the source for any violation of applicable requirements under Utah Code Ann. Section 19-2-107(2)(g) and Section 19-2-110 prior to or at the time of issuance of this permit. (R307-415-6f(3)(b)

I.M.2.c The applicable requirements of the Acid Rain Program, consistent with the CAA Section 408(a). (R307-415-6f(3)(c))

I.M.2.d The ability of the Director to obtain information from the source under Utah Code Ann. Section 19-2-120, and the ability of the EPA to obtain information from the source under the CAA Section 114. (R307-415-6f(3)(d))

I.N **Emergency Provision.**

I.N.1 An "emergency" is any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error. (R307-415-6g(1))

I.N.2 An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the affirmative defense is demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

I.N.2.a An emergency occurred and the permittee can identify the causes of the emergency. (R307-415-6g(3)(a))

I.N.2.b The permitted facility was at the time being properly operated. (R307-415-6g(3)(b))

I.N.2.c During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in this permit. (R307-415-6g(3)(c))

I.N.2.d The permittee submitted notice of the emergency to the Director within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. This notice fulfills the requirement of Provision I.S.2.c below. (R307-415-6g(3)(d))

I.N.3 In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof. (R307-415-6g(4))

I.N.4 This emergency provision is in addition to any emergency or upset provision contained in any other section of this permit. (R307-415-6g(5))

I.O **Operational Flexibility.**

Operational flexibility is governed by R307-415-7d(1).

I.P **Off-permit Changes.**

Off-permit changes are governed by R307-415-7d(2).

I.Q **Administrative Permit Amendments.**

Administrative permit amendments are governed by R307-415-7e.

I.R **Permit Modifications.**

Permit modifications are governed by R307-415-7f.

I.S **Records and Reporting.**

I.S.1 Records.

I.S.1.a The records of all required monitoring data and support information shall be retained by the permittee for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, all original strip-charts or appropriate recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. (R307-415-6a(3)(b)(ii))

I.S.1.b For all monitoring requirements described in Section II, Special Provisions, the source shall record the following information, where applicable: (R307-415-6a(3)(b)(i))

I.S.1.b.1 The date, place as defined in this permit, and time of sampling or measurement.

I.S.1.b.2 The date analyses were performed.

I.S.1.b.3 The company or entity that performed the analyses.

I.S.1.b.4 The analytical techniques or methods used.

I.S.1.b.5 The results of such analyses.

I.S.1.b.6 The operating conditions as existing at the time of sampling or measurement.

I.S.1.c Additional record keeping requirements, if any, are described in Section II, Special Provisions.

I.S.2 Reports.

I.S.2.a Monitoring reports shall be submitted to the Director every six months, or more frequently if specified in Section II. All instances of deviation from permit requirements shall be clearly identified in the reports. (R307-415-6a(3)(c)(i))

I.S.2.b All reports submitted pursuant to Provision I.S.2.a shall be certified by a responsible official in accordance with Provision I.K of this permit. (R307-415-6a(3)(c)(i)

I.S.2.c The Director shall be notified promptly of any deviations from permit requirements including those attributable to upset conditions as defined in this permit, the probable cause of such deviations, and any corrective actions or preventative measures taken. Prompt, as used in this condition, shall be defined as written notification within the number of days shown under "Enforceable Dates and Timelines" at the front of this permit. Deviations from permit requirements due to breakdowns shall be reported in accordance with the provisions of R307-107. (R307-415-6a(3)(c)(ii))

I.S.3 Notification Addresses.

I.S.3.a All reports, notifications, or other submissions required by this permit to be submitted to the Director are to be sent to the following address or to such other address as may be required by the Director:

Utah Division of Air Quality
P.O. Box 144820
Salt Lake City, UT 84114-4820
Phone: 801-536-4000

I.S.3.b All reports, notifications or other submissions required by this permit to be submitted to the EPA should be sent to one of the following addresses or to such other address as may be required by the Director:

For annual compliance certifications:

Environmental Protection Agency, Region VIII
Office of Enforcement, Compliance and Environmental Justice
(mail code 8ENF)
1595 Wynkoop Street
Denver, CO 80202-1129

For reports, notifications, or other correspondence related to permit modifications,

applications, etc.:

Environmental Protection Agency, Region VIII
Office of Partnerships and Regulatory Assistance Air and Radiation Program
(mail code 8P-AR)
1595 Wynkoop Street
Denver, CO 80202-1129
Phone: 303-312-6114

I.T **Reopening for Cause.**

I.T.1 A permit shall be reopened and revised under any of the following circumstances:

I.T.1.a New applicable requirements become applicable to the permittee and there is a remaining permit term of three or more years. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire, unless the terms and conditions of this permit have been extended pursuant to R307-415-7c(3), application shield. (R307-415-7g(1)(a))

I.T.1.b The Director or EPA determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit. (R307-415-7g(1)(c))

I.T.1.c EPA or the Director determines that this permit must be revised or revoked to assure compliance with applicable requirements. (R307-415-7g(1)(d))

I.T.1.d Additional applicable requirements are to become effective before the renewal date of this permit and are in conflict with existing permit conditions. (R307-415-7g(1)(e))

I.T.2 Additional requirements, including excess emissions requirements, become applicable to a Title IV affected source under the Acid Rain Program. Upon approval by EPA, excess emissions offset plans shall be deemed to be incorporated into this permit. (R307-415-7g(1)(b))

I.T.3 Proceedings to reopen and issue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. (R307-415-7g(2))

I.U **Inventory Requirements.**

An emission inventory shall be submitted in accordance with the procedures of R307-150, Emission Inventories. (R307-150)

I.V **Title IV and Other, More Stringent Requirements**

Where an applicable requirement is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, Acid Deposition Control, both provisions shall be incorporated into this permit. (R307-415-6a(1)(b))

SECTION II: SPECIAL PROVISIONS

II.A **Emission Unit(s) Permitted to Discharge Air Contaminants.**
(R307-415-4(3)(a) and R307-415-4(4))

II.A.1 **Permitted Source**
Source-wide

II.A.2 **Unit #EAF 1 & 2: Electric Arc Furnaces**
Two 65-ton electric arc furnaces equipped with lances and burners controlled by a direct emission control (DEC) system during melting/refining and by a canopy evacuation system during charging/tapping with Ladle Metallurgical Facility (LMF). All exhaust to the EAF baghouse.

II.A.3 **Unit #2 & 3: Lime Silo #1 and #2 Baghouse Vents**
Controls emissions when the lime/dolomite storage silos are filled by pneumatic transfer.

II.A.4 **Unit #4: Lime Handling Fugitive Sources**
Includes lime/dolomite delivery, stockpiling, conveyor and batching operations, feed bin stocking, and conveyor drop to charge bucket.

II.A.5 **Unit #6 & 7: Carbon Silo Baghouse Vents #1 and #2**
Controls particulate emissions generated when carbon is pneumatically loaded into the storage silos.

II.A.6 **Unit #8: Alloy Handling**
Includes dust from alloy delivery, storage, and transfer to charge bucket.

II.A.7 **Unit #9: EAF Baghouse Vent**
Emissions from the EAF furnaces captured by either the DEC or canopy flow through a spark arrestor then through the EAF baghouse before being vented

II.A.8 **Unit #11: EAF Dust Handling Fugitive Sources**
Includes EAF dust loading into gondola cars, EAF baghouse hoppers and conveyors, dust storage silo, and EAF dust loading to rail cars/trucks.

II.A.9 **Unit #12: Caster Area Building Emissions**
Includes meltshop fugitive emissions from the natural gas-fired horizontal & vertical ladle preheaters and the tundish preheaters, tundish/ladle skull lancing, wire alloy addition/steel stirring, and torches/cutting operations. EAF emissions not captured by the canopy or DEC may also vent at this area.

II.A.10 **Unit #13: Billet Reheat Furnace #1**
Natural gas or propane fired furnace rated to consume 1320 MMcf/yr of natural gas, equipped with a low NO_x burner

II.A.11 **Unit #14: Billet Reheat Furnace #2**
Natural gas or propane fired furnace rated to consume 980 MMcf/yr of natural gas.

II.A.12 **Unit #15: Roll Mill**
Includes hot steel rolling, and steel product burning. No unit-specific applicable requirements

II.A.13 **Unit #17 & 18: Contact/Non-Contact Cooling Towers**
Two cooling tower arrangements each used to cool general-use contact and non-contact cooling water. No unit-specific applicable requirements.

II.A.14 **Unit #19 & 20: DEC Cooling Towers**

Cooling tower arrangement used to cool non-contact DEC cooling water. No unit-specific applicable requirements.

II.A.15 **Unit #21: Caster Cooling Tower**

Cooling tower arrangement for contact water used for the casting operations. No unit-specific applicable requirements.

II.A.16 **Unit #24 a & b: Unpaved Roadway Fugitives**

Fugitive emissions from unpaved haul and service roads.

II.A.17 **Unit #24 c & d: Paved Roadway Fugitives**

Fugitive emissions from paved haul and service roads.

II.A.18 **Unit #1: Raw Material Fugitive Sources**

Includes scrap steel delivery, stockpiles, and loading. No unit-specific applicable requirements.

II.A.19 **Unit #TANKS: Miscellaneous tank emissions**

Includes emissions from HCl storage tank, used oil storage tanks, two above ground diesel storage tanks, above ground gasoline storage tank, and propane tank venting.

II.A.20 **10% Opacity: Selected 10% Opacity Emission Units**

Lime Silo # 1 and #2 baghouse vents, Carbon Silo #1 and #2 baghouse vents, alloy handling, abrasive saw baghouse, jump mill baghouse, rolled product heat retention boxes, ladle vacuum degasser, and lime handling fugitive sources

II.A.21 **Unit #MISC: Miscellaneous emissions**

Includes emissions from desalination plant, acetylene combustion, natural gas/propane combustion for comfort heating, slag handling and lab. No unit-specific applicable requirements.

II.A.22 **Unit #SAND: Sandblasting operations**

Miscellaneous sandblasting operations.

II.A.23 **Unit #DEGTANK: Diethylene glycol storage tank**

Aboveground diethylene glycol storage tank, 12000 gallon capacity, holding material < 0.05 mmHg.

II.A.24 **MISC VOC: Painting and solvent cleaning activities**

Various process-related solvent cleaning (including parts washers) and architectural painting activities that emit volatile organic compounds. Janitorial cleaners are not included in this grouping.

II.A.25 **Fence Post Dip Painting Line**

II.A.26 **NSPS CI RICE**

II.A.27 **NSPS SI RICE**

II.A.28 **Existing NESHAP Emergency CI RICE**

II.A.29 **Existing NESHAP non-emergency SI RICE**

II.A.30 **Ladle vacuum degasser equipped with flare**
Burner rating: 0.005 lb NO_x/ton

II.A.31 **Maintenance Building Equipment**
Fabrication Shop Baghouse

II.B **Requirements and Limitations**

The following emission limitations, standards, and operational limitations apply to the permitted facility as indicated:

II.B.1 **Conditions on permitted source (Source-wide).**

II.B.1.a **Condition:**

Visible emissions shall not exceed 20 percent opacity except as otherwise specified in this permit. [Origin: DAQE-AN100080043-18]. [R307-401-8]

II.B.1.a.1 **Monitoring:**

A visual opacity survey of each affected emission unit shall be performed on a weekly basis by an individual trained on the observation procedures of 40 CFR 60, Appendix A, Method 9. If visible emissions other than steam are observed from an emission unit, an opacity determination of that emission unit shall be performed by a certified observer within 24 hours of the initial survey. The opacity determination shall be performed in accordance with 40 CFR 60, Appendix A, Method 9.

When the survey is conducted by a certified observer, the opacity of each visible emission may be estimated and a reference method observation made of the emission point of highest estimated opacity. If this observation shows compliance with this limitation, no further observations are necessary. If compliance is not demonstrated, reference method observations shall be conducted of each point in order of estimated opacity until an observation shows compliance.

II.B.1.a.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.1.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.1.b **Condition:**

Natural gas consumption shall be no greater than 2,340 MMSCF per rolling 12 month period not including fuel consumed by oxyfuel burners for the EAFs. [Origin: DAQE-AN100080043-18]. [R307-401-8]

II.B.1.b.1 **Monitoring:**

Natural gas consumption shall be determined using billing statements for the previous twelve months, with the appropriate conversion of acf to scf. The amount of fuel consumed by the EAF oxyfuel burners shall be metered and may be subtracted from the total gas consumption. The previous 12 month total shall be documented by the 20th day of each month.

II.B.1.b.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.1.b.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.1.c **Condition:**

Propane consumption shall be no greater than 2,800,000 gallons per rolling 12-month period not including fuel consumed by oxyfuel burners for the EAFs. [Origin: DAQE-AN100080043-18]. [R307-401-8]

II.B.1.c.1 **Monitoring:**

Propane consumption shall be determined by metering the volume of propane consumed plant wide for the previous twelve months. The amount of fuel consumed by the EAF oxyfuel burners shall be metered and may be subtracted from the total gas consumption. The previous 12 month total shall be documented by the 20th day of each month.

II.B.1.c.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.1.c.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.1.d **Condition:**

At all times, including periods of startup, shutdown, and malfunction, the owners and operators shall, to the extent practicable, maintain and operate any equipment approved under DAQE-AN100080040-17, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by DAQE-AN100080040-17 shall be recorded. [Origin: DAQE-AN100080043-18]. [40 CFR 60.11(d), R307-401-8(2)]

II.B.1.d.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.1.d.2 **Recordkeeping:**

Permittee shall document activities performed to assure proper operation and maintenance. Records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.1.d.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.1.e **Condition:**

All conveyor transfer points and batching equipment drop points shall either be enclosed (3 sides and a roof minimum) or be equipped with water sprays to be used whenever dry conditions warrant for dust control. [Origin: DAQE-AN100080043-18]. [R307-401-8]

II.B.1.e.1 **Monitoring:**

All non-enclosed points shall have visible emissions observed weekly, conducted according to 40 CFR 60, Appendix A, Method 22. The adequacy of the water sprays shall be determined by the lack of visual emissions.

II.B.1.e.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.1.e.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.1.f **Condition:**

The permittee shall comply with the applicable requirements for servicing of motor vehicle air conditioners pursuant to 40 CFR 82, Subpart B - Servicing of Motor Vehicle Air Conditioners. [Origin: 40 CFR 82.30(b)]. [40 CFR 82.30(b)]

II.B.1.f.1 **Monitoring:**

The permittee shall certify, in the annual compliance statement required in Section I of this permit, its compliance status with the requirements of 40 CFR 82, Subpart B.

II.B.1.f.2 **Recordkeeping:**

All records required in 40 CFR 82, Subpart B shall be maintained consistent with the requirements of Provision I.S.1 of this permit. [R307-415-6b]

II.B.1.f.3 **Reporting:**

All reports required in 40 CFR 82, Subpart B shall be submitted as required. There are no additional reporting requirements except as outlined in Section I of this permit.

II.B.1.g **Condition:**

The permittee shall comply with the applicable requirements for recycling and emission reduction for class I and class II refrigerants pursuant to 40 CFR 82, Subpart F - Recycling and Emissions Reduction. [Origin: 40 CFR 82.150(b)]. [40 CFR 82.150(b)]

II.B.1.g.1 **Monitoring:**

The permittee shall certify, in the annual compliance statement required in Section I of this permit, its compliance status with the requirements of 40 CFR 82, Subpart F.

II.B.1.g.2 **Recordkeeping:**

All records required in 40 CFR 82, Subpart F shall be maintained consistent with the requirements of Provision I.S.1 of this permit.

II.B.1.g.3 **Reporting:**

All reports required in 40 CFR 82, Subpart F shall be submitted as required. There are no additional reporting requirements except as outlined in Section I of this permit.

II.B.1.h **Condition:**

A Risk Management Plan (RMP) developed in accordance with 40 CFR 68 shall be submitted to the United States Environmental Protection Agency not later than the applicable date in 40 CFR 68 when the source becomes subject to the rule. [Origin 40 CFR 68]. [40 CFR 68]

II.B.1.h.1 **Monitoring:**

The record serves as monitoring.

II.B.1.h.2 **Recordkeeping:**

A copy of the Risk Management Plan shall be available to the Director upon request along with a copy of the transmittal letter to EPA.

II.B.1.h.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I.

II.B.1.i **Condition:**

The permittee shall submit a fugitive dust control plan to the Director in accordance with R307-309-6. There is no opacity exception for wind speeds that exceed 25 miles per hour. [Origin: R307-309-6]. [R307-309-6]

II.B.1.i.1 **Monitoring:**

In lieu of monitoring via visible emissions observations, adherence to the current fugitive dust control plan approved by the Director shall be monitored to demonstrate that appropriate measures are being taken to control fugitive dust.

II.B.1.i.2 **Recordkeeping:**

A copy of the fugitive dust control plan shall be maintained on-site.

Records of measures taken to control fugitive dust shall be maintained to demonstrate adherence to the most recently approved fugitive dust control plan

Records shall be maintained as described in Provision I.S.1 of this permit.

II.B.1.i.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.1.j **Condition:**

Fugitive emissions shall not exceed 15 percent opacity. [Origin: R307-309-4]. [R307-309-4]

II.B.1.j.1 **Monitoring:**

A visual opacity survey of each affected emission unit shall be performed on a weekly basis by an individual trained on the observation procedures of 40 CFR 60, Appendix A, Method 9. If visible emissions other than steam are observed from an emission unit, an opacity determination of that emission unit shall be performed by a certified observer within 24 hours of the initial survey. The opacity determination shall be performed in accordance with 40 CFR 60, Appendix A, Method 9.

When the survey is conducted by a certified observer, the opacity of each visible emission may be estimated and a reference method observation made of the emission point of highest estimated opacity. If this observation shows compliance with this limitation, no further observations are necessary. If compliance is not demonstrated, reference method observations shall be conducted of each point in order of estimated opacity until an observation shows compliance.

II.B.1.j.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.1.j.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.1.k **Condition:**

Salt applied to roads shall be at least 92% NaCl, $MgCl_2$, $CaCl_2$, or KCl. After January 1, 2014, any person who applies an abrasive such as crushed slag or sand, or who applies salt that is less than 92% by weight NaCl, $MgCl_2$, and/or $CaCl_2$ to roads shall comply with the requirements of either R307-307-5(1)(a) or (b). [Origin: R307-307]. [R307-307-4(1), R307-307-5(2)]

II.B.1.k.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.1.k.2 **Recordkeeping:**

The following records shall be maintained as outlined in Provision I.S.1 of this permit:

For Salt - the quantity applied, the percent by weight of insoluble solids in the salt, and the percentage of the material that is sodium chloride (NaCl), magnesium chloride ($MgCl_2$), calcium chloride ($CaCl_2$), or potassium chloride (KCl).

For Abrasives (such as sand or crushed slag) - the quantity applied and the percent by weight of fine material which passes the number 200 sieve in a standard gradation analysis.

II.B.1.k.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.1.l **Condition:**

The permittee shall ensure that the following conditions are met for all cold VOC containing solvent parts washers:
(1) A cover shall be installed which shall remain closed except during actual loading, unloading or handling of parts in cleaner. The cover shall be designed so that it can be easily operated with one hand if (a) the volatility of the solvent is greater than 2 kPa (15 mm Hg or 0.3 psi) measured at 38 degrees C (100 degrees F), (b) the solvent is agitated, or (c) the solvent is heated.

(2) An internal draining rack for cleaned parts shall be installed on which parts shall be drained until all dripping ceases. If the volatility of the solvent is greater than 4.3 kPa (32 mm Hg at 38 degrees C (100 degrees F)), the drainage facility must be internal, so that parts are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(3) Waste or used solvent shall be stored in covered containers.

(4) Tanks, containers and all associated equipment shall be maintained in good operating condition and leaks shall be repaired immediately or the degreaser shall be shutdown.

(5) Written procedures for the operation and maintenance of the degreasing or solvent cleaning equipment shall be permanently posted in an accessible and conspicuous location near the equipment.

(6) If the solvent volatility is greater than 4.3 kPa (33 mm Hg or 0.6 psi) measured at 38 degrees C (100 degrees F), or if solvent is heated above 50 degrees C (120 degrees F), then one of the following control devices shall be used: (a) freeboard that gives a freeboard ratio greater than 0.7; (b) water cover if the solvent is insoluble in and heavier than water; (c) other systems of equivalent control, such as a refrigerated chiller or carbon absorption.

(7) If used, the solvent spray shall be a solid fluid stream at a pressure which does not cause excessive splashing and may not be a fine, atomized or shower type spray. [Origin: R307-335-4]. [R307-335-4]

II.B.1.l.1 **Monitoring:**

A visual observation shall be conducted monthly for all equipment and applicable work practices.

II.B.1.l.2 **Recordkeeping:**

Results of monthly inspections and the volatility of the solvent(s) being used shall be recorded and maintained as described in Provision I.S.1 of this permit.

II.B.1.l.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.1.m **Condition:**

Sulfur content of fuel oil shall be no greater than 0.0015 percent by weight. [Origin: DAQE-AN100080043-18]. [R307-203-1(1), R307-401-8]

II.B.1.m.1 **Monitoring:**

For each fuel load received, the permittee shall maintain documentation showing the fuel meets this condition.

II.B.1.m.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.1.m.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.1.n **Condition:**

The permittee shall notify the Director in writing when the installation of new equipment has been completed and is operational, as an initial compliance inspection is required. To ensure proper credit when notifying the Director, send you correspondence to the Director, Attn: NSR Section.

If the installation has not been completed by June 5, 2020 for this condition, the Director shall be notified in writing on the status of the installation. At that time, the Director shall require documentation of the continuous installation of the operation and may revoke the AO in accordance with R307-401-18, UAC. [Origin: DAQE-AN100080043-18]. [R307-401-18, R307-401-8]

II.B.1.n.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.1.n.2 **Recordkeeping:**

As applicable, the permittee shall maintain a copy of each notification required by this permit condition in accordance with Provision I.S.1 of this permit.

II.B.1.n.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.2 **Conditions on Electric Arc Furnaces (Unit #EAF 1 & 2).**

II.B.2.a **Condition:**

Visible emissions shall not exceed 6 percent opacity for emissions from the shop and due solely to the operation of any EAF(s) [Origin: DAQE-AN100080043-18]. [40 CFR 60.272a(a)(3), 40 CFR 63.10686(d)(6), R307-401-8]

II.B.2.a.1 **Monitoring:**

Visible emissions determinations shall be performed by a certified visible emission observer at least once per day of operation. The determinations shall occur when the furnace is operating in the melting and refining period. The arithmetic average of 24 consecutive 15-second opacity observations shall be taken in accordance with 40 CFR 60, Appendix A, Method 9. The opacity shall be recorded for any point(s) where visible emissions are observed. Where it is possible to determine that a number of visible emission sites relate to only one incident of visible emissions, only one opacity determination will be required. In this case, the opacity determination must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident.

II.B.2.a.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.2.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.2.b **Condition:**

Hours of operation shall be no greater than 8,220 hours per rolling 12 month period. [Origin: DAQE-AN100080043-18]. [R307-401-8]

II.B.2.b.1 **Monitoring:**

The permittee shall calculate, by the twentieth day of each month, a 12-month total based on the first day of each month using data from the previous 12 months. Hours of operation shall be determined by supervisor's monitoring and maintenance of a daily operations log.

II.B.2.b.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.2.b.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.3 **Conditions on EAF Baghouse Vent (Unit #9).**

II.B.3.a **Condition:**

Visible emissions shall not exceed 3 percent opacity [Origin: DAQE-AN100080043-18]. [40 CFR 60.272a(a)(2), R307-401-8]

II.B.3.a.1 **Monitoring:**

In lieu of installing a continuous opacity monitoring system, the permittee shall demonstrate compliance with the visible emission limitation by monitoring the following.

a) Visible emissions determinations shall be performed by a certified visible emission observer at least once per day of operation. The determinations shall occur when the furnace is operating in the melting and refining period. These observations shall be taken in accordance with 40 CFR 60, Appendix A, Method 9, and, for at least three 6-minute periods, the opacity shall be recorded for any point(s) where visible emissions are observed. Where it is possible to determine that a number of visible emission sites relate to only one incident of the visible emissions, only one set of three 6-minute opacity determinations will be required. In this case, the opacity determination must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident.

b) A bag leak detection system meeting the following specifications and requirements shall be installed and continuously operated on the affected emission unit.

i) The bag leak detection system shall be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 1 milligram per actual cubic meter (0.00044 grains per actual cubic foot) or less.

ii) The bag leak detection system sensor shall provide output of relative particulate matter loadings and the owner or operator shall continuously record the output from the bag leak detection system using electronic or other means (e.g., using a strip chart recorder or a data logger) at a minimum of once per shift.

iii) The bag leak detection system shall be equipped with an alarm system that will sound when an increase in relative particulate loading is detected over the alarm set point established according to paragraph (iv). The alarm shall be located such that it can be heard by the appropriate plant personnel.

iv) For the bag leak detection system, the permittee developed and submitted to the Director, for approval, a site-specific monitoring plan that addresses the items identified in (a) through (e) below. For each bag leak detection system that operates based on the triboelectric effect, the monitoring plan shall be consistent with the recommendations contained in the U.S. Environmental Protection Agency guidance document "Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015). The permittee shall operate and maintain the bag leak detection system according to the site-specific monitoring plan at all times. The plan shall describe the following:

(a) Installation of the bag leak detection system;

(b) Initial and periodic adjustment of the bag leak detection system including how the alarm set-point will be established;

(c) Operation of the bag leak detection system including quality assurance procedures;

(d) How the bag leak detection system will be maintained including a routine maintenance schedule and spare parts inventory list; and

(e) How the bag leak detection system output shall be recorded and stored.

v) The initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the alarm set points and the alarm delay time (if applicable).

vi) Following initial adjustment, the permittee shall not adjust the averaging period, alarm set point, or alarm delay time without approval from the Director except as provided for in (a) and (b) below.

(a) Once per quarter, the permittee may adjust the sensitivity of the bag leak detection system to account for seasonal effects including temperature and humidity according to the procedures identified in the site-specific monitoring plan required under paragraph (iv) above.

(b) If opacities greater than zero percent are observed over four consecutive 15-second observations during the daily opacity observations required under II.B.3.a.1.a and the alarm on the bag leak detection system does not sound, the permittee shall lower the alarm set point on the bag leak detection system to a point where the alarm would have sounded during the period when the opacity observations were made.

vii) For negative pressure, induced air baghouses, and positive pressure baghouses that are discharged to the atmosphere through a stack, the bag leak detection sensor shall be installed downstream of the baghouse and upstream of any wet scrubber.

viii) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

ix) The permittee shall initiate procedures to determine the cause of all alarms within 1 hour of an alarm. The cause of the alarm shall be alleviated within 3 hours of the time the alarm occurred by taking whatever corrective action(s) are necessary. Corrective actions may include, but are not limited to, the following:

(a) Inspecting the baghouse for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in particulate emissions;

(b) Sealing off defective bags or filter media;

(c) Replacing defective bags or filter media or otherwise repairing the control device;

(d) Sealing off a defective baghouse compartment;

(e) Cleaning the bag leak detection system probe or otherwise repairing the bag leak detection system; and

(f) Shutting down the process producing the particulate emissions.

II.B.3.a.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

Additionally, the following shall be maintained in accordance with Provision I.S.1 of this permit for each bag leak detection system.

a) Records of the bag leak detection system output at a minimum of once per shift;

b) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and

c) Records of the date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, if procedures were initiated within 1 hour of the alarm, the cause of the alarm, an explanation of the actions taken, the date and time the cause of the alarm was alleviated, and if the alarm was alleviated within 3 hours of the alarm.

II.B.3.a.3 **Reporting:**

In addition to the reporting requirements specified in Section I of this permit, the permittee shall submit a written report of exceedances of the control device opacity to the Director semi-annually. Exceedances are defined as all 6-minute periods during which the average opacity is 3 percent or greater. (40 CFR 60.276a(b)).

II.B.3.b **Condition:**

The minimum number of EAF baghouse fans to be operated is the number of operating fans used in NSPS Subpart AAa initial performance demonstrations. [Origin: DAQE-AN100080043-18]. [R307-401-8]

II.B.3.b.1 **Monitoring:**

The number of fans in operation on the EAF baghouse shall be checked once per day.

II.B.3.b.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.3.b.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.3.c **Condition:**

The permittee shall perform monthly operational status inspections of the equipment that is important to the performance of the EAF emissions total capture system (i.e., pressure sensors, dampers, and damper switches). This inspection shall include observations of the physical appearance of the equipment (e.g., presence of hole in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion). Any deficiencies shall be noted and proper maintenance performed. [Origin: DAQE-AN100080043-18 and 40 CFR 63.10686(a)]. [40 CFR 60 Subpart AAa, 40 CFR 63 Subpart YYYYY]

II.B.3.c.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.3.c.2 **Recordkeeping:**

Results of monthly inspections and any maintenance performed shall be recorded and maintained as described in Provision I.S.1 of this permit.

II.B.3.c.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.3.d **Condition:**

The permittee shall calibrate and maintain a fan ampere and damper setting system. This system shall provide records of fan operations with readings taken once per shift and provide a fan operation log that records excursion events such as fan shut downs and startups.

Required fan amperes and damper positions shall be those established during the most recent initial performance test completed for NSPS Subpart AAa. The permittee may petition the Director for re-establishment of these parameters whenever the EAF operating conditions upon which the parameters were previously established are no longer applicable.

As an alternative, the permittee may install, operate and maintain either a continuous volumetric monitoring device, or a negative pressure monitoring system (subsequent to performing an initial compliance test) meeting the following requirements:

Continuous volumetric monitoring device:
This system shall provide a continuous record of air flow in all ducts evacuating the EAFs and roof canopy. The monitoring device may be installed in any location in the exhaust ducts such that reproducible flow rate monitoring will result. The flow rate monitoring device(s) shall have an accuracy of plus or minus 10% over its normal operating range and shall be calibrated according to manufacturer's instructions. The Director may require the permittee to demonstrate the accuracy of the monitoring device(s) according to method 1 and 2, Appendix A, 40 CFR 60. Required air flows will be those established during the initial compliance test. The initial compliance test shall measure the exhaust flow and damper settings for each separate duct and be recorded during the charging, melting, and tapping stages for each EAF.

Negative pressure monitoring system:
This system shall consist of a monitoring device that continuously records the negative pressure in each duct for all ducts used to evacuate the emissions from the EAFs. The pressure shall be recorded as 15-minute integrated averages. The monitoring devices shall be installed in any appropriate location in the ducts such that reproducible results are obtained and shall be upstream of any damper in the duct. The pressure monitoring device shall have an accuracy of plus or minus five (5) mm of water gauge over its normal operating range and shall be calibrated according to manufacturer's instructions. Measurement of the minimum negative pressure recorded during the initial performance test for each duct shall be the minimum allowed negative pressure during charging, melting and tapping stages for each furnace. The permittee shall maintain a log of the negative pressure in integrated 15-minute averages of each furnace during all stages. The initial compliance test shall measure the negative pressure in each separate duct and record during charging, melting, and tapping stages for each furnace. [Origin: DAQE-AN100080043-18]. [R307-401-8]

II.B.3.d.1 **Monitoring:**

During normal operational periods, records required for this permit condition will serve as monitoring.

If an initial performance test of a system allowed in this provision is being conducted to re-

establish baseline parameters, the permittee shall advise the Director of the test date at least 30 days prior to the test. Shop opacity observations shall be conducted in accordance with 40 CFR 60.11, which requires a minimum of three hours of observations (30 6-minute averages). During the test, the permittee shall monitor the following during the charging, melting and tapping stages for each furnace:

a) Charge weights and materials, and tap weights and materials;

b) Heat times, including start and stop times, and a log of process operation, including periods of no operation during testing;

c) Control device parameters appropriate to the system tested:

1) Fan amperage and damper settings: the number of fans operating, average fan amperage and damper positions for each separate duct.

2) Continuous volumetric monitoring device: the exhaust flow rate and damper settings for each separate duct.

3) Negative pressure monitoring system: the negative pressure in each separate duct.

II.B.3.d.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.3.d.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.3.e **Condition:**

Emissions of CO shall not exceed 1,200 lbs/hr based on a 1-hour average. [Origin: DAQE-AN100080043-18]. [R307-401-8]

II.B.3.e.1 **Monitoring:**

The permittee shall install, calibrate, maintain, and operate a continuous emissions monitoring system on the EAF baghouse exhaust stack. The permittee shall record the output of the system for measuring the CO emissions. The monitoring system shall comply with all applicable sections of R307-170 and 40 CFR 60, Appendix B. Except for system breakdown, repairs, calibration checks, and zero and span adjustments required under paragraph (d) 40 CFR 60.13, the permittee shall continuously operate all required continuous monitoring systems and shall meet minimum frequency of operation requirements as outlined in 40 CFR 60.13 and Section R307-170. The permittee shall conduct a Relative Accuracy Test Audit (RATA) by the end of the 3rd calendar quarter of each year.

II.B.3.e.2 **Recordkeeping:**

Results of monitoring shall be recorded and maintained as required in R307-170 and as described in Provision I.S.1 of this permit.

II.B.3.e.3 **Reporting:**

The permittee shall comply with the reporting provisions in R307-170-9 and any additional reporting provisions contained in Section I of this permit. The quarterly reports required in R307-170-9 are considered prompt notification of permit deviations required in Provision I.S.2.c of this permit if all information required by Provision I.S.2.c is included in the report.

II.B.3.f **Condition:**

Emissions of CO shall not exceed 682.93 lbs/hr based on an 8-hour average. [Origin: DAQE-AN100080043-18]. [R307-401-8]

II.B.3.f.1 **Monitoring:**

The permittee shall install, calibrate, maintain, and operate a continuous emissions monitoring system on the EAF baghouse exhaust stack. The permittee shall record the output of the system for measuring the CO emissions. The monitoring system shall comply with all applicable sections of R307-170 and 40 CFR 60, Appendix B. Except for system breakdown, repairs, calibration checks, and zero and span adjustments required under paragraph (d) 40 CFR 60.13, the permittee shall continuously operate all required continuous monitoring systems and shall meet minimum frequency of operation requirements as outlined in 40 CFR 60.13 and Section R307-170. The permittee shall conduct a Relative Accuracy Test Audit (RATA) by the end of the 3rd calendar quarter of each year.

II.B.3.f.2 **Recordkeeping:**

Results of monitoring shall be recorded and maintained as required in R307-170 and as described in Provision I.S.1 of this permit.

II.B.3.f.3 **Reporting:**

The permittee shall comply with the reporting provisions in R307-170-9 and any additional reporting provisions contained in Section I of this permit. The quarterly reports required in R307-170-9 are considered prompt notification of permit deviations required in Provision I.S.2.c of this permit if all information required by Provision I.S.2.c is included in the report.

II.B.3.g **Condition:**

Emissions of CO shall not exceed 2,800 tons per year based on a rolling 12-month total. [Origin: DAQE-AN100080043-18]. [R307-401-8]

II.B.3.g.1 **Monitoring:**

The permittee shall install, calibrate, maintain, and operate a continuous emissions monitoring system on the EAF baghouse exhaust stack. The permittee shall record the output of the system for measuring the CO emissions. The monitoring system shall comply with all applicable sections of R307-170 and 40 CFR 60, Appendix B. The emissions shall be determined on a rolling 12-month total. Within the first 20 days of each month, the total shall be calculated for each calendar month and added to the previous 11 months data.

Except for system breakdown, repairs, calibration checks, and zero and span adjustments required under paragraph (d) 40 CFR 60.13, the permittee shall continuously operate all required continuous monitoring systems and shall meet minimum frequency of operation requirements as outlined in 40 CFR 60.13 and Section R307-170. The permittee shall conduct a Relative Accuracy Test Audit (RATA) by the end of the 3rd calendar quarter of each year.

II.B.3.g.2 **Recordkeeping:**

Results of monitoring shall be recorded and maintained as required in R307-170 and as described in Provision I.S.1 of this permit.

II.B.3.g.3 **Reporting:**

The permittee shall comply with the reporting provisions in R307-170-9 and any additional reporting provisions contained in Section I of this permit. The quarterly reports required in R307-170-9 are considered prompt notification of permit deviations required in Provision I.S.2.c of this permit if all information required by Provision I.S.2.c is included in the report.

II.B.3.h **Condition:**

Emissions of NO_x shall not exceed 245 tons per year based on a rolling 12-month total. [Origin: DAQE-AN100080043-18]. [R307-401-8]

II.B.3.h.1 **Monitoring:**

The permittee shall install, calibrate, maintain, and operate a continuous emissions monitoring system on the EAF baghouse exhaust stack. The permittee shall record the output of the system for measuring the NO_x emissions. The monitoring system shall comply with all applicable sections of R307-170 and 40 CFR 60, Appendix B. The emissions shall be determined on a rolling 12-month total. Within the first 20 days of each month, the total shall be calculated for each calendar month and added to the previous 11 months data.

Except for system breakdown, repairs, calibration checks, and zero and span adjustments required under paragraph (d) 40 CFR 60.13, the permittee shall continuously operate all required continuous monitoring systems and shall meet minimum frequency of operation requirements as outlined in 40 CFR 60.13 and Section R307-170. The permittee shall conduct a Relative Accuracy Test Audit (RATA) by the end of the 3rd calendar quarter of each year.

II.B.3.h.2 **Recordkeeping:**

Results of monitoring shall be recorded and maintained as required in R307-170 and as described in Provision I.S.1 of this permit.

II.B.3.h.3 **Reporting:**

The permittee shall comply with the reporting provisions in R307-170-9 and any additional reporting provisions contained in Section I of this permit. The quarterly reports required in R307-170-9 are considered prompt notification of permit deviations required in Provision I.S.2.c of this permit if all information required by Provision I.S.2.c is included in the report.

II.B.3.i **Condition:**

Emissions of filterable TSP shall not exceed 27.0 lbs/hr and 0.0030 grains/dscf (68 degrees F, and 29.92 in Hg). [Origin: DAQE-AN100080043-18]. [40 CFR 60.272a(a)(1), R307-401-8]

II.B.3.i.1 **Monitoring:**

Stack testing shall be performed as specified below:

(a) Frequency. Emissions shall be tested every year. Tests may also be required at the direction of the Director.

(b) Notification. At least 30 days before the test, the source shall notify the Director of the date, time, and place of testing and provide a copy of the test protocol. The source test protocol shall be approved by the Director prior to performing the tests. The source shall attend a pretest conference if determined necessary by the Director.

(c) Methods.

(i) Sample Location - the emission point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1, or other EPA-approved testing method, as acceptable to the Director. An Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.

(ii) Sample Method - 40 CFR 60. Appendix A, Method 5D, or other EPA approved testing methods, as acceptable to the Director. The minimum sample time and sample volume shall be 4 hours and 160 dscfm.

(iii) Volumetric Flow Rate - 40 CFR 60, Appendix A, Method 2 or other EPA approved testing methods, as acceptable to the Director.

(d) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Director to give the results in the specified units of the emission limitation.

(e) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

II.B.3.i.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.3.i.3 **Reporting:**

In addition to the reporting requirements of Section I of this permit, the permittee shall submit the results of the stack tests to the Director within 60 days of completion of the testing. Results shall clearly identify test results as compared to permit limits and indicate compliance status.

II.B.3.j **Condition:**

Emissions of filterable PM_{10} shall not exceed 17.8 lbs/hr and 0.0018 grains/dscf (68 degrees F, and 29.92 in Hg). [Origin: DAQE-AN100080043-18]. [R307-401-8]

II.B.3.j.1 **Monitoring:**

Stack testing shall be performed as specified below:

(a) Frequency. Emissions shall be tested every year. Tests may also be required at the direction of the Director.

(b) Notification. At least 30 days before the test, the source shall notify the Director of the date, time, and place of testing, provide a copy of the test protocol, and obtain approval by the Director prior to performing the tests. The source shall attend a pretest conference if determined necessary by the Director.

(c) Methods.

(i) Sample Location - the emission point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1, or other EPA-approved testing methods, as acceptable to the Director. An Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.

(ii) To measure filterable particulate emission, 40 CFR 51, Appendix M, Method 201 or Method 201A, or other EPA-approved testing method, as acceptable to the Director. If other

approved testing methods are used which cannot measure the PM_{10} fraction of the filterable particulate emissions, all of the filterable particulate emissions shall be considered PM_{10}.

(iii) The back half condensables shall not be used for compliance demonstration but shall be used for inventory purposes.

(iv) Volumetric Flow Rate - 40 CFR 60, Appendix A, Method 2 or other EPA-approved testing method, as acceptable to the Director.

(v) Alternatively, 40 CFR 60, Appendix A, Method 5D may be used to determine total TSP emissions. If TSP emissions are below the PM_{10} limit that will constitute compliance with the PM_{10} limit. If TSP emissions are not below the PM_{10} limit, the permittee shall retest using the methods allowed in paragraphs (i)-(iv) above within 180 days of the TSP test date.

(d) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Director to give the results in the specified units of the emission limitation.

(e) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

II.B.3.j.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.3.j.3 **Reporting:**

In addition to the reporting requirements of Section I of this permit, the permittee shall submit the results of the stack tests to the Director within 60 days of completion of the testing. Results shall clearly identify test results as compared to permit limits and indicate compliance status.

II.B.3.k **Condition:**

Emissions of SO_2 shall not exceed 93.98 lbs/hr based on a 3-hour rolling average. [Origin: DAQE-AN100080043-18]. [R307-401-8]

II.B.3.k.1 **Monitoring:**

The permittee shall install, calibrate, maintain, and operate a continuous emissions monitoring system on the EAF baghouse exhaust stack. The permittee shall record the output of the system for measuring the SO_2 emissions. The monitoring system shall comply with all applicable sections of R307-170 and 40 CFR 60, Appendix B. Except for system breakdown, repairs, calibration checks, and zero and span adjustments required under paragraph (d) 40 CFR 60.13, the permittee shall continuously operate all required continuous monitoring systems and shall meet minimum frequency of operation requirements as outlined in 40 CFR 60.13 and Section R307-170. The permittee shall conduct a Relative Accuracy Test Audit (RATA) by the end of the 3rd calendar quarter of each year.

II.B.3.k.2 **Recordkeeping:**

Results of monitoring shall be recorded and maintained as required in R307-170 and as described in Provision I.S.1 of this permit.

II.B.3.k.3 **Reporting:**

The permittee shall comply with the reporting provisions in R307-170-9 and any additional reporting provisions contained in Section I of this permit. The quarterly reports required in R307-170-9 are considered prompt notification of permit deviations required in Provision I.S.2.c

of this permit if all information required by Provision I.S.2.c is included in the report.

II.B.3.l **Condition:**

Emissions of SO_2 shall not exceed 89.0 lbs/hr based on a 24-hour average. [Origin: DAQE-AN100080043-18]. [R307-401-8]

II.B.3.l.1 **Monitoring:**

The permittee shall install, calibrate, maintain, and operate a continuous emissions monitoring system on the EAF baghouse exhaust stack. The permittee shall record the output of the system for measuring the SO_2 emissions. The monitoring system shall comply with all applicable sections of R307-170 and 40 CFR 60, Appendix B. Except for system breakdown, repairs, calibration checks, and zero and span adjustments required under paragraph (d) 40 CFR 60.13, the permittee shall continuously operate all required continuous monitoring systems and shall meet minimum frequency of operation requirements as outlined in 40 CFR 60.13 and Section R307-170. The permittee shall conduct a Relative Accuracy Test Audit (RATA) by the end of the 3rd calendar quarter of each year.

II.B.3.l.2 **Recordkeeping:**

Results of monitoring shall be recorded and maintained as required in R307-170 and as described in Provision I.S.1 of this permit.

II.B.3.l.3 **Reporting:**

The permittee shall comply with the reporting provisions in R307-170-9 and any additional reporting provisions contained in Section I of this permit. The quarterly reports required in R307-170-9 are considered prompt notification of permit deviations required in Provision I.S.2.c of this permit if all information required by Provision I.S.2.c is included in the report.

II.B.3.m **Condition:**

Emissions of SO_2 shall not exceed 245 tons per year based on a rolling 12-month total. [Origin: DAQE-AN100080043-18]. [R307-401-8]

II.B.3.m.1 **Monitoring:**

The permittee shall install, calibrate, maintain, and operate a continuous emissions monitoring system on the EAF baghouse exhaust stack. The permittee shall record the output of the system for measuring the SO_2 emissions. The monitoring system shall comply with all applicable sections of R307-170 and 40 CFR 60, Appendix B. The emissions shall be determined on a rolling 12-month total. Within the first 20 days of each month, the total shall be calculated for each calendar month and added to the previous 11 months data.

Except for system breakdown, repairs, calibration checks, and zero and span adjustments required under paragraph (d) 40 CFR 60.13, the permittee shall continuously operate all required continuous monitoring systems and shall meet minimum frequency of operation requirements as outlined in 40 CFR 60.13 and Section R307-170. The permittee shall conduct a Relative Accuracy Test Audit (RATA) by the end of the 3rd calendar quarter of each year.

II.B.3.m.2 **Recordkeeping:**

Results of monitoring shall be recorded and maintained as required in R307-170 and as described in Provision I.S.1 of this permit.

II.B.3.m.3 **Reporting:**

The permittee shall comply with the reporting provisions in R307-170-9 and any additional reporting provisions contained in Section I of this permit. The quarterly reports required in R307-170-9 are considered prompt notification of permit deviations required in Provision I.S.2.c of this permit if all information required by Provision I.S.2.c is included in the report.

II.B.3.n **Condition:**

Permittee shall prepare and implement a pollution prevention plan for metallic scrap selection and inspection to minimize the amount of chlorinated plastics, lead, and free organic liquids that is charged to the furnace. [Origin: 40 CFR 63.10685(a)(1)]. [40 CFR 63 Subpart YYYYY]

II.B.3.n.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.3.n.2 **Recordkeeping:**

Records shall demonstrate compliance with the requirements for the pollution prevention plan in accordance with 40 CFR 63.10685(c). Records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.3.n.3 **Reporting:**

The semi-annual compliance report shall certify compliance with the pollution prevention plan in accordance with 40 CFR 63.10685(c). There are no other reporting requirements for this provision except those specified in Section I of this permit.

II.B.3.o **Condition:**

Permittee shall certify in your notice of compliance status that you participate in and purchase motor vehicle scrap only from scrap providers who participate in a program for removal of mercury switches that has been approved by the EPA. [Origin: 40 CFR 63.10685(b)(2) and 40 CFR 63.10685(b)(2)(iv)]. [40 CFR 63 Subpart YYYYY]

II.B.3.o.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.3.o.2 **Recordkeeping:**

Records shall demonstrate compliance with the requirements of this condition in accordance with 40 CFR 63.10685(c). Records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.3.o.3 **Reporting:**

The semi-annual compliance report shall certify compliance with this provision in accordance with 40 CFR 63.10685(c). There are no other reporting requirements for this provision except those specified in Section I of this permit.

II.B.3.p **Condition:**

For scrap that does not contain motor vehicle scrap, permittee shall certify in your notification of compliance status and maintain records of documentation that this scrap does not contain motor vehicle scrap. [Origin: 40 CFR 63.10685(b)(4)]. [40 CFR 63 Subpart YYYYY]

II.B.3.p.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.3.p.2 **Recordkeeping:**

Permittee shall keep records documenting compliance with this section for scrap that does not contain motor vehicle scrap in accordance with 40 CFR 63.10685(c). Records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.3.p.3 **Reporting:**

The semi-annual compliance report shall certify compliance with this provision in accordance with 40 CFR 63.10685(c). There are no other reporting requirements for this provision except those specified in Section I of this permit.

II.B.3.q **Condition:**

Emissions of filterable PM2.5 shall not exceed 17.4 lbs/hr and 0.00176 grains/dscf (68 degrees F, and 29.92 in Hg). Emissions of condensable PM2.5 shall not exceed 29.53 lbs/hr. [Origin: DAQE-AN100080043-18]. [R307-401-8]

II.B.3.q.1 **Monitoring:**

1) Stack testing shall be performed as specified below:

(a) Frequency. Emissions shall be tested every year. Tests may also be required at the direction of the Director.

(b) Notification. At least 30 days before the test, the source shall notify the Director of the date, time, and place of testing, provide a copy of the test protocol, and obtain approval by the Director prior to performing the tests. The source shall attend a pretest conference if determined necessary by the Director.

(c) Methods.
(i) Sample Location - the emission point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1, or other EPA approved testing method as acceptable to the Director. An Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.
(ii) To measure filterable particulate emissions, 40 CFR 51, Appendix M, Method 201A or other EPA approved testing method, as acceptable to the Director. If other approved testing methods are used which cannot measure the PM2.5 fraction of the filterable particulate emissions, all of the filterable particulate emissions shall be considered PM2.5.
(iii) To measure condensable particulate emissions, 40 CFR51, Appendix M, Method 202 or other EPA approved testing method, as acceptable to the Director.
(iv) Both the filterable particulate emissions and the condensable particulate emissions shall be used for compliance demonstration.
(v) Volumetric Flow Rate - 40 CFR 60, Appendix A, Method 2 or other EPA-approved testing methods, as acceptable to the Director.
(vi) Alternatively, 40 CFR 60, Appendix A, Method 5D may be used to determine total TSP

emissions. If TSP emissions are below the PM2.5 limit that will constitute compliance with the PM_{10} limit. If TSP emissions are not below the PM2.5 limit, the permittee shall retest using the methods allowed in paragraphs (i)-(v) above within 180 days of the TSP test date.

(d) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Director to give the results in the specified units of the emission limitation.

(e) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

II.B.3.q.2 **Recordkeeping:**

Results of all stack testing shall be recorded and maintained in accordance with the associated test method and Provision I.S.1 of this permit.

II.B.3.q.3 **Reporting:**

In addition to the reporting requirements of Section I of this permit, the permittee shall submit the results of the stack tests to the Director within 60 days of completion of the testing. Results shall clearly identify test results as compared to permit limits and indicate compliance status.

II.B.3.r **Condition:**

STATE ONLY REQUIREMENT. Emissions of NO_x shall not exceed 59.5 lbs/hr based on a calendar day average. [Origin: Utah 2019 $PM_{2.5}$ SIP, Part H]. [SIP Section IX.H.12]

II.B.3.r.1 **Monitoring:**

The permittee shall install, calibrate, maintain, and operate a continuous emissions monitoring system on the EAF baghouse exhaust stack. The permittee shall record the output of the system for measuring the NO_x emissions. The monitoring system shall comply with all applicable sections or R307-170 and 40 CFR 60, Appendix B. The emissions shall be determined on a calendar day average every day.

Except for system breakdown, repairs, calibration checks, and zero and span adjustments required under paragraph (d) 40 CFR 60.13, the permittee shall continuously operate all required continuous monitoring systems and shall meet minimum frequency of operation requirements as outlined in 40 CFR 60.13 and Section R307-170. The permittee shall conduct a Relative Accuracy Test Audit (RATA) by the end of the 3rd calendar quarter of each year.

II.B.3.r.2 **Recordkeeping:**

Results of monitoring shall be recorded and maintained as required in R307-170 and as described in Provision I.S.1 of this permit.

II.B.3.r.3 **Reporting:**

The permittee shall comply with the reporting provisions in R307-170-9 and any additional reporting provisions contained in Section I of this permit. The quarterly reports required in R307-170-9 are considered prompt notification of permit deviations required in Provision I.S.2.c of this permit if all information required by Provision I.S.2.c is included in the report.

II.B.3.s **Condition:**

Emissions of VOC shall not exceed 22.20 lbs/hr. [Origin: DAQE-AN100080043-18]. [R307-401-8]

II.B.3.s.1 **Monitoring:**

Stack testing shall be performed as follows:

(a) Frequency. Emissions shall be tested every five years. The source may also be tested at any time if directed by the Director. A state only requirement under the Utah SIP, Section IX.H.12 is emissions shall be tested every year.

(b) Notification. At least 30 days before the test, the source shall notify the Director of the date, time, and place of testing and provide a copy of the test protocol. The source test protocol shall be approved by the Director prior to performing the tests. The source shall attend a pretest conference if determined necessary by the Director.

(c) The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 5D, or other EPA-approved testing method, as acceptable to the Director. Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.

(d) VOC emissions shall be determined by using 40 CFR 60, Appendix A, Method 25A using a flame ionization analyzer equipped with a methane separator. If such an analyzer is unavailable, VOC emissions shall be determined simultaneously using two analyzers, with one configured to read only methane. The difference between the total organic detector and the methane detector shall constitute the VOC measurement.

(e) Volumetric Flow Rate - 40 CFR 60, Appendix A, Method 2 or other EPA-approved testing method, as acceptable to the Director.

(f) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Director to give the results in the specified units of the emission limitation.

(g) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

II.B.3.s.2 **Recordkeeping:**

Results of all stack testing shall be recorded and maintained in accordance with the associated test method and Provision I.S.1 of this permit.

II.B.3.s.3 **Reporting:**

In addition to the reporting requirements of Section I of this permit, the permittee shall submit the results of the stack tests to the Director within 60 days of completion of the testing. Results shall clearly identify test results as compared to permit limits and indicate compliance status.

II.B.4 **Conditions on EAF Dust Handling Fugitive Sources (Unit #11).**

II.B.4.a **Condition:**

Visible emissions shall not exceed 10 percent opacity. [Origin: 40 CFR 60 Subpart AAa]. [40 CFR 60.272a(b)]

II.B.4.a.1 **Monitoring:**

Opacity observations of dust-handling activities shall be conducted each January and July. An opacity observation shall be performed in accordance with 40 CFR 60, Appendix A, Method 9 on the emission unit that appears to have the highest opacity. If this unit does not exceed the opacity limitation, no further observations of any of the emission units will be required. If this unit exceeds the opacity limitation, the emission unit with the next highest opacity shall be observed until an emission unit does not exceed the opacity limitation. All emission units not observed shall be considered to not exceed the opacity limitation.

II.B.4.a.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.4.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.5 **Conditions on Billet Reheat Furnace #1 (Unit #13).**

II.B.5.a **Condition:**

Visible emissions shall not exceed 10 percent opacity. [Origin: DAQE-AN100080043-18]. [R307-401-8]

II.B.5.a.1 **Monitoring:**

In lieu of monitoring via visible emission observations, fuel usage shall be monitored to demonstrate that only natural gas or propane is being used as fuel.

II.B.5.a.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.5.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.5.b **Condition:**

Emissions of NO_x shall not exceed 15.0 lbs/hr. [Origin: DAQE-AN100080043-18]. [R307-401-8]

II.B.5.b.1 **Monitoring:**

Stack testing shall be performed as specified here:

(a) Frequency. The source shall be tested every three years. Tests may also be required at the direction of the Director. A state only requirement under the Utah SIP, Section IX.H.12 is that emissions shall be tested every year.

(b) Notification. At least 30 days before the test, the source shall notify the Director of the date, time, and place of testing and provide a copy of the test protocol. The source test protocol shall be approved by the Director prior to performing the tests. The source shall attend a pretest conference if determined necessary by the Director.

(c) The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1. In addition, Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.

(d) Methods to be used:

(1) To determine stack volumetric flow rate - 40 CFR 60, Method 2, or other EPA-approved testing method, as acceptable to the Director.

(2) To test for NO_x emissions - 40 CFR 60, Appendix A, Method 7, 7A, 7B, 7C, 7D, or 7E, or other EPA-approved testing method, as acceptable to the Director.

(e) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors to give the results in the specified units of the emission limitation.

(f) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

II.B.5.b.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.5.b.3 **Reporting:**

In addition to the reporting requirements of Section I of this permit, the permittee shall submit the results of the stack tests to the Director within 60 days of completion of the testing. Results shall clearly identify test results as compared to permit limits and indicate compliance status.

II.B.6 **Conditions on Billet Reheat Furnace #2 (Unit #14).**

II.B.6.a **Condition:**

Visible emissions shall not exceed 10 percent opacity. [Origin: DAQE-AN100080043-18]. [R307-401-8]

II.B.6.a.1 **Monitoring:**

In lieu of monitoring via visible emission observations, fuel usage shall be monitored to demonstrate that only natural gas or propane is being used as fuel.

II.B.6.a.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.6.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.6.b **Condition:**

Emissions of NO_x shall not exceed 8.0 lbs/hr. [Origin: DAQE-AN100080043-18]. [R307-401-8]

II.B.6.b.1 **Monitoring:**

Stack testing shall be performed as specified here:

(a) Frequency. The source shall be tested every three years. Tests may also be required at the direction of the Director. A state only requirement under the Utah SIP, Section IX.H.12 is that emissions shall be tested every year.

(b) Notification. At least 30 days before the test, the source shall notify the Director of the date, time, and place of testing and provide a copy of the test protocol. The source test protocol shall be approved by the Director prior to performing the tests. The source shall attend a pretest conference if determined necessary by the Director.

(c) The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1. In addition, Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.

(d) Methods to be used:

(1) To determine stack volumetric flow rate - 40 CFR 60, Method 2, or other EPA-approved testing method, as acceptable to the Director.

(2) To test for NO_x emissions - 40 CFR 60, Appendix A, Method 7, 7A, 7B, 7C, 7D, or 7E, or other EPA-approved testing method, as acceptable to the Director.

(e) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors to give the results in the specified units of the emission limitation.

(f) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

II.B.6.b.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.6.b.3 **Reporting:**

In addition to the reporting requirements of Section I of this permit, the permittee shall submit the results of the stack tests to the Director within 60 days of completion of the testing. Results shall clearly identify test results as compared to permit limits and indicate compliance status.

II.B.7 **Conditions on Unpaved Roadway Fugitives (Unit #24 a & b).**

II.B.7.a **Condition:**

Visible emissions shall not exceed 20 percent opacity. [Origin: DAQE-AN100080043-18]. [R307-401-8]

II.B.7.a.1 **Monitoring:**

In lieu of opacity monitoring, unpaved roads and other operational areas that are used by mobile equipment shall be water sprayed and/or chemically treated in sufficient frequency and quantity to maintain the surface material in a damp/moist condition except when freezing conditions exist.

II.B.7.a.2 **Recordkeeping:**

Records of water treatment shall be kept for all periods including the following items: date, number of treatments made, dilution rate, and quantity, rainfall received if any and the approximate amount, and the time of day treatments were made.

II.B.7.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.8 **Conditions on Paved Roadway Fugitives (Unit #24 c & d).**

II.B.8.a **Condition:**

Visible emissions shall not exceed 10 percent opacity. [Origin: DAQE-AN100080043-18]. [R307-401-8]

II.B.8.a.1 **Monitoring:**

In lieu of opacity monitoring, paved roads shall be periodically swept or water flushed as conditions warrant.

II.B.8.a.2 **Recordkeeping:**

Records of cleaning paved roads shall be kept as described in Provision I.S.1 of this permit.

II.B.8.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.9 **Conditions on Miscellaneous Tank Emissions (Unit #TANKS).**

II.B.9.a **Condition:**

For the Gasoline Storage Tank monthly throughput will be less than 10,000 gallons of gasoline. The permittee must not allow gasoline to be handled in manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:
1. Minimize gasoline spills
2. Clean up spills as expeditiously as practicable
3. Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use
4. Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators. [Origin 40 CFR 63.11116]. [40 CFR 63]

II.B.9.a.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.9.a.2 **Recordkeeping:**

Records to document gasoline throughput must be available within 24 hours of a request by the Director or representatives of USEPA.

II.B.9.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.10 **Conditions on Selected 10% Opacity Emission Units (Unit #10% Opacity).**

II.B.10.a **Condition:**

Visible emissions shall not exceed 10 percent opacity. [Origin: DAQE-AN100080043-18]. [R307-401-8]

II.B.10.a.1 **Monitoring:**

Opacity observations of dust-handling activities shall be conducted each January and July. An opacity observation shall be performed in accordance with 40 CFR 60, Appendix A, Method 9 on the emission unit that appears to have the highest opacity. If this unit does not exceed the opacity limitation, no further observations of any of the emission units will be required. If this unit exceeds the opacity limitation, the emission unit with the next highest opacity shall be observed until an emission unit does not exceed the opacity limitation. All emission units not observed shall be considered to not exceed the opacity limitation.

II.B.10.a.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.10.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.11 **Conditions on Sandblasting operations (Unit #SAND).**

II.B.11.a **Condition:**

Visible emissions shall not exceed 40% opacity, except for an aggregate period of three minutes in any one hour. [Origin: R307-206]. [R307-206]

II.B.11.a.1 **Monitoring:**

(a) Visible emissions shall be measured using EPA Method 9 every six months if abrasive blasting operations are conducted. Visible emissions from intermittent sources shall use procedures similar to Method 9, but the requirement for observations to be made at 15 second intervals over a six-minute period shall not apply.
(b) Visible emissions from unconfined blasting shall be measured at the densest point of the emission after a major portion of the spent abrasive has fallen out, at a point not less than five feet nor more than twenty-five feet from the impact surface from any single abrasive blasting nozzle.
(c) An unconfined blasting operation that uses multiple nozzles shall be considered a single source unless it can be demonstrated by the permittee that each nozzle, measured separately, meets the emission and performance standards provided in R307-206-2 through 4.
(d) Visible emissions from confined blasting shall be measured at the densest point after the air contaminant leaves the enclosure.

II.B.11.a.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.11.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.12 **Conditions on Painting and Solvent Cleaning Activities (Unit #MISC VOC)**

II.B.12.a **Condition:**

Plant wide emissions of VOC from miscellaneous solvent, cleaners (excluding janitorial), painting, and rolling mill oil and grease use shall not exceed 42.64 tons per 12-month period. [Origin: DAQE-AN100080043-18]. [R307-401-8]

II.B.12.a.1 **Monitoring:**

Compliance with the limitation shall be determined on a rolling 12-month total. Based on the first day of each month a new 12-month total shall be calculated using the previous 12 months data. This documentation shall be completed by the 20th day of each month. [R307-415-6b]

II.B.12.a.2 **Recordkeeping:**

A) Records shall include the following data for each item used:

(1) Name of the VOC emitting material, such as: paint, adhesive, solvent, thinner, reducers, chemicals, compounds, toxics, isocyanates, etc;

(2) Quantity of VOC-containing materials used (gallons);

(3) Density of VOC-containing materials used (pounds per gallon);

(4) Percent by weight of all VOCs in each material.

(5) The total quantity of VOCs used each month shall be the sum of the VOC usage calculated for each material by the following procedure:

VOC usage (lbs) = [% VOC by Weight/100] x [Density (lb/gal)] x [Quantity Consumed (gal)]

VOC usage (tons) = VOC usage (lbs) / 2000

(6) The quantity of VOC reclaimed for the month shall be similarly quantified and subtracted from the quantities calculated in step (5), to provide the monthly total VOC emissions.

B) The rolling mill VOC calculation shall be determined by the weight of oil and grease purchased for use in the rolling mill each month multiplied by 4.63%.

II.B.12.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.13 **Conditions on Fence Post Dip Paint Line.**

II.B.13.a **Condition:**

Emissions shall not exceed 2.3 pounds of VOC per gallon of coating, minus water and exempt solvents. [Origin: R307-350]. [R307-350]

II.B.13.a.1 **Monitoring:**

VOC content shall be determined by inspection of the VOC specifications provided by the vendor in purchase records.

II.B.13.a.2 **Recordkeeping:**

Records shall include inventory and product data sheets of all coatings and solvents subject to 307-350-7(3) and shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.13.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.13.b **Condition:**

Work practices of R307-350-7(1 and 2) shall be followed. [Origin: R307-350-7]. [R307-350]

II.B.13.b.1 **Monitoring:**

A visual observation shall be conducted monthly for all applicable work practices.

II.B.13.b.2 **Recordkeeping:**

Records shall meet R307-350-7(3) and shall be maintained as described in Provision I.S.1 of this permit.

II.B.13.b.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.14 **Conditions on NSPS Compression Ignition Reciprocating Internal Combustion Engines.**

II.B.14.a **Condition:**

The permittee shall operate and maintain affected emission units that achieve the emission standards as required in 40 CFR 60.4204 and 40 CFR 60.4205 over the entire life of the engine. The permittee shall do all of the following, except as permitted in II.B.14.a.1(b):
(1) Operate and maintain the stationary CI ICE and control device according to the manufacturer's emission-related written instructions;
(2) Change only those emission-related settings that are permitted by the manufacturer; and
(3) Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as applicable. [Origin: 40 CFR 60 Subpart IIII]. [40 CFR 60.4206, 40 CFR 60.4211(a)]

II.B.14.a.1 **Monitoring:**

(a) The permittee shall document activities performed to assure proper operation and maintenance.

(b) If the permittee does not install, configure, operate, and maintain affected emission units and control devices according to the manufacturer's emission-related written instructions, or changes emission-related settings in a way that is not permitted by the manufacturer, the permittee shall demonstrate compliance as follows:

(1) For affected emission units with maximum engine power less than 100 HP:
a. Keep a maintenance plan and records of conducted maintenance to demonstrate compliance; and
b. To the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions; and
c. If the permittee does not install and configure the engine and control device according to the manufacturer's emission-related written instructions, or changes the emission-related settings in a way that is not permitted by the manufacturer, the permittee shall conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of such action.

(2) For affected emission units greater than or equal to 100 HP and less than or equal to 500 HP:
a. Keep a maintenance plan and records of conducted maintenance; and
b. To the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions; and
c. Conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after changing emission-related settings in a way that is not permitted by the manufacturer.

II.B.14.a.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.14.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.14.b **Condition:**

The permittee of affected emission units with a displacement of less than 30 liters per cylinder shall purchase diesel fuel that meets the following per gallon standards of 40 CFR 80.510(b) for nonroad diesel fuel:
1. Sulfur content no greater than 15 ppm (0.0015 percent) by weight and
2. A minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.
[Origin: 40 CFR 60 Subpart IIII]. [40 CFR 60.4207(b)]

II.B.14.b.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.14.b.2 **Recordkeeping:**

For each fuel load received, the permittee shall maintain either fuel receipt records or other documentation showing fuel meets the specifications of 40 CFR 80.510(b). The permittee shall maintain documentation demonstrating compliance with the condition. These records shall be maintained in accordance with Provision I.S.1. of this permit.

II.B.14.b.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.14.c **Condition:**

Each emergency affected emission unit shall not exceed 100 hours of maintenance checks and readiness testing per year unless the permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of affected emission units beyond 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. Emergency engines may operate up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply non-emergency power as part of a financial arrangement with another entity. Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in 40 CFR 60.4211(f), is prohibited. [Origin: 40 CFR 40 CFR 60 Subpart IIII]. [40 CFR 604211(f)]

II.B.14.c.1 **Monitoring:**

If an emergency affected emission unit does not meet the standards applicable to non-emergency engines, the permittee shall install a non-resettable hour meter prior to startup of the engine. [40 CFR 60.4209(a)] Records required for this permit condition will serve as monitoring.

II.B.14.c.2 **Recordkeeping:**

Records of each affected emission unit shall be kept on a monthly basis in an operation and maintenance log. Records shall distinguish between maintenance-related hours and emergency use-related hours. If maintenance and testing beyond 100 hours per year are required by Federal, State, or local standards, records of these standards shall also be kept.

Starting with the model years in Table 5 of 40 CFR 60 Subpart IIII, if an affected emission unit does not meet the standards applicable to non-emergency engines in the applicable model year, the permittee shall keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The permittee must record the time of operation of the engine and the reason the engine was in operation during that time. (Origin: 40 CFR 60.4214(b))

Records shall be maintained as described in Provision I.S.1 of this permit.

II.B.14.c.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.14.d **Condition:**

For all affected emission units, except those that are modified, reconstructed, or removed from one existing location and reinstalled at a new location, the permittee shall comply with paragraphs (a) through (c).
(a) The permittee shall not install stationary CI RICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.
(b) The permittee shall not install stationary CI RICE (excluding fire pump engines) with a maximum engine power of less than 19 KW (25 HP) that do not meet the applicable requirements for 2008 model year engines.

(c) In addition to the requirements specified in 40 CFR 60.4201,4202, 4204, and 4205, it is prohibited to import stationary CI RICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements specified in this section.
[Origin: 40 CFR 60 Subpart IIII]. [40 CFR 60.4208]

II.B.14.d.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.14.d.2 **Recordkeeping:**

The permittee shall keep records of the install date of each affected emission unit and the applicable requirements under 40 CFR 60 Subpart IIII. Records shall be maintained as described in Provision I.S.1 of this permit.

II.B.14.d.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.14.e **Condition:**

Pre-2007 model year emergency affected emission units with a displacement of less than 10 liters per cylinder that are not fire pump engines shall comply with the emission standards in Table 1 of 40 CFR 60 Subpart IIII. Pre-2007 model year emergency affected emission units with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines shall comply with the emission standards in 40 CFR 94.8(a)(1). Modified or reconstructed affected emission units with a displacement of less than 10 liters per cylinder that are not fire pump engines shall meet the emission standards in Table 1 of 40 CFR 60 Subpart IIII applicable to the model year, maximum engine power, and displacement of the modified or reconstructed engine. Modified or reconstructed affected emission units with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines shall meet the emission standards in 40 CFR 94.8(a)(1) applicable to the model year, maximum engine power, and displacement of the modified or reconstructed engine. If the permittee conducts performance tests in-use on stationary CI ICE with a displacement of less than 30 liters per cylinder they shall meet the not-to-exceed (NTE) standards as indicated in 40 CFR 60.4212. [Origin: 40 CFR 60 Subpart IIII]. [40 CFR 60.4205(a)]

II.B.14.e.1 **Monitoring:**

The permittee shall demonstrate compliance according to one of the methods specified in paragraphs (1) through (5) of this section.
(1) Purchasing an engine certified according to 40 CFR part 89 or 40 CFR part 94, as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications.
(2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in 40 CFR 60 Subpart IIII and these methods must have been followed correctly.
(3) Keeping records of engine manufacturer data indicating compliance with the standards.
(4) Keeping records of control device vendor data indicating compliance with the standards.
(5) Conducting an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in 40 CFR 60.4212, as applicable.
(Origin: 40 CFR 60.4211(b)).

II.B.14.e.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.14.e.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.14.f **Condition:**

2007 model year and later emergency affected emission units with a displacement of less than 30 liters per cylinder that are not fire pump engines shall comply with the emission standards for new nonroad CI RICE in 40 CFR 60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI RICE. [Origin: 40 CFR 60 Subpart IIII]. [40 CFR 60.4205(b)]

II.B.14.f.1 **Monitoring:**

The permittee shall comply by purchasing an engine certified to the emission standards in 40 CFR 60.4205(b) for the same model year and maximum engine power. The engine must be Installed, configured, operated, and maintained according to the manufacturer's emission-related specifications, except as permitted below. (Origin: 40 CFR 60.4211(c)).

II.B.14.f.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.14.f.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.15 **Conditions on NSPS Spark Ignition Reciprocating Internal Combustion Engines.**

II.B.15.a **Condition:**

For each affected emission unit where construction commenced (i.e., date the affected emission unit is ordered by the Permittee) after June 12, 2006, with a maximum engine power:
(1) Less than or equal to 19 KW (25 HP) manufactured on or after July 1, 2008, the Permittee shall comply with the emission standards in 40 CFR 60.4231(a) (origin 40 CFR 60.4233(a));
(2) Greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG), the Permittee shall comply with the emission standards in Table 1 of 40 CFR 60 Subpart JJJJ. Alternatively for engines manufactured prior to January 1, 2011 that were certified to the certification emission standards in 40 CFR part 1048 applicable to engines that are not severe duty engines, if such stationary SI ICE was certified to a carbon monoxide (CO) standard above the standard in Table 1 40 CFR 60 Subpart JJJJ, the Permittee may meet the CO certification (not field testing) standard for which the engine was certified. (origin 40 CFR 60.4233(e))

Deadline for importing or installing affected emission units produced in the previous model year, except units that have been modified, reconstructed or removed from one existing location and reinstalled at a new location. (origin 40 CFR 60.4236)
(1)The Permittee shall not install affected emission units with a maximum engine power of less than 500 HP that do not meet the applicable requirements in 40CFR 60.4233. (Origin 40 CFR 60.4236(a))
(2) For emergency engines with a maximum engine power of greater than 19 KW (25 HP), the Permittee shall not install engines that do not meet the applicable requirements in 40 CFR 60.4233. (origin 40 CFR

60.4236(c))

The Permittee shall operate and maintain affected emission units that achieve the emission standards as required in 40 CFR 60.4233 over the entire life of the engine (origin 40 CFR 60.4234)

It is expected that air-to-fuel ratio controllers will be used with the operation of three-way catalysts/non-selective catalytic reduction. The AFR controller must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times. [Origin: 40 CFR 60 Subpart JJJJ]. [40 CFR 60.4233, 40 CFR 60.4234, 40 CFR 60.4236, 40 CFR 60.4243]

II.B.15.a.1 **Monitoring:**

The Permittee shall comply with this section by purchasing an engine certified to the emission standards in 40 CFR 60.4231 (a) through(c), as applicable, for the same engine class and maximum engine power. The Permittee shall operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions. The Permittee shall also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply. If the Permittee adjusts engine settings according to and consistent with the manufacturer's instructions, the affected emission unit will not be considered out of compliance.

II.B.15.a.2 **Recordkeeping:**

The Permittee shall keep records of conducted maintenance to demonstrate compliance, but no performance testing is required for the Permittee. Results of monitoring shall be maintained in accordance with the Provisions I.S.1 of this permit.

II.B.15.a.3 **Reporting:**

Reports shall be submitted as specified in Section I of this permit.

II.B.15.b **Condition:**

Emergency engines may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of affected emission units in emergency situations. The Permittee may petition the Director for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. Affected emission units may operate up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. For affected emission units, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in this section, is prohibited. [Origin: 40 CFR 60 Subpart JJJJ]. [40 CFR 60.4243(d)]

II.B.15.b.1 **Monitoring:**

For affected emission units less than 130 HP, built on or after July 1, 2008, and does not meet the standards applicable to non-emergency engines, the Permittee shall install a nonresettable hour meter upon startup of the affected emission unit. (Origin: 40 CFR 60.4237(c).

II.B.15.b.2 **Recordkeeping:**

For each affected emission unit greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, that do not meet the standards applicable to non-emergency engines, the Permittee shall keep records of the hours of operation of the affected emission unit that is recorded through the nonresettable hour meter.

The Permittee shall document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non- emergency operation. (40 CFR 60.4245(b))

Records shall be maintained as described in Provision I.S.1 of this permit.

II.B.15.b.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.15.c **Condition:**

The permittee shall use gasoline that meets the per gallon sulfur limit in 40 CFR 80.195. [Origin: 40 CFR 60 Subpart JJJJ]. [40 CFR 60.4235]

II.B.15.c.1 **Monitoring:**

For each delivery of gasoline, the permittee shall either:
(1) Determine the fuel sulfur content expressed as ppm; or
(2) Inspect the fuel sulfur content expressed as ppm determined by the vendor using methods of the ASTM; or
(3) Inspect documentation provided by the vendor that indirectly demonstrates compliance with this provision.

II.B.15.c.2 **Recordkeeping:**

Records shall be maintained as described in Provision I.S.1 of this permit.

II.B.15.c.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.15.d **Condition:**

All natural gas-fired emergency generators shall not exceed 10% opacity. [Origin: DAQE-AN100080043-18]. [R307-401-8]

II.B.15.d.1 **Monitoring:**

During any period that the emergency generator(s) is (are) operated for longer than 12 hours consecutively, visual observations(s) of each generator exhaust shall be made by an individual trained on the observation procedures of 40 CFR 60, Appendix A, Method 9. The individual is not required to be a certified visual emissions observer (VEO). If any visible emissions are observed, then an opacity determination shall be performed in accordance with 40 CFR 60, Appendix A, Method 9, by a certified VEO.

Observations shall be completed within 24 hours of the engine being operated 12 hours or more, each event. All hours of operation that are not emergency use shall be counted as maintenance operational hours. If the generator(s) continue to operate on consecutive days following the initial observation, an opacity determination shall be performed on a daily basis.

II.B.15.d.2 **Recordkeeping:**

Records of visual observations performed and data required by 40 CFR 60, Appendix A, Method 9 for each determinations shall be maintained as described in Provision I.S.1. of this permit.

II.B.15.d.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.16 **Conditions on NESHAP Existing CI Emergency RICE less than or equal to 500 hp.**

II.B.16.a **Condition:**

The permittee shall comply with the following operating limitations at all times for each emergency affected emission unit:

1. The permittee shall operate the affected emission unit according to the requirements in paragraphs 1.a through 1.c. Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in 1.a through 1.c, is prohibited. If the engine is not operated in accordance with paragraphs 1.a through 1.c, it will not be considered an emergency engine and shall meet all requirements for non-emergency engines.

a. There is no time limit on the use of emergency stationary RICE in emergency situations.

b. Operation for the purpose of maintenance checks and readiness testing is limited to 100 hours per year, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. A petition for approval of additional hours to be used for maintenance checks and readiness testing is not required if the permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year.

c. The permittee may operate the affected emission unit up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing and shall meet the requirements in 40 CFR 63.6640(f)(1)(iii).

2. The permittee shall meet the following requirements at all times, except during periods of startup:

a. Change oil and filter every 500 hours of operation or annually, whichever comes first;

b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first;

c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

3. During periods of startup, the permittee shall minimize the engine's time spent at idle and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.

4. The permittee shall comply with the applicable general provisions in 40 CFR 63.1-15 as identified in Table 8 of 40 CFR 63 Subpart ZZZZ. [Origin: 40 CFR 63 Subpart ZZZZ]. [40 CFR 63.6595(a)(1), 40 CFR 63.6602, 40 CFR 63.6605(a), 40 CFR 63.6625(h), 40 CFR 63.6640(f), 40 CFR 63.6665, 40 CFR 63 Subpart ZZZZ, 40 CFR 63 Subpart ZZZZ]

II.B.16.a.1 **Monitoring:**

The permittee shall install a non-resettable hour meter if one is not already installed. [40 CFR 63.6625(f)].

If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the required schedule, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The work practice shall be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated.

The permittee shall demonstrate continuous compliance by operating and maintaining the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written operation and maintenance instructions or develop and follow their own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR 63.6625(e), 40 CFR 63.6640(a), 40 CFR 63 Subpart ZZZZ Table 6]

The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in accordance with 40 CFR 63.6625(i).

The permittee shall comply with the applicable general provisions in 40 CFR 63.1-15 as identified in Table 8 of 40 CFR 63 Subpart ZZZZ. [40 CFR 63.6665].

II.B.16.a.2 **Recordkeeping:**

The permittee shall keep the records described in 40 CFR 63.6655(a)(1)-(5) as applicable. [40 CFR 63.6655(a)]

For each affected emission unit that does not meet the standards applicable to non-emergency engines, the permittee shall keep records of the hours of operation of the engine that are recorded through the non-resettable hour meter. The permittee shall document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for demand response operation, the permittee shall keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response. [40 CFR 63.6655(f)]

If additional hours are to be used for maintenance checks and readiness testing, the permittee shall maintain records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year. [40 CFR 63.6640(f)(2)(i)]

The permittee shall keep records that demonstrate continuous compliance with each applicable operating limitation [including, but not limited to, the manufacturer's emission-related operation and maintenance instructions or the permittee-developed maintenance plan]. [40 CFR 63.6655(d), 40 CFR 63 Subpart ZZZZ Table 6]

Records of the maintenance conducted shall be kept in order to demonstrate that the permittee operated and maintained the affected emission unit and after-treatment control device (if any) according to their own maintenance plan. [40 CFR 63.6655(e)]

The permittee shall comply with the applicable general provisions in 40 CFR 63.1-15 as identified in Table 8 of 40 CFR 63 Subpart ZZZZ. [40 CFR 63.6665]

Records shall be maintained in accordance with 40 CFR 63.6660 and Provision I.S.1 of this permit.

II.B.16.a.3 **Reporting:**

The permittee shall report any failure to perform the work practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable. [40 CFR 63 Subpart ZZZZ Table 2d Footnote 2]

The permittee shall comply with the applicable general provisions in 40 CFR 63.1-15 as identified in 40 CFR 63 Subpart ZZZZ Table 8. [40 CFR 63.6665] The permittee shall also report each instance in which it did not meet the applicable requirements in Table 8. [40 CFR 63.6640(e)]

There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.16.b **Condition:**

At all times the permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the permittee to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [Origin: 40 CFR 63 Subpart ZZZZ]. [40 CFR 63.6595(a)(1), 40 CFR 63.6605(b)]

II.B.16.b.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.16.b.2 **Recordkeeping:**

The permittee shall keep the records described in 40 CFR 63.6655(a)(1)-(5) as applicable. [40 CFR 63.6655(a)] The permittee shall document activities performed to assure proper operation and maintenance. Records shall be maintained in accordance with 40 CFR 63.6660 and Provision I.S.1 of this permit.

II.B.16.b.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.17 **Conditions on Existing NESHAP SI RICE non-emergency less than or equal to 500 hp.**

II.B.17.a **Condition:**

The permittee shall meet the following requirements, except during periods of startup:
(1) Change oil and filter every 1,440 hours of operation or annually, whichever comes first;
(2) Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first; and
(3) Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first.

The permittee shall minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes after which the non-startup emission limitations apply. [40 CFR 63, Subpart ZZZZ]. [40 CFR 63.6603]

II.B.17.a.1 **Monitoring:**

The permittee shall operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

II.B.17.a.2 **Recordkeeping:**

The permittee shall keep the records described 40 CFR 63.6655(a)(1)-(5), (d), and (e). Records shall be maintained in accordance with 40 CFR 63.6660 and Provision I.S.1 of this permit.

II.B.17.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.18 **Condition on Maintenance Building Equipment.**

II.B.18.a **Condition:**

The fabrication shop baghouse shall not exceed 10% opacity. [Origin: DAQE-AN100080043-18]. [R307-401-8]

II.B.18.a.1 **Monitoring:**

A visual observation of each affected emission unit shall be performed on a weekly basis by an individual trained on the observation procedures of 40 CFR 60, Appendix A, Method 9. The individual is not required to be a certified visible emissions observer (VEO). If any visible emissions are observed, an opacity determination of that emission unit shall be performed by a certified VEO in accordance with 40 CFR 60, Appendix A, Method 9 within 24 hours of the initial observation.

II.B.18.a.2 **Recordkeeping:**

Records of visual observations performed and data required by 40 CFR 60, Appendix A, Method 9 shall be maintained in accordance with Provision I.S.1 of this permit. [R307-401-8]

II.B.18.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.C **Emissions Trading**
(R307-415-6a(10))

Not applicable to this source.

II.D **Alternative Operating Scenarios**.
(R307-415-6a(9))

Not applicable to this source.

SECTION III: PERMIT SHIELD

The following requirements have been determined to be not applicable to this source in accordance with Provision I.M, Permit Shield:

III.A. R307-415-3 (Major Source Definition:)

This regulation is not applicable to the Permitted Source for the following reason(s): Nucor Bar Mill Group and Western Metal Recycling are not a single major source under this definition. Although contiguous and under a common corporate ownership, they are not under common control, not in a single major industrial grouping, and each facility can exist without the operation or presence of the other [Last updated January 22, 2019]

SECTION IV: ACID RAIN PROVISIONS

IV.A **This source is not subject to Title IV. This section is not applicable.**

REVIEWER COMMENTS

This operating permit incorporates all applicable requirements contained in the following documents:

Incorporates	DAQE-AN100080043-18 dated December 5, 2018

1. Comment on an item originating in DAQE-AN100080043-18 regarding Unit #9: EAF Baghouse Vent
   Bag Leak Detection System: Approval of the permit constitutes approval of the Bag Leak Detection System [Last updated February 4, 2019]

2. Comment on an item originating in 40 CFR 63 Subpart CCCCCC regarding Unit #TANKS: Miscellaneous tank emissions
   Gasoline Storage Tank: Added requirements of 40 CFR 63.11116 will apply to the above ground gasoline storage tank on January 10, 2011. [Last updated January 22, 2019]

3. Comment on an item originating in 40 CFR 63 Subpart YYYYY regarding Unit #9: EAF Baghouse Vent
   CAM: 40 CFR 63.10686(e) requires the development of a compliance assurance monitoring program meeting the requirements of 40 CFR 64 to monitor the capture system and PM control device required in this subpart. The CAM is a bag leak detection system. [Last updated January 22, 2019]

4. Comment on an item originating in 40 CFR 68 regarding Permitted Source
   RMP: This regulation is not applicable at this time. [Last updated January 22, 2019]

5. Comment on an item originating in DAQE-AN100080043-18 regarding Permitted Source
   Propane Flare: A propane flare exists at the site. The flare is not in use, is not authorized for use in the source Approval Order, and is deleted from the Title V equipment list. [Last updated February 4, 2019]

6. Comment on an item originating in 40 CFR 89 regarding Permitted Source
   Non-road Engines: Nucor has several portable engines. These engines meet the criteria for non-road engines since they are not at a specific site within the source for more than 12 consecutive months. [Last updated January 22, 2019]

7. Comment on an item originating in this permit regarding Permitted Source
   Nucor fiscal year definition: This permit refers to a fiscal year. For accounting purposes Nucor's year is divided up into 52 week periods. The year begins on the Sunday closest to January 1. [Last updated January 22, 2019]

8. Comment on an item originating in 40 CFR 60 Subpart AAa regarding Unit #EAF 1 & 2: Electric Arc Furnaces
   NSPS "shop opacity" monitoring clarification: 60.271a(a) defines "shop opacity" as "the arithmetic average of 24 or more opacity observations of emissions from the shop taken in accordance with Method 9 ... " EPA regional staff previously expressed concern over the potential to read 60.271(k) and this definition as requiring "a series of 24 six-minute Method 9 readings (i.e., 144 minutes)". Method 9 states that a minimum of 24 observations shall be made at 15-second intervals. The inclusion of the phrase "for applicable time periods" in 60.271(k) appears to infer that a standard six-minute observation is meant, with multiple six-minute observations required for different regulatory purposes.

60.273(d) and 60.273a(d) each state "Shop opacity shall be determined as the arithmetic average of 24 or more consecutive 15-second opacity observations of emissions from the shop taken in accordance with Method 9". This seems to confirm the above interpretation; this interpretation should be used when dealing with "shop opacity" (nominally 6%). [Last updated January 22, 2019]

9. Comment on an item originating in 40 CFR 60 Subpart AAa regarding Unit #9: EAF Baghouse Vent

   Particulate limit stringency review: The NSPS for Electric Arc Furnace's, 40 CFR 60 Subpart AAa, at para 60.272a(a)(1) limits the emission of particulate matter from a control device (in this case a baghouse) to 0.0052 gr/dscf. Approval Order DAQE-AN100080038-16 limits the emission of particulate matter to 0.0030 gr/dscf which is more stringent than the NSPS and is the limit in this permit. [Last updated January 22, 2019]

10. Comment on an item originating in 40 CFR 60.273a(d) regarding Unit #EAF 1 & 2: Electric Arc Furnaces

    NSPS EAF static pressure monitoring requirements: Nucor has opted to perform daily visible emissions observations of the shop opacity. 40 CFR 60.273a(d) relieves the source of the requirement to install a furnace static pressure monitoring device if observations of shop opacity are conducted according to certain criteria. These criteria are included in this permit, so Nucor is not required to have a furnace static monitoring device. [Last updated January 22, 2019]

11. Comment on an item originating in 40 CFR 60 Subpart AAa 60.274a(b,c,f,g) regarding Unit #EAF 1 & 2: Electric Arc Furnaces

    NSPS EAF monitoring requirements: The approval order requires monitoring of the EAF air flow system in one of three different ways. These approval order conditions were originally based on the requirements of 40 CFR 60.274(b) and (c), and are equivalent to or more stringent than the NSPS language. Subpart AAa is identical to Subpart AA in the related paragraphs, so the stringency review is still valid once AAa is triggered. Division staff has confirmed that all requirements of these NSPS conditions and the related requirements in the NSPS have been included in this permit.

    Comparisons: Fan amps and damper settings: 60.274a(b) requires a check and record of these values once per shift. The AO and NSPS are equivalent on this condition.

    Volumetric flow in ducts: 60.274a(b) requires monitoring of flow through each separately ducted hood; the AO required a record of air flow in all ducts evacuating the EAF and roof canopy. Reproducibility and accuracy requirements are identical between the two conditions. The AO and NSPS are equivalent on this condition.

    60.274a(c) requires determination of the settings for either of the above monitoring situations whenever a compliance test is done for shop opacities. This language is included in the monitoring for the emission control system parameter monitoring condition, where both shop opacity and system parameters must be measured during any performance test to establish those parameters.

    The AO also allows an option to monitor the negative pressure in the ducts used to evacuate emissions from the furnaces. These ducts are active during melting and refining, are not water-cooled and are separate from the overhead canopy ducts, though both set draw emissions to the EAF baghouse. The AO language for this option is similar to 60.274a(f) and (g), with minor differences. However, 60.274a(f) and (g) do not apply if the source is doing daily shop opacities as Nucor is. Therefore, this AO option is not likely to be used, and is included in the OP only to carry over the AO condition in full. [Last updated January 22, 2019]

12. Comment on an item originating in DAQE-AN100080043-18 regarding Unit #EAF 1 & 2: Electric Arc Furnaces

    Fan amperage and damper setting compliance values on file: Approval Order condition II.B.1.f.A reflects a monitoring requirement from 40 CFR Subpart AA that requires monitoring of the pollution control equipment on an EAF based on the results from the initial compliance test. Subpart AAa has the same language. Nucor has completed such performance tests and DAQ has those results. A copy of the results will be stored with this permit for reference as opposed to reproducing the results in the permit. The requirement to monitor the pollution control system (fan amps, etc) is included in this permit with the appropriate language referencing the results of the performance tests. [Last updated February 4, 2019]

13. Comment on an item originating in 1997 Notice of Intent regarding Unit #11: EAF Dust Handling Fugitive Sources

    Dust handling sources not covered in EAF Dust Handling Fugitive Sources: EAF dust handling from canopy/DEC dropout chamber operations occur inside the meltshop and are controlled by the canopy system. The emission points listed in the emission unit description in this permit are outside of the meltshop. Additionally, the spark arrestor directly upstream from the baghouse has been determined to be inherent process equipment, not a control device. [Last updated January 22, 2019]

14. Comment on an item originating in this permit regarding Permitted Source

    Monitoring stringency for propane and natural gas limits potentially changed: The monitoring for natural gas and propane consumption originally required the subtraction of the fuel used by the EAF oxyfuel burners. Nucor requested that the subtraction be optional. DAQ agreed because the end result is potentially more stringent. Now Nucor MAY subtract the oxyfuel burners. [Last updated January 22, 2019]

15. Comment on an item originating in this permit regarding Permitted Source

    Changes from AA to AAa: The following changes were made when the NSPS applicability was changed from AA to AAa: exceptions for charging and tapping were deleted; requirement to record time and duration of charge were deleted; monitoring was standardized (2 versions in previous permit); and citations were updated. [Last updated January 22, 2019]

16. Comment on an item originating in this permit regarding Unit #DEGTANK: Diethylene glycol storage tank

    Removal of Subpart Kb recordkeeping: The requirement to maintain the design records for this tank has been removed, since the modifications to 40 CFR 60 Subpart Kb in 2003 eliminated the requirement. [Last updated January 22, 2019]

17. Comment on an item originating in this permit regarding Permitted Source

    R307-309-5(3): The fugitive dust rule R307-309-5(3) allows for a 25 mph exemption. The exemption has been omitted from this permit to make the fugitive dust requirements as stringent as the EPA approved rule R307-1-4.05 [Last updated January 22, 2019]

18. Comment on an item originating in Utah 2016, 2019 SIPs regarding Permitted Source

    2016, 2019 SIP Issues: The requirements from SIPs (dated 12/7/2016 and 1/2/2019) are included. The requirements of the 1/2/2019 SIP are state only requirements. All other requirements are previously approved either in the Approval Order (DAQE-AN100080043-18) or in Part H 1 - 4 of the 12/7/2016 SIP approved by EPA. [Last updated March 4, 2019]

State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

L. Scott Baird
Executive Director

DIVISION OF AIR QUALITY
Bryce C. Bird
Director

RN100080046

September 23, 2020

Doug Jones
Nucor Steel
PO Box 100
Plymouth, UT 84330

Dear Doug Jones,

Re: Engineer Review:
Modification to Approval Order to DAQE-AN100080043-18 to Add Carbon and Flux Handling System
Project Number: N100080046

The DAQ requests a company representative (Title V Responsible Official for enhanced Approval Order application) review and sign the attached Engineer Review (ER). This ER identifies all applicable elements of the New Source Review permitting program. Nucor Steel should complete this review within **10 business days** of receipt.

Nucor Steel should contact **Tad Anderson** at (385) 306-6515 if there are questions or concerns with the review of the draft permit conditions. Upon resolution of your concerns, please email tdanderson@utah.gov the signed cover letter to Tad Anderson. Upon receipt of the signed cover letter, the DAQ will prepare an ITA for a 30-day public comment period. At the completion of the comment period, the DAQ will address any comments and will prepare an AO for signature by the DAQ Director.

If Nucor Steel does not respond to this letter within **10 business days,** the project will move forward without source concurrence. If Nucor Steel has concerns that cannot be resolved and the project becomes stagnant, the DAQ Director may issue an Order prohibiting construction.

Approval Signature _____
(Signature & Date)

☐ By (Title V responsible official) initialing this box and signing this document, this document serves as an enhanced application and the public comment period will serve as the required comment period for Title V purposes.

The Title V responsible official certifies: based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

UTAH DIVISION OF AIR QUALITY
ENGINEER REVIEW

SOURCE INFORMATION

Project Number	N100080046
Owner Name	Nucor Steel
Mailing Address	PO Box 100 Plymouth, UT, 84330
Source Name	Nucor Steel
Source Location	West Nucor Rd PO Box 100 Plymouth, UT 84330
UTM Projection	401000 m Easting, 4637500 m Northing
UTM Datum	NAD27
UTM Zone	UTM Zone 12
SIC Code	3312 (Steel Works, Blast Furnaces (Including Coke Ovens), & Rolling Mills)
Source Contact	Doug Jones
Phone Number	(435) 458-2415
Email	doug.jones@nucor.com
Project Engineer	Tad Anderson, Engineer
Phone Number	(385) 306-6515
Email	tdanderson@utah.gov
Notice of Intent (NOI) Submitted	June 2, 2020
Date of Accepted Application	September 1, 2020

SOURCE DESCRIPTION

General Description
Nucor Steel, Plymouth (Nucor) is a steel recycling operation located in Northeastern Box Elder County, Utah, just outside Plymouth Utah. Nucor utilizes scrap steel as the primary raw material to manufacture steel bar products including rebar and shapes. The facility utilizes electric Arc Furnaces to melt scrap steel and cast the steel into billets. Billets are stored in an inventory, then reheated in a reheat furnace and passed through a rolling mill where it is shaped into the final product.

NSR Classification:
Minor Modification at Major Source

Source Classification
Located in Box Elder County, Non-Attainment area for $PM_{2.5}$
Airs Source Size: A

Applicable Federal Standards
NSPS (Part 60), A: General Provisions
NSPS (Part 60), AA: Standards of Performance for Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974, and On or Before August 17, 1983
NSPS (Part 60), AAa: Standards of Performance for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 17, 1983
NSPS (Part 60), IIII: Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
NSPS (Part 60), JJJJ: Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
MACT (Part 63), A: General Provisions
MACT (Part 63), ZZZZ: National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
MACT (Part 63), YYYYY: National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steelmaking Facilities
MACT (Part 63), CCCCCC: National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities
Title V (Part 70) Major Source
PSD applies to Nucor Plymouth Mini Mill

Project Proposal
Modification to Approval Order to DAQE-AN100080043-18 to Add Carbon and Flux Handling System

Project Description
Nucor has requested to add the carbon and flux handling system to the arc furnace to assure proper chemistry of the final products manufactured. The new carbon and flux handling system would add lime, dolomitic lime, and coal directly to a steel scrap charge bucket, which is loaded with scrap steel. The additional carbon and flux handling system includes a new belly dump unloading point for bulk carbon to be transferred to an existing silo. Lime will be unloaded to existing unloading points and transferred to existing silos.

The new carbon and flux handling system and new unloading point will be located within the

building, but adjacent to an open doorway. Nucor is proposing to install emissions capture and controls to lower emissions from the new process. The new carbon and flux handling system will have a hood surrounding the charge drop point and exhaust from the hood will be routed to the existing Electric Arc Furnace (EAF) baghouse. The new unloading point will be located the furthest distance (extending building footprint) from the open doorway with a below grade pit (to minimize drop distance) and a bucket elevator system to silo. Indoor building operations are controlled by the EAF baghouse, but with open door operations, emissions are anticipated.

EMISSION IMPACT ANALYSIS

Modeling is not required as R307-410-4 and R307-410-5. The emission rate from the new carbon and flux handling system and new unloading point is 15.43 pounds per year (0.01 TPY) PM_{10} and 2.33 pounds per year (<0.01 TPY) $PM_{2.5}$.
[Last updated September 16, 2020]

SUMMARY OF EMISSIONS

The emissions listed below are an estimate of the total potential emissions from the source. Some rounding of emissions is possible.

Criteria Pollutant	Change (TPY)	Total (TPY)
CO_2 Equivalent	0	151073.00
Carbon Monoxide	0	2993.21
Nitrogen Oxides	0	346.85
Particulate Matter	0	235.50
Particulate Matter - PM_{10}	0.01	266.50
Particulate Matter - $PM_{2.5}$	0	245.46
Sulfur Dioxide	0	253.32
Volatile Organic Compounds	0	150.27

Hazardous Air Pollutant	Change (lbs/yr)	Total (lbs/yr)
Total HAPs (CAS #THAPS)	0	33820
	Change (TPY)	**Total (TPY)**
Total HAPs	0	16.91

Note: Change in emissions indicates the difference between previous AO and proposed modification.

Review of BACT for New/Modified Emission Units

1. **BACT review regarding Material handling**

With the addition of new carbon and flux handling system and new unloading point, BACT must be conducted for the two new drop points. The control technologies to for material handling are water application, enclosures and add-on control devices such as baghouses, wet scrubbers, cyclones, and electrostatic precipitators to control fugitive PM_{10} and $PM_{2.5}$ emissions.

The new carbon and flux handling system cannot use any water suppression since water added to the EAF would increase the risk of steam explosion. The carbon and flux handling system is enclosed with some openings, but will have a hood to capture emissions and route the exhaust to the existing EAF baghouse. A 90% control efficiency was assumed for the capture and control by the EAF baghouse. The existing EAF baghouse is limited to a 3% opacity limit and is required to be tested annually for PM_{10} and $PM_{2.5}$. Emissions from the new carbon and flux handling system would be included in the existing emission limitations for the EAF baghouse.

BACT for the new carbon and flux handling system is semi-enclosed, an emission hood to be routed to the existing EAF baghouse.

The new unloading point will be located the furthest distance from the open doorway. The building is being extended to maximize distance from the building to minimize fugitive emission drift. The unload point will be below grade pit (to minimize drop distance) to a bucket elevator system to fill a silo.

BACT for the new unloading point is semi-enclosed, below grade drop point and a 15% opacity limit per UAC R307-309-4.
[Last updated September 22, 2020]

SECTION I: GENERAL PROVISIONS

The intent is to issue an air quality AO authorizing the project with the following recommended conditions and that failure to comply with any of the conditions may constitute a violation of the AO. **(New or Modified conditions are indicated as "New" in the Outline Label):**

I.1	All definitions, terms, abbreviations, and references used in this AO conform to those used in the UAC R307 and 40 CFR. Unless noted otherwise, references cited in these AO conditions refer to those rules. [R307-101]
I.2	The limits set forth in this AO shall not be exceeded without prior approval. [R307-401]
I.3	Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved. [R307-401-1]
I.4	All records referenced in this AO or in other applicable rules, which are required to be kept by the owner/operator, shall be made available to the Director or Director's representative upon request, and the records shall include the two-year period prior to the date of the request. Unless otherwise specified in this AO or in other applicable state and federal rules, records shall be kept for a minimum of five (5) years. [R307-401-8]
I.5	At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded. [R307-401-4]
I.6	The owner/operator shall comply with UAC R307-107. General Requirements: Breakdowns. [R307-107]
I.7	The owner/operator shall comply with UAC R307-150 Series. Emission Inventories. [R307-150]
I.8	The owner/operator shall submit documentation of the status of construction of the carbon and flux handling system to the Director within 18 months from the date of this AO. This AO may become invalid if construction is not commenced within 18 months from the date of this AO or if construction is discontinued for 18 months or more. To ensure proper credit when notifying the Director, send the documentation to the Director, attn.: NSR Section. [R307-401-18]

SECTION II: PERMITTED EQUIPMENT

The intent is to issue an air quality AO authorizing the project with the following recommended conditions and that failure to comply with any of the conditions may constitute a violation of the AO. **(New or Modified conditions are indicated as "New" in the Outline Label):**

II.A THE APPROVED EQUIPMENT

II.A.1	**Nucor Plymouth Minimill** Electric Arc Furnace Steel Mill
II.A.2	**Melt Shop Equipment and Operations** Two carbon electrode furnaces, equipped with natural gas oxy-fuel fired burners and oxygen lances, flux/carbon addition and injection systems, Direct Evacuation Control (DEC) and ancillary equipment (ladles, cranes, etc.) evacuated to a EAF fabric filter baghouse. Melt shop operations include: skull lancing; natural gas-fired horizontal and vertical ladle preheaters; tundish preheaters; ladle/ tundish demolition, reconstruction, rebricking and torching.
II.A.3	**Melt Shop Equipment and Operations Continued** The furnaces and associated support equipment may be modified by installation of eccentric bottom tap(s); sidewall and door oxygen lance burner technologies and/or door lancing technologies; alterations in furnace movements including roof swings and tilt mechanisms; and associated components; water cooling system improvements; computer control equipment, refractories, and alterations to raw material feeds such as alloy addition in wire and in bulk, and support equipment modifications.
II.A.4	**Melt Shop Equipment and Operations Continued** Support Equipment modification include charge bucket, ladle, crane, electrical transformers, and structure modifications and building modifications. Improved maintenance practices associated with the furnaces will be implemented for the purposes of minimizing lost time associated with equipment breakdowns.
II.A.5	**Caster and associated equipment** Continuous casting system with provisions for alloy addition; supplemental oxygen injection heating; backup alloy stir station; and automatic and manual torching operations to cut billets to length evacuated to melt shop baghouse. All modifications to the EAFs and casting systems, or improved maintenance practices, are to be completed for the purpose of increasing production rates as a continuous program of construction, not to exceed AO production limits and emission limits.
II.A.6	**Caster and associated equipment Continued** The caster and associated equipment may be modified by: increasing or varying the number of strands; modifications to ladle handling or manipulation systems; ladle stirring; tundish modifications; slag system modifications; alloy addition modifications; casting speed; mold size and shape modifications, and; liquid steel washout capture systems. Improved maintenance practices at the caster will be implemented for the purposes of minimizing lost

	time associated with equipment breakdowns.
II.A.7	**Storage silos** A. One storage silo for EAF baghouse material B. Two lime/dolomite storage silos equipped with a fabric filter baghouse(s) C. Four storage silos for carbon, each equipped with a baghouse filter
II.A.8	**Scrap/scrap substitute handling operations**
II.A.9	**Slag stockpiles** *The stockpiles are listed for informational purposes only.
II.A.10 NEW	**Raw Material Handling Systems** Alloy, Coal, and Flux Unloading, Storage, and Charge Bucket Loading A. Northeast Rail Station B. Meltshop Station(s)
II.A.11	**Billet reheat furnace #1** Furnace is natural gas/propane fired with low NO_x burner Maximum burner rating 0.090 lb NO_x/MMBTU
II.A.12	**Billet reheat furnace #2** Furnace is natural gas/propane fired with ultra-low NO_x burner Maximum burner rating 0.075 lb NO_x/MMBTU
II.A.13	**Water desalination plant** Plant wide water treatment.
II.A.14	**Associated mobile equipment** *This equipment is listed for informational purposes only.
II.A.15	**Miscellaneous parts washers**
II.A.16	**Sandblast station(s)**
II.A.17	**Evaporative cooling towers** Evaporative cooling towers arrangements for 5 water systems.
II.A.18	**Lime, fluorspar, charge carbon, and alloy handling**
II.A.19	**Miscellaneous gas fired equipment** Miscellaneous plant wide natural gas/ propane cutting torches and burners that are rated less than 1,000,000 Btu/hour each. *This equipment is listed for informational purposes only.
II.A.20	**Hot steel rolling operations** Operations are equipped with baghouses venting indoors.

II.A.21	**Scrap steel stockpiles** *This equipment is listed for informational purposes only.
II.A.22	**Fuel storage tanks** Diesel and gasoline fuel storage tanks less than 19,812 gallons.
II.A.23	**Pumps** Miscellaneous diesel, natural gas and propane fueled pumps.
II.A.24	**Di-ethylene glycol storage tank**
II.A.25	**Paint Dip Line**
II.A.26	**Roll Mill 1** Jump Mill Baghouse vented to the atmosphere Abrasive Saw Shack Baghouse vented to the atmosphere Roll Mill Heat Retention Boxes equipped with natural gas burners
II.A.27	**Unpowered ladle stir stations/Powered LMFs**
II.A.28	**Ladle vacuum degasser equipped with flare** Burner rating 0.005 lb NO_x/ton
II.A.29	**EAF hydraulics** Natural gas fired engines for hydraulics.
II.A.30	**Maintenance Building Equipment** Fabrication Shop Baghouse
II.A.31	**Natural Gas Emergency Generators** Capacities: One - 100 hp Two - 460 hp NSPS Applicability: Subpart JJJJ MACT Applicability: Subpart ZZZZ
II.A.32	**Diesel Emergency Generators** Capacities: Two - 51 hp NSPS Applicability: Subpart IIII MACT Applicability: Subpart ZZZZ
II.A.33	**Gasoline Emergency Generators** Capacities: Six - Less than 25hp NSPS Applicability: Subpart JJJJ MACT Applicability: Subpart ZZZZ

SECTION II: SPECIAL PROVISIONS

The intent is to issue an air quality AO authorizing the project with the following recommended conditions and that failure to comply with any of the conditions may constitute a violation of the AO. **(New or Modified conditions are indicated as "New" in the Outline Label):**

II.B REQUIREMENTS AND LIMITATIONS

II.B.1	**Limitations and Test Procedures**
II.B.1.a	Emissions to the atmosphere at all times from the indicated emission point(s) shall not exceed the following rates and concentrations*: Source: EAF Baghouse Pollutant — lb/hr — grains/dscf (68ºF, 29.92 in Hg) — tons/year TSP (filterable) — 27.0 — 0.0030 PM_{10} (filterable) — 17.8 — 0.0018 $PM_{2.5}$ (filterable, 24-ave) — 17.4 — 0.00176 $PM_{2.5}$ (condensables, 24-ave) — 29.53 SO_2 (3-hr ave) — 93.98 SO_2 (24-hr ave) — 89.0 SO_2 (rolling 12-month total) — 245 NO_x (rolling 12-month total) — 245 CO (1-hr ave) — 1,200 CO (8-hr ave) — 682.93 CO (rolling 12-month total) — 2,800 VOC — 22.20 Source: Reheat Furnace #1 Pollutant — lb/hr NO_x — 15.0 Source: Reheat Furnace #2 Pollutant — lb/hr NO_x — 8.0 *For particulate emission limits where dual limits are listed, both limits apply. [R307-401]
II.B.1.b	Stack testing to show compliance with the emission limitations stated in the above condition shall be performed as specified below: A. Emissions Point / Pollutant — Test Frequency EAF Baghouse TSP — Every year PM_{10} — Every year $PM_{2.5}$ — Every year $PM_{2.5}$ Condensables — Every year

	SO_2 CEM NO_x CEM CO CEM VOC Every 5 years Reheat Furnace #1 NO_x Every 3 years Reheat Furnace #2 NO_x Every 3 years B. Testing Status PM_{10} and $PM_{2.5}$ (filterable) compliance may be demonstrated through TSP testing. If the TSP emissions are below the PM_{10} and $PM_{2.5}$ limit, then that will constitute compliance with the PM_{10} and $PM_{2.5}$ limits. If the TSP emissions are not below the PM_{10} limit, testing will be required. If required, this test will be completed within 120 days of the yearly TSP test. CEM compliance shall be demonstrated through use of a Continuous Emissions Monitoring System (CEM) as outlined in Condition #II.B.3.a below. The CEM that is used to determine compliance shall be operated according to the most recent Title V permit. C. Notification The Director shall be notified at least 30 days prior to conducting any required emission testing. A source test protocol shall be submitted to DAQ when the testing notification is submitted to the Director. The source test protocol shall be approved by the Director prior to performing the tests. The source test protocol shall outline the proposed test methodologies, stack to be tested, and procedures to be used. A pretest conference shall be held, if directed by the Director. D. Sample Location The emission point shall be designed to conform to the requirements of 40 CFR 60, Appendix A, Method 1, or other EPA approved testing methods acceptable to the Director. An Occupational Safety and Health Administration (OSHA) or Mine Safety and Health Administration (MSHA) approved access shall be provided to the test location. E. Volumetric Flow Rate 40 CFR 60, Appendix A, Method 2 or other EPA approved testing methods acceptable to the Director.
	F. TSP 40 CFR 60. Appendix A, Method 5D, or other EPA approved method. The minimum sample time and sample volume shall be four hours and 160 dscfm. G. PM_{10} The following methods shall be used to measure filterable particulate emissions: 40 CFR 51,

	Appendix M, Method 201 or Method 201A, or other EPA-approved testing method, as acceptable to the Director. If other approved testing methods are used which cannot measure the PM_{10} fraction of the filterable particulate emissions, all of the filterable particulate emissions shall be considered PM_{10}. The condensable particulate emissions shall not be used for compliance demonstration, but shall be used for inventory purposes. H. $PM_{2.5}$ The following methods shall be used to measure filterable particulate emissions: 40 CFR 51, Appendix M, Method 201A, or other EPA-approved testing method, as acceptable to the Director. If other approved testing methods are used which cannot measure the $PM_{2.5}$ fraction of the filterable particulate emissions, all of the filterable particulate emissions shall be considered $PM_{2.5}$. The following methods shall be used to measure condensable particulate emissions: 40 CFR 51, Appendix M, Method 202, or other EPA-approved testing method, as acceptable to the Director. Both the filterable particulate emissions and the condensable particulate emissions shall be used for compliance demonstration. I. Nitrogen Oxides (NO_x) 40 CFR 60, Appendix A, Method 7, 7A, 7B, 7C, 7D, 7E, or other EPA approved testing methods acceptable to the Director. J. VOCs VOC emissions shall be determined using 40 CFR 60, App. A, Method 25A using a flame ionization analyzer equipped with a methane separator. If such an analyzer is unavailable, VOC emissions shall be determined simultaneously using two analyzers, with one configured to read only methane. The difference between the total organic detector and the methane detector shall constitute the VOC measurement. K. Calculations To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Director, to give the results in the specified units of the emission limitation. L. Existing Source Operation For an existing source/emission point, the production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three years. [R307-401]

II.B.1.c NEW	Visible emissions from the following emission points shall not exceed the following values: A. Fabrication Shop baghouse - 10% B. Natural gas-fired generators - 10% C. Emissions from the shop and due solely to operations of any electric arc furnaces - 6% D. Exhaust of the EAF baghouse - less than 3% E. EAF dust handling equipment - less than 10% F. Carbon storage silo baghouse exhaust - 10% G. Lime/dolomite storage silo exhaust - 10% H. Roll Mill baghouse - 10% I. Unpaved haul roads and unpaved service roads - 20% J. Paved haul roads and service roads - 10% K. Additive (coke breeze, feldspar, alloys, lime, etc.) batching operations - 10% L. Reheat Furnace #1 and #2 - 10% M. Sandblasting - 40% N. All other points - 20% O. Fugitive emissions - 15% Opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9. In lieu of monitoring via visible emission observations for Reheat Furnace #1 and #2, fuel usage shall be monitored to demonstrate that only natural gas or propane is being used as fuel. Results of monitoring for Reheat Furnace #1 and #2 shall be maintained in accordance with R307-415-6a(3)(b). [R307-201]
II.B.1.d	The minimum number of EAF baghouse fans to be operated is the number of operating fans used in 40 CFR 60 Subpart AAa initial performance demonstrations. [R307-401]

II.B.1.e	Nucor shall install, calibrate, and maintain one of the following systems to verify that emission control systems are operating within established parameters: A. Fan ampere and damper setting system This system shall provide records of fan operation and amperes with readings taken once per shift and provide a fan operation log that records excursion events such as fan shut-downs and startups. Required fan amperes and damper positions shall be those established during an initial compliance test where compliance with emission (including opacity) limitations was demonstrated. The records shall be made available to the Director upon request. B. Continuous volumetric monitoring device This system will provide a continuous record of airflow in all ducts evacuating the EAF and roof canopy. The monitoring devices may be installed in any location in the exhaust ducts such that reproducible flow rate monitoring will result. The flow rate monitoring device(s) shall have an accuracy of plus or minus 10% over its normal operating range and shall be calibrated according to Manufacturer's instructions. The Director may require Nucor to demonstrate the accuracy of the monitoring device(s) according to method 1 and 2, Appendix A, 40 CFR 60. Required airflows will be those established during an initial compliance test where compliance with emission (including opacity) limits was demonstrated. The records shall be made available to the Director upon request. C. Negative pressure monitoring system This system will consist of a monitoring device that continuously records the negative pressure in each duct for all ducts used to evacuate emissions from the EAF(s). The pressure shall be recorded as 15-minute integrated averages. The monitoring devices shall be installed in any appropriate location in the ducts such that reproducible results are obtained and shall be upstream of any damper in the duct. The pressure-monitoring device shall have an accuracy of plus or minus five (5) mm of water gauge over its normal operating range and shall be calibrated according to the Manufacturer's instructions. Measurements of the minimum negative pressure recorded during the initial performance test of condition II.B.1.a above for each duct shall be the minimum allowed negative pressure during the charging, melting, and tapping stages for each furnace. Nucor shall maintain a log of the negative pressures in integrated 15-minute averages of each furnace during all stages. The log shall be made available to the Director or Director's representative upon request. Nucor shall establish the parameters during the initial compliance test(s) and shall submit the parameters to the Director for approval. Nucor shall operate the emission control systems within the approved parameters. [R307-401]
II.B.1.f	Nucor shall perform visible emission observations of emissions from the EAF baghouse with a certified observer. Observations shall be conducted at least once per day when at least one of the furnaces is operating in the melting/refining stage. These observations shall be taken in accordance with Method 9, and for at least three six-minute periods. Records of daily observations shall be maintained on site. [R307-401]

II.B.1.g	The melt shop operation shall not exceed 8,220 hours of operation per rolling 12-month period. Monitoring: Nucor shall calculate, by the twentieth day of each month, a 12-month total based on the first day of each month using data from the previous 12 months. Hours of operation shall be determined by supervisor's monitoring and maintenance of a daily operations log. Recordkeeping: Results of monitoring shall be maintained in accordance with Condition I.4 of this permit. [R307-401]
II.B.1.h	Nucor shall perform monthly operational status inspections of the equipment that is important to the performance of the EAF emissions total capture system. The inspections shall include all ducting, dampers, switches, etc. This inspection shall include observations of the physical appearance of the equipment (e.g. presence of holes in the ductwork or canopy, flow constrictions caused by dents or accumulation of dust in the ductwork, and fan erosion). Any deficiencies shall be noted and proper maintenance performed. Records of the results of the monthly inspections and maintenance/repairs performed shall be maintained. [R307-401]
II.B.1.i NEW	Emergency pumps shall only be used during the periods when electric power is interrupted and/or during maintenance. Records documenting pump usage shall be kept in a log and they shall show the date the pump was used, the duration in hours that the pump was used, and the reason for the pump usage. [R307-401]
II.B.2	**Monitoring - Continuous Emissions Monitoring**
II.B.2.a	Nucor shall install, calibrate, maintain, and operate a CEM system on EAF baghouse exhaust stacks. Nucor shall record the output of the system, for measuring the NO_x emissions, SO_2 emissions, and CO emissions. The monitoring system shall comply with all applicable sections of R307-170 and 40 CFR 60, Appendix B. Except for system breakdown, repairs, calibration checks, and zero and span adjustments required under paragraph (d) 40 CFR 60.13, Nucor shall continuously operate all required continuous monitoring systems and shall meet minimum frequency of operation requirements as outlined in 40 CFR 60.13 and Section R307-170. [R307-401]
II.B.3	**Roads and Fugitive Dust**

II.B.3.a	All unpaved roads and other unpaved operational areas that are used by mobile equipment shall be water sprayed and/or chemically treated to control fugitive dust. Treatment shall be of sufficient frequency and quantity to maintain the surface material in a damp/moist condition. The opacity shall not exceed 20% during all times the areas are in use or unless it is below freezing. Records of water treatment shall be kept for all periods when the plant is in operation. The records shall include the following items: A. Date B. Number of treatments made, dilution ratio, and quantity C. Rainfall received, if any, and approximate amount D. Time of day treatments were made Records of treatment shall be made available to the Director upon request, and shall include a period of two years ending with the date of the request. [R307-401]
II.B.3.b	The paved haul roads and operational areas shall be periodically swept or water-flushed-clean as conditions warrant or as determined necessary by the Director. Records of cleaning paved roads shall be made available to the Director or Director's representative upon request. Records shall include a period of two years before the date of request. [R307-401]
II.B.3.c	There shall be no active exterior coke breeze, and feldspar stockpiles located at the Nucor manufacturing site. [R307-401]
II.B.3.d	Water sprays shall be installed to ensure all conveyor transfer points and batching equipment drop points are adequately controlled for fugitive emissions: An alternative to water sprays for items listed above may be to enclose the transfer/drop points. The sprays shall operate whenever dry conditions warrant or as determined necessary by the Director. [R307-401]
II.B.4	**Fuels**
II.B.4.a	Nucor shall use only natural gas or propane as a fuel in the steel making processes. The plant-wide consumption of natural gas at the steel plant shall not exceed 2,340,000,000 scf per year and propane shall not exceed 2,800,000 gallons per year, not including fuel consumed by oxy-fuel burners for the two EAFs. Nucor shall install a meter or meters, which measure the amount of natural gas consumed by the EAF oxy-fuel burners. Nucor shall install a meter, which measures the volume of propane-consumed plant wide. Compliance with the annual limitations shall be determined on a rolling 12-month total. Consumption of natural gas shall be determined by the last 12 vendor billing statements with the appropriate conversion of acf to scf, as recommended by the vendor, and subtracting from the statements the amount of fuel consumed by the EAF oxy-fuel burners. Consumption of propane shall be determined by records of propane consumed at the steel making plant, by Nucor's meters. [R307-401]
II.B.4.b	The owner/operator shall only use diesel fuel (fuel oil #1, #2, or diesel fuel oil additives) on site. All diesel burned shall meet the definition of ultra-low sulfur diesel (ULSD), and contain no more than 15 ppm sulfur. [R307-401]

II.B.4.b.1	To demonstrate compliance with the diesel fuel requirements for any diesel fuel purchased, the owner/operator shall keep and maintain fuel purchase invoices. The fuel purchase invoices shall indicate that the diesel fuel meets the ULSD requirements, or the owner/operator shall obtain certification of sulfur content from the fuel supplier. [R307-401]
II.B.5	**VOC Limitations**
II.B.5.a	The emissions of VOC at the Nucor mill plant from miscellaneous solvent, cleaners (excluding janitorial), painting, and rolling mill oil and grease use shall not exceed 42.64 tons per 12-month period. The plant wide emissions of VOC from the solvents cleaners and paints shall be determined by maintaining a record of VOC potential contained in the materials used each month. The rolling mill VOC calculation shall be determined by the weight of oil and grease purchased for use in the rolling mill each month multiplied by 4.63%. [R307-401]
II.B.6	**Emergency Generator Requirements**
II.B.6.a	The owner/operator shall not operate any emergency generator engine on site for more than 100 hours per rolling 12-month period for regular maintenance, testing, and other allowed non-emergency uses listed in 40 CFR 60 Subpart ZZZZ. There is no restriction on use during emergency situations. [40 CFR 60 Subpart ZZZZ, R307-401-8]
II.B.6.b	To determine compliance with a rolling 12-month total, the owner/operator shall calculate a new 12-month total by the last day of each month using data from the previous 12 months. Records documenting the operation of each emergency engine shall be kept in a log and shall include the following: 1. The date the emergency engine was used 2. The duration of operation in ours 3. The reason for use. [40 CFR 60 Subpart ZZZZ, R307-401-8]
II.B.6.c	To determine the duration of operation, the owner/operator shall install a non-resettable hour meter for each emergency engine. [40 CFR 60 Subpart ZZZZ, R307-401-8]

PERMIT HISTORY

When issued, the approval order shall supersede (if a modification) or will be based on the following documents:

Incorporates	Notice of Intent dated June 2, 2020
Supersedes	DAQE-AN100080043-18 dated December 5, 2018

REVIEWER COMMENTS

1. **Comment regarding Emission Estimates:**
The estimated emissions for the new carbon and flux handling system and new unloading point used emission equations and factors from AP-42, Chapter 13, Table 13.2.4-1. The following are the material throughputs: coal material unloading is 15,000 ton of coal unload/load and 25,000 tons of flux. The emissions estimate from the throughputs and emission factors produced the uncontrolled emissions. A 90% control efficiency was added to both new carbon and flux handling system and new unloading point. The 90% control for the new carbon and flux handling system is for the partial enclosure and a capture hood routed to the EAF baghouse. The 90% control for the new unloading point is due to the partial enclosure and the below grade drop point. [Last updated September 22, 2020]

2. **Comment regarding Permit Modification:**
This permit modification is just for the new carbon and flux handling system and new unloading point. This permit needs to be reanalyzed site wide and will be done within the next 5 years. No other requirements were changed from the original permit except for the visible emission opacity requirement. The equipment list was updated and the emissions of PM_{10} were increased by 0.01 TYP to account for the new drop points. [Last updated September 22, 2020]

3. **Comment regarding Fugitive Emissions Opacity:**
Fugitive emissions opacity of 15% was added to the site wide visible emissions opacity requirement. The 15% fugitive emissions opacity is by State Rule R307-309-4 and is listed in the Title V permit. [Last updated September 16, 2020]

4. **Comment regarding Permit Requirements:**
The new carbon and flux handling system and new unloading point has an increase of 15.43 pounds per year (0.01 TPY) PM_{10} and 2.33 pounds per year (<0.01 TPY) $PM_{2.5}$. The State of Utah only limited this operation to an opacity limit in the visible emissions opacity requirement as all fugitive emissions. The emissions from the new carbon and flux handling system are routed to the EAF baghouse which has an opacity limit of 3% and is tested annually. [Last updated September 22, 2020]

ACRONYMS

The following lists commonly used acronyms and associated translations as they apply to this document:

40 CFR	Title 40 of the Code of Federal Regulations
AO	Approval Order
BACT	Best Available Control Technology
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CDS	Classification Data System (used by EPA to classify sources by size/type)
CEM	Continuous emissions monitor
CEMS	Continuous emissions monitoring system
CFR	Code of Federal Regulations
CMS	Continuous monitoring system
CO	Carbon monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent - 40 CFR Part 98, Subpart A, Table A-1
COM	Continuous opacity monitor
DAQ/UDAQ	Division of Air Quality
DAQE	This is a document tracking code for internal UDAQ use
EPA	Environmental Protection Agency
FDCP	Fugitive dust control plan
GHG	Greenhouse Gas(es) - 40 CFR 52.21 (b)(49)(i)
GWP	Global Warming Potential - 40 CFR Part 86.1818-12(a)
HAP or HAPs	Hazardous air pollutant(s)
ITA	Intent to Approve
LB/HR	Pounds per hour
LB/YR	Pounds per year
MACT	Maximum Achievable Control Technology
MMBTU	Million British Thermal Units
NAA	Nonattainment Area
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOI	Notice of Intent
NO_x	Oxides of nitrogen
NSPS	New Source Performance Standard
NSR	New Source Review
PM_{10}	Particulate matter less than 10 microns in size
$PM_{2.5}$	Particulate matter less than 2.5 microns in size
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
R307	Rules Series 307
R307-401	Rules Series 307 - Section 401
SO_2	Sulfur dioxide
Title IV	Title IV of the Clean Air Act
Title V	Title V of the Clean Air Act
TPY	Tons per year
UAC	Utah Administrative Code
VOC	Volatile organic compounds