INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

TO: Interested Parties / Applicant

DATE: February 28, 2007

RE: Nucor Steel / 107-23609-00038

FROM: Nisha Sizemore
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for considerations at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER.dot 03/23/06

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PART 70 SIGNIFICANT SOURCE MODIFICATION
OFFICE OF AIR QUALITY

Nucor Steel
4537 South Nucor Road
Crawfordsville, Indiana 47933

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. It shall not be a defense for the 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. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17. This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-2 and 326 IAC 2-7-10.5, applicable to those conditions.

First Significant Source Modification No.: 107-23609-00038	
Original signed by: Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: February 28, 2007

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.4 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary steel mini-mill.

Source Address:	4537 South Nucor Road, Crawfordsville, Indiana 47933
Mailing Address:	4537 South Nucor Road, Crawfordsville, Indiana 47933
General Source Phone Number:	(765) 364-1323
SIC Code:	3312
County Location:	Montgomery
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD Rules Major Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

A.2 Part 70 Source Definition [326 IAC 2-7-1(22)]

This steel mini-mill consists of a source with on-site contractors:

(a) Nucor Steel, the primary operation, is located at 4537 South Nucor Road, Crawfordsville, Indiana, 47933;

(b) Whitesville Mill Processing, the supporting operation, is located at 4537 South Nucor Road, Crawfordsville, Indiana, 47933; and

(c) BOC Gases, the supporting operation, is located at 4537 South Nucor Road, Crawfordsville, Indiana, 47933.

(d) Heritage Environmental Services, the supporting operation, is located at 4537 South Nucor Road, Crawfordsville, Indiana, 47933.

One combined Part 70 permit will be issued to Nucor Steel, Whitesville Mill Processing, BOC Gases, and Heritage Environmental Services. The new plant ID for the combined source is 107-00038.

A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

D.1 – CASTRIP – VACUUM DEGASSER AND FLARE

(a) One (1) vacuum degasser with process gas lances, identified as V #1, constructed in 2004, to be modified in 2006, a maximum capacity of 270 tons of steel/hour, emissions controlled by a closed flare, and exhausting to Stack 500. This vacuum degasser removes entrained gases from the steel. Desulfurization and/or decarburization may also occur during the degassing process. The enclosed flare burner has a maximum heat input capacity of 2 MMBtu/hour, uses natural gas as its primary fuel with propane as back up fuel, and operates with a minimum temperature of 1,400 ^{o}F. The flare only operates when the vacuum degasser is in the degassing mode (i.e., when CO must be controlled).

D.2 – CASTRIP – LOW NOx BOILER

(b) One (1) natural gas fueled low-NO_x boiler, identified as Boiler ID No. 501, constructed in 2004, a heat input capacity of 71.04 MMBtu/hour, utilizing low-NOx burners, and exhausting to Stack 501. This boiler provides steam to the vacuum degasser. Propane will be used as back up fuel.

Under 40 CFR Part 63, Subpart DDDDD, this unit is considered a new boiler in the large gaseous fuel subcategory.

Under 40 CFR Part 60, Subpart Dc, this unit is considered a steam generating unit.

D.3 – CASTRIP – PREHEATERS, DRYERS, AND ALLOY UNLOADING

(c) One (1) natural gas fueled ladle preheater, identified as LP-3, constructed in 2004, to be modified in 2006, a heat input capacity of 12 MMBtu/hour utilizing low NOx burners, emissions uncontrolled, and exhausting to a roof monitor (S-21, also identified as 105,106). Some emissions of this ladle preheater may also exhaust through the Castrip LMS Baghouse stack S-20. Propane will be used as back up fuel.

(d) Two (2) natural gas-fired ladle preheaters, identified as LP-1 and LP-2, and one (1) natural gas-fired ladle dryer identified as LD-1, each constructed in 2002, to be modified in 2007, a heat input capacity of 12 MMBtu/hour each, utilizing low-NOx burners, and the capability to utilize propane as a backup fuel. The preheaters exhaust to roof monitor S-21. The ladle dryer exhausts to baghouse stack S-20.

(e) Two (2) natural gas-fired tundish preheaters, identified as TP-1 and TP-2, constructed in 2002, to be modified in 2006, a heat input capacity of 10 MMBtu per hour each, utilizing oxy-fuel burners, and have the capability to utilize propane as a backup fuel. Emissions exhaust to LMS baghouse stack S-20.

(f) Two (2) natural gas-fired tundish nozzle preheaters identified as TNP-1 and TNP-2, to be modified in 2006. Each tundish nozzle preheater shall be equipped with low-NOx burners, shall not exceed a maximum heat input rate of 2 MMBtu per hour, and has the capability to utilize propane as a backup fuel. Combustion emissions exhaust to the LMS baghouse stack identified as S-20.

(g) Three (3) natural gas-fired tundish dryers, identified as TD-1, TD-2, and TD-3, constructed in 2002, to be modified in 2006, with a maximum heat input capacity of 4 MMBtu per hour, 3 MMBtu per hour, and 1 MMBtu per hour, respectively, utilizing low-NOx burners, and having the capability to utilize propane as a backup fuel. Emissions exhaust to roof monitor S-21.

(h) Two (2) natural gas-fired transition piece preheaters, identified as TPP-3 and TPP-4, and two (2) natural gas-fired transition piece dryers, identified as TPD-1 and TPD-2, constructed in 2002, to be modified in 2006. The two (2) transition piece preheaters have a heat input capacity of 2 MMBtu per hour each for a combined total capacity of 4.0 MMBtu per hour, the two (2) transition piece dryers have heat input capacity of 0.15 MMBtu per hour each, utilizing low-NOx burners. The preheaters exhaust to baghouse stack S-20. The dryers exhaust to roof monitor S-21. The preheaters are used in the tundish operation located on the caster deck. The transition piece preheaters and transition piece dryers utilize propane as a backup fuel.

(i) Associated VTD alloy unloading, storage and feed systems, identified as AU-2, constructed in 2005, and consisting of:

(1) One (1) alloy truck dump station.

(2) Truck unloading/conveyors.

(3) Storage hoppers, all exhausting to a common bin vent, rated at 0.01 grains per dry standard cubic foot, into the building.

Alloy unloading is performed in a 3-sided building along the side of the existing Castrip building. Emissions exhaust to the atmosphere.

(j) Dumping, storage, and transfer operations of alloy raw materials for the strip caster plant, identified as AU-1 and constructed in 2002.

D.4 - CASTRIP – LMS, TUNDISH, AND CONTINUOUS STRIP CASTER

(k) A strip caster line rated at a maximum steel production rate of 270 tons per hour consisting of:

(1) One (1) ladle metallurgy station, identified as LMS-2, constructed in 2002, to be modified in 2006, and maximum production capacity of 270 tons of steel per hour, and emissions captured by a side draft hood that has a PM capture efficiency of 99 percent and controlled by the LMS-2 baghouse, and exhausting to the LMS-2 baghouse stack identified as S-20. The remaining uncontrolled emissions shall be exhausted through the LMS-2 roof monitor identified as S-21. The LMS-2 baghouse has an enclosed dust handling system or equivalent for material recovery and particulate matter control.

(2) Tundishes, identified as T-1, constructed in 2002, to be modified in 2006, with a maximum production capacity of 270 tons of steel per hour. The two (2) natural gas-fired tundish preheaters, identified as TP-1 and TP-2 and the three (3) natural gas-fired tundish dryers, identified as TD-1, TD-2 and TD-3, supply heat to the tundish. Only one (1) tundish may be operated at a given time. The tundish in operation feeds the molten metal from the LMS-2 ladle to one (1) continuous strip caster identified as CS-1.

(3) One (1) continuous strip caster, identified as CS-1, constructed in 2002, to be modified in 2006, a maximum capacity of 270 tons of steel per hour, and emissions captured by a canopy hood that has a PM capture efficiency of 98 percent. The captured PM in the gas stream shall be controlled by the LMS-2 baghouse and the gas stream shall be exhausted though the LMS-2 baghouse stack identified as S-20. The remaining uncontrolled emissions shall be exhausted through the LMS-2 roof monitor identified as S-21.

D.5 – **INSIGNIFICANT ACTIVITIES – MISCELLANEOUS SILOS** (See Condition A.4)

D.6 – INSIGNIFICANT ACTIVITIES – CASTRIP – COILERS, COIL CUTTING, AND HOT ROLLING STAND (See Condition A.4)

D.7 – **WASTEWATER TREATMENT PLANT**

(l) One wastewater treatment plant, identified as WWTP, constructed in September 2002, consisting of two water recovery systems i.e. oil/alkali wastes and acid rinse water, and surge vessels for the regenerated acid, acid rinse water and spent pickle liquor. The WWTP consists of following:

(1) Oily waste tanks:

(A) Two (2) batch treatment tanks, identified as T-853 and T-854, with a maximum capacity of 12,000 gallons each, with emissions uncontrolled, and exhausting inside the building.

(B) One (1) decant oil tank, identified as T-856, with maximum capacity of 9,000 gallons with emissions uncontrolled, and exhausting inside the building.

(C) One (1) oily waste evaporator feed tank, identified as T-858, with maximum capacity of 20,000 gallons with emissions uncontrolled.

(D) One (1) oily waste evaporator concentrate tank, identified as T-857, with maximum capacity of 20,000 gallons with emissions uncontrolled, and exhausting inside the building.

(2) Acid tanks:

(A) Three (3) acid rinse water surge tanks, identified as T-850, T-851 and T-852, with a maximum capacity of 33,000 gallons each, with emissions controlled by the pickle line scrubber #1, and exhausting to stack S-17.

(B) One (1) lime neutralization tank, identified as T-875, with maximum capacity of 10,000 gallons, with emissions controlled by a wet particulate scrubber, and exhausting to stack S-60.

(C) One (1) acidic rinse evaporator feed tank, identified as T-877, with maximum capacity of 20,000 gallons with emissions uncontrolled and exhausting to stack S-17.

(D) One (1) acidic rinse evaporator concentrator tank, identified as T-878, with maximum capacity of 20,000 gallons with emissions uncontrolled and exhausting to stack S-17.

(3) Two (2) closed chamber type evaporators, identified as EV-1 and EV-2, each with a maximum capacity of 1,800 gallons per hour. This is a closed loop system with no emissions.

(m) Three (3) regenerated acid tanks, identified as T-867, T-868 and T-869, constructed in September 2002, with a maximum capacity of 33,000 gallons each, with emissions controlled by the pickle line scrubber, and exhausting to S-17.

Under 40 CFR Part 63, Subpart CCC, these units are considered new hydrochloric acid storage vessels.

(n) Four (4) spent pickle liquor tanks, identified as T-863, T-864, T-865 and T-866, constructed in September 2002, each with a maximum capacity of 33,000 gallons each, with emissions controlled by the pickle line scrubber, and exhausting to S-17.

(o) Lime silo system, constructed in 1989 and relocated in September 2002, including the following equipment:

(1) One (1) lime silo, identified as TFS-1, with a maximum capacity of 60,000 pounds.

(2) One (1) live bin bottom.

(3) One (1) screw conveyor.

(4) One (1) wet particulate scrubber.

D.8 – SLAG PROCESSING

(p) Slag processing, identified as EU-10, constructed in 1989, is performed by Whitesville Mill Service Company, an on-site contractor. Slag and other steel mill related materials are

transported by slag pots or other mobile equipment, processed, and stockpiled with a maximum throughput of 305 tons/hr. This emission unit consists of storage piles (unprocessed and processed materials), grizzly feeding, slag processing (screening, conveying, and crushing), slag pot dumping, product loading for transport, and unpaved roads. The fugitive emissions from slag processing are controlled by water sprays and exhaust to the atmosphere.

(q) One (1) mill scale screen and conveyor system, identified as MSS-1, constructed in 2001, with a maximum throughput rate of 350 tons of mill scale per hour, with emissions uncontrolled, and exhausting to the atmosphere.

D.9 – BOC GASES PLANT

(r) The BOC Gases Plant is operated by BOC Gases, an on-site contractor. It provides gases (oxygen, nitrogen, hydrogen, argon, and liquid air) consisting of:

(1) One (1) natural gas-fired boiler identified as ID No. 1, constructed in 1989, with a heat input capacity of 9 MMBtu per hour, with emissions uncontrolled, and exhausting to stack S-36. This boiler uses propane as a backup fuel.

Under 40 CFR Part 63, Subpart DDDDD, this unit is considered an existing boiler in the small gaseous fuel subcategory.

(2) One (1) natural gas-fired boiler, identified as ID No. 2, constructed in 1994, with a heat input capacity of 15.0 MMBtu per hour, with emissions uncontrolled, and exhausting to stack S-37. This boiler uses propane as a backup fuel.

Under 40 CFR Part 63, Subpart DDDDD, this unit is considered an existing boiler in the large gaseous fuel subcategory.

Under 40 CFR Part 60, Subpart Dc, this unit is considered a steam generating unit.

(3) One (1) natural gas-fired boiler, identified as the hydrogen plant boiler, constructed in 1996, with a heat input capacity of 9.98 MMBtu per hour, with emissions uncontrolled, and exhausting to stack S-30. This boiler uses propane as a backup fuel.

Under 40 CFR Part 63, Subpart DDDDD, this unit is considered an existing boiler in the small gaseous fuel subcategory.

D.10 – INSIGNIFICANT ACTIVITIES – PAVED AND UNPAVED ROADS (See Condition A.4)

D.11 – PETROLEUM PRODUCT STORAGE

(s) One (1) 500 gallon aboveground gasoline storage tank, identified as GST #1, installed in 1988, using submerged filling technology to control VOC emissions, which exhausts to the atmosphere.

(t) Three (3) 500 gallon aboveground diesel storage tanks, identified as DST #1, DST #2, and DST #3, all installed in 1988, using submerged filling technology to control VOC emissions, which exhausts to the atmosphere.

(u) One (1) 5,000 gallon aboveground diesel storage tank, identified as DST #4, installed in 1988, using submerged filling technology to control VOC emissions, which exhausts to the atmosphere.

D.12 – COOLING TOWERS

(v) The contact and noncontact cooling towers are equipped with drift eliminators. Each cooling tower exhausts to the atmosphere.

Cooling Towers	No. of Cells	Design Capacity (gal/min)	Cooling Towers	No. of Cells	Average Capacity (gal/min)
Meltshop Non Contact	9	60,000	Galvanizing/Annealing Non Contact	2	6,500
Meltshop Caster Contact	**4 2**	5,000	Annealing Non Contact	2	5,000
Meltshop Caster Contact (expansion)	2	5,000	Castrip Contact	4	12,000
Hot Mill Contact	4	16,383	Castrip Non Contact	7	14,400
Hot Mill Contact (expansion)	1	4,000	Castrip Compressor Non Contact	3	2,400
Hot Mill Non Contact	4	25,319	BOC Non Contact (CT-91A)	1	750
Laminar Contact	3	11,600	BOC Non Contact (CT-91B)	2	3,200
Cold Mill Non Contact	2	10,000	Main Compressor Non Contact	4	3,200
Cold Mill Non Contact (expansion)	1	5,000			
Vacuum Degasser Contact	1	8,000	Vacuum Degasser Non Contact	1	8,000

D.13 – INSIGNIFICANT ACTIVITIES – SCRAP HANDLING AND PROCESSING

(See Condition A.4)

D.14 – EMERGENCY GENERATORS

(w) Diesel fired generators and air compressors for power outages and emergencies.

(1) Cold Mill generator, identified as GEN #3, constructed in 1997, with a capacity of 280 HP, with emissions uncontrolled.

(2) Hot Mill NC Cooling Tower generator, identified as GEN #1, constructed in 1989, with a capacity of 2,100 HP, with emissions uncontrolled.

(3) Galv Line Pot generator, identified as GEN #4, constructed in 1992, with a capacity of 890 HP, with emissions uncontrolled.

(4) MS Cooling Tower Cold Well generator, identified as GEN #2, constructed in 1996, with a capacity of 2,520 HP, with emissions uncontrolled.

D.15 – INSIGNIFICANT ACTIVITIES – GASOLINE DISPENSING FACILITIES
(See Condition A.4)

D.16 – COLD MILL – PICKLE LINES 1 AND 2

(x) Both Pickle Lines use enhanced HCl pickling solution and rinse water and are equipped with process tanks.

(1) Pickle Line 1, identified as PL1, constructed in 1988, with a maximum capacity of 250 tons/hr, controlled by a counter flow-packed scrubber and mist eliminators,

and exhausting to stack S-17. The Pickle Line 1 scrubber has a design flow rate of 12,000 acf/min and a loading of 0.01 gr/dscf. Each pickle line has an electric static oiler.

Under 40 CFR Part 63, Subpart CCC, Pickle Line 1 is considered an existing continuous pickle line.

(2) Pickle Line 2, identified as PL2, constructed in 1997, with a maximum capacity of 250 tons/hr, controlled by a tray scrubber and mist eliminators, and exhausting to stack S-18. The Pickle Line 2 scrubber has a design flow rate of 9,000 acf/min and a loading of 0.01 gr/dscf. Each pickle line has an electric static oiler.

Under 40 CFR Part 63, Subpart CCC, Pickle Line 2 is considered a continuous pickle line.

(3) The tank farm treats the rinse water from Pickle Line 1 and Pickle Line 2. These tanks also store spent acid, raw acid, regenerated acid, oily wastewater treated waters for reuse, treatment process wastewater, and other process and treated waters.

Under 40 CFR Part 63, Subpart CCC, the tanks that store virgin or regenerated hydrochloric acid are considered new hydrochloric acid storage vessels.

D.17 – COLD MILL – COLD REVERSING MILL 1 AND COLD MILL BOILER (CMB #1)

(y) Cold Reversing Mill 1, identified as EU-09, constructed in 1988, with a maximum capacity of 250 tons/hour. Emulsion oil is sprayed on the strip, controlled by hoods mounted on both sides of the mill stand and exhausting, through collision mist eliminators at a design flow rate of 84,000 acf/min and 0.01 gr/dscf, to stack S-32.

(z) One (1) natural gas fueled Cold Mill Boiler, identified as CMB#1, constructed in 1988, with a heat input capacity of 34 MMBtu per hour, with emissions uncontrolled and exhausting to stack S-19. The boiler uses propane as a backup fuel.

Under 40 CFR Part 63, Subpart DDDDD, this unit is considered an existing boiler in the large gaseous fuel subcategory.

Under 40 CFR Part 60, Subpart Dc, this unit is considered a steam generating unit.

D.18 – COLD MILL – COLD MILL BOILER (CMB#2)

(aa) One (1) natural gas fueled Cold Mill Boiler (CMB #2), identified as EU-19, with a heat input capacity of 34 MMBtu per hour, with emissions exhausting to stack S-23. Propane is used as a back-up fuel. The Cold Mill Boiler (CMB #2) is not yet installed.

Under 40 CFR Part 63, Subpart DDDDD, this unit is considered a new boiler in the large gaseous fuel subcategory.

Under 40 CFR Part 60, Subpart Dc, this unit is considered a steam generating unit.

D.19 – COLD MILL – REVERSING AND TEMPERING (R/T) MILL

(bb) Reversing and Tempering (R/T) Mill, (previously known as Temper Mill), identified as EU-14, constructed in 1995, with a maximum capacity of 250 tons of steel per hour, with emulsion oil sprayed on the strip, and controlled by hoods mounted on both sides of the mill stand and a fabric filter, exhausting through a panel-type collision mist eliminators to stack S-22. The panel-type collision mist eliminator has a design flow rate of 84,000 acf/min and an outlet grain loading of 0.01 gr/dscf. Note: This mill can reverse and temper. The mist eliminators operate as controls only when the mill is operating as a cold reversing mill.

D.20 – COLD MILL – ALKALINE CLEANING STATION

(cc) Alkali Cleaning at the Galvanizing line with mist eliminator as control. Emissions are exhausted to stack #510. The Alkaline Cleaning Station has a capacity of 140 tons of steel per hour.

D.21 – COLD MILL – ANNEALING FURNACES

(dd1) Eighteen (18) natural gas-fueled batch Annealing Furnaces, identified as EU-03, constructed in 2001. Each has a heat input capacity of 4.8 MMBtu per hour and a maximum throughput capacity of 200 tons of steel per hour. Emissions are uncontrolled and exhaust to roof vent (S-26).

(dd2) One (1) natural gas-fired annealing furnace, identified as AN-19, approved for construction in 2007, with a heat input capacity of 4.8 MMBtu per hour and a maximum throughput capacity of 200 tons of steel per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to roof vent (S-26).

D.22 – INSIGNIFICANT ACTIVITIES – COLD MILL – QUALITY CONTROL/REWIND INSPECTION LINE (See Condition A.4)

D.23 – COLD MILL – ACID REGENERATION

(ee) Acid Regeneration system, identified as EU-04, constructed in 1989, consisting of two natural gas fueled tangentially fired burners with a maximum rating of 5.6 MMBtu per hour, and an absorber and cyclone with emissions controlled by its own counter flow packed scrubber (identified as AR scrubber) with mist eliminator exhausting to stack S-31. The counter flow-packed scrubber has a design flow rate of 4,269 acf/min and loading of 0.04 gr/dscf. Propane is used as back up fuel.

Under 40 CFR Part 63, Subpart CCC, this unit is considered an existing acid regeneration plant.

D.24 – COLD MILL – GALVANIZING LINE

(ff) Thirty six (36) Main Burners, identified as PHB #1 – PHB #36, constructed in 1992, and modified in 2002, input capacity of 1.622 MMBtu per hour each, and three (3) Auxiliary Burners, each with a heat input capacity of 0.1 MMBtu per hour in the preheat furnace section of the galvanizing line using natural gas rated at maximum total capacity of 58.7 MMBtu per hour. The main burners exhaust to stack S-27. The three (3) Auxiliary Burners exhaust to the atmosphere. The NOx emissions are controlled by a Selective Catalytic Reduction/Selective Non-Catalytic Reduction (SCR/SNCR) Systems. Exhausts to roof ventilation. The galvanizing line has an electric static oiler. A continuous emissions monitor (CEM) is used to monitor NOx emissions.

(gg) Additional burners as follows:

(1) Forty four (44) Burners, identified as RB#1 – RB#44, constructed in 2002, each with a heat input capacity of 0.323 MMBtu per hour in radiant tube section with a

maximum total capacity of 14.2 MMBtu per hour and option to replace non-conforming burners. The NOx emissions are controlled by SCR System. Exhausts to stack S-27. The SCR/SNCR and SCR systems shall be referred to collectively as the SCR/SNCR system.

(2) One (1) auxiliary burner with a maximum heat input of 3.2 MMBtu/hr in the Alkaline Cleaning Section. The burner is natural gas fired and use propane as backup.

(3) Two (2) auxiliary burners with a maximum heat input of 1.5 MMBtu/hr each in the Strip Dryer Section. The burners are natural gas fired and use propane as backup.

(4) Four (4) auxiliary burners with a maximum heat input of 0.052 MMBtu/hr each in the Pot Roll Heater. The burners are natural gas fired and use propane as backup.

(5) Two (2) emergency burners with a maximum heat input of 0.58 MMBtu/hr each in the Zinc Pot Section. The burners are natural gas fired and use propane as backup.

(6) Two (2) auxiliary burners with a maximum heat input of 0.013 MMBtu/hr each in the Preheat open end burners section. The burners are natural gas fired and use propane as backup.

The SCR/SNCR and SCR systems shall be referred to collectively as the SCR/SNCR system.

(hh) One (1) Zinc Coating pot, identified as ZP#1, constructed in 1992, with a maximum capacity of 140 tons of steel per hour, uncontrolled and exhausting to the atmosphere.

D.25 – INSIGNIFICANT ACTIVITIES – WELDING (See Condition A.4)

D.26 – INSIGNIFICANT ACTIVITIES – MISCELLANEOUS SHEARS, SIDE TRIMMERS, AND SCRAP CUTTING (See Condition A.4)

D.27 – HOT STRIP MILL & TUNNEL FURNACE SYSTEM

(ii) The Hot Strip Mill, identified as HSM, constructed in 1989, with a maximum capacity of 502 tons/hour consisting of various rolling mill processes: Shearing, Descaling, Finishing, Rollout Table, Coilers, Skin Pass Mill and Roll Grinders. Parts of the Hot Mill Strip are controlled by water roll cooling.

(jj) Tunnel Furnace System, identified as EU-02, constructed in 1989, with a maximum capacity of 502 tons/hour, with a maximum total heat input capacity of 200 MMBtu per hour, emissions uncontrolled, tunnel furnace 1 exhausts to stack S13 and S14, tunnel furnace 2 exhausts to stack S15, and consisting of:

(1) Tunnel Furnace 1 – Natural gas fired with a heat input capacity of 84 MMBtu per hour. Tunnel Furnace 1 was constructed in 1989 as part of the original Tunnel Furnace System.

(2) Tunnel Furnace 2 – Natural gas fired with a heat input capacity of 84 MMBtu per hour. Tunnel Furnace 2 was constructed in 1994.

(3) Shuttle Furnaces 1 and 2 – Natural gas fired with a heat input capacity of 13 MMBtu per hour each using low NOx burners. Shuttle Furnaces 1 and 2 were constructed in 1994.

(4) Snub Furnace – Natural gas fired with a heat input capacity of 6 MMBtu per hour. The snub furnace was constructed in 1989 and modified in 1994.

D.28 – HOT STRIP MILL – ANNEALING FURNACES

(kk) Four (4) natural gas-fired annealing furnaces using propane as a backup fuel, identified as HM #1-HM #4, each with a maximum heat input capacity of 14.505 MMBtu per hour. Emissions are controlled by low NOx burners and exhaust to the atmosphere. HM#1 and HM#2 were installed in 2006. HM#3 and HM#4 were not installed yet.

D.29 – INSIGNIFICANT ACTIVITIES – DEGREASING (See Condition A.4)

D.30 – MELT SHOP – MATERIAL TRANSFER STATION

(ll) Material transfer station #1, located inside the building exhausting to general ventilation, which will service both the EAFs and the LMFs, used to transfer various types and grades of lime, carbon, foamy slag, scrap, scrap substitutes, and other alloys from rail cars. Railcars are unloaded to trucks, silos, or the meltshop alloy handling system. Identified as MT #1, constructed in 2003, and consisting of:

(1) Rail car bottom unloading through a rubber boot to a conveyor with emissions uncontrolled.

(2) One (1) totally enclosed conveyor, identified as MTC, constructed in 2003, with emissions controlled by a bin vent dust collector and exhausting to stack S-45.

(3) One (1) loading spout connected to the load truck with emissions uncontrolled.

(mm) Material transfer station #2, located outside the building and exhausting to the atmosphere, which services the EAFs and the LMFs, used to transfer various types and grades of lime, carbon, foamy slag, scrap, scrap substitutes, and other alloys from rail cars. Railcars are unloaded to trucks, silos, or the meltshop alloy handling system. Identified as MT #2, constructed in 2006, and consisting of:

(1) Ten (10) storage silos, each controlled by individual bin vent filters or the Meltshop EAF baghouses (1 and 2).

(2) One (1) rail unloading operation under a roof.

(3) One (1) truck dumping station enclosed by a three sided building.

(4) One (1) loader dumping station enclosed by a three sided building.

(5) Associated enclosed conveyors.

(6) Storage bins.

(7) Misc. feed equipment and controls.

D.31 – MELTSHOP– ELECTRIC ARC FURNACES, ARGON OXYGEN DECARBURIZATION (AOD) VESSELS, DESULFURIZATION, CONTINUOUS CASTERS, EAF DUST TREATMENT FACILITY

(nn) Two (2) Meltshop Electric Arc Furnaces (EAFs), identified as EAF #1 and EAF #2, constructed in 1989, together with the Argon Oxygen Decarburization (AOD) have a maximum capacity of 502 tons/hour, with emissions controlled by multi compartment reverse air type baghouses (identified as Meltshop EAF Baghouse1 and Meltshop EAF Baghouse2). A continuous emission monitor (CEM) is used to monitor NOx, CO, and SO_2 emissions from the EAFs.

Under 40 CFR Part 60, Subpart AAa, these units are considered electric arc furnaces.

(1) The EAFs also utilize the following technologies:

(A) A direct shell evacuation (DSE) control system ("a fourth hole duct"),

(B) An overhead roof exhaust system consisting of canopy hoods,

(C) Oxy fuel burners, and

(2) Each or any combination of the Meltshop EAFs and AOD can independently produce the maximum capacity of 502 tons/hour of steel. Each Meltshop EAF can operate concurrently or independently to achieve this maximum capacity.

(3) Both the Meltshop EAF Baghouse1 and Meltshop EAF Baghouse2 capture the emissions from the Meltshop EAFs, AOD vessel, Desulfurization, Meltshop Continuous Casters and other miscellaneous sources. Each Meltshop Baghouse can sufficiently control emissions independently. Each Meltshop EAF Baghouse serves as a back up control to the Meltshop LMFs.

(A) The Meltshop EAF Baghouse1 is a multi compartment positive pressure baghouse, has a design air flow rate of 1,527,960 actual cubic foot/min (acf/min) and an outlet PM loading of 0.0018 grains/dry standard cubic foot (gr/dscf). This Meltshop EAF Baghouse1 exhausts to a roof vent/monitor identified as vent BH1.

(B) The Meltshop EAF Baghouse2 is a multi compartment positive pressure baghouse, has a design flow rate of 915,000 dscf/min and 1,200,000 acf/min and an outlet PM loading of 0.0018 gr/dscf. This Meltshop EAF Baghouse2 exhausts to a stack identified as BH2.

(4) The fugitive emissions generated during the furnace operations are captured by the Meltshop Roof Canopies or contained within the Meltshop Building.

(5) The Meltshop roof monitors include exhausts from the ladle preheaters, ladle dryers, tundish preheaters, tundish dryers, ladle lancing station, tundish dumping, fugitive emissions from the LMFs, fugitive emissions from the Meltshop Casters and other Meltshop operations.

(oo) Argon oxygen decarburization (AOD) vessels, identified as AODs, constructed in 1995, together with the Meltshop EAFs have a total maximum capacity of 502 tons/hour, with emissions controlled by the Meltshop EAF Baghouse1 which exhausts to a roof vent/monitor identified as vent BH1, and Meltshop EAF Baghouse2 which exhausts to stack BH2. Only 1 AOD vessel can operate at a time.

Under 40 CFR Part 60, Subpart AAa, these units are considered argon-oxygen decarburization vessels.

(pp) Desulfurization (DS) is an additional step in the Meltshop operations that remove sulfur. It has a maximum capacity of 502 tons of metal per hour.

(qq) Two (2) Meltshop Continuous Casters, identified as CC #1 and CC #2, CC #1 was constructed in 1989, CC #2 was constructed in 1994, with total maximum capacity of 502 tons/hour, with emissions controlled by the Meltshop EAF Baghouse1 identified as vent BH1 which exhausts to a roof vent/monitor or Meltshop EAF Baghouse2 which exhausts to stack BH2. The steam from the Meltshop Continuous Casters exhausts through stack S-11.

(rr) An EAF dust treatment facility, identified as DTF, constructed in 2004, with a capacity of 100,000 lb/hour, with emission control by bin vents for the silos, scrubber for dust treatment and baghouse for truck loading. Dust transfer will also occur inside the building.

Under 40 CFR Part 60, Subpart AAa, this unit is considered a dust handling system. Options for the dust transfer are:

(1) from silo to truck through a loading spout,

(2) from silo to railcar through a loading spout,

(3) From silo to truck through a loading spout to transfer to the existing Meltshop EAF Baghouses. Unloading from the truck at the existing Meltshop EAF Baghouses also occurs in the building, transferring the dust through augers and a bucket elevator to the existing silo. In this option, the existing EAF dust treatment will have a maximum capacity of 100,000 lb/hr.

(4) Treating dust at the new silo and transferring to a truck. No loading spout is necessary because the material is no longer dusty, as treated.

The EAF dust treatment facility consists of the following:

(A) One (1) lime storage silo, identified as HRE #1, constructed in 1999, with a maximum capacity of 109 tons, emissions controlled by a bin vent filter, and exhausting to stack HR/E-2. Lime is pneumatically loaded to the silo at a maximum transfer rate of 40,000 pounds per hour.

(B) One (1) pugmill, identified as PM, constructed in 1999, with a maximum capacity of 100,000 pounds per hour, emissions controlled by one (1) cyclone in series with one (1) venturi scrubber, and exhausting to stack HR/E-1. Lime is transferred to the pugmill via a screw conveyor system at a maximum transfer rate of 5,100 pounds per hour and EAF dust is transferred to the pugmill via gravity through an enclosed cone bottom loading spout at a maximum transfer rate of 100,000 pounds per hour.

D.32 – MELTSHOP – LADLE METALLURGY FURNACES, PREHEATERS, AND DRYERS

(ss) Two (2) Meltshop Ladle Metallurgy Furnaces (LMFs)/Stirring Station, identified as EU-13, constructed in 1988, with a maximum capacity of 502 tons/hour each and controlled by a baghouse, identified as Meltshop LMF Baghouse, exhausting to stack S-13. The Meltshop LMF Baghouse has a design flow rate of 200,000 acf/min. The LMF baghouse was constructed in 1992.

(1a) Ladle Preheaters, identified as LP #1 - #5, uncontrolled and exhausting to stacks 7 and 8, consisting of:

(A) 3 units, identified as LP #1 - #3, constructed in 1989, each rated at 10 MMBtu per hour.

(B) 1 unit, identified as LP #4, constructed in 1994, rated at 7.5 MMBtu per hour.

(C) 1 unit, identified as LP #5, constructed in 1989, rated at 15 MMBtu per hour.

(1b) Ladle Preheaters, identified as LP #1a through LP #7a, consisting of:

(A) Three (3) natural gas-fired ladle preheaters, identified as LP #1a, LP #2a, and LP #3a, approved for construction in 2007, each with a heat input capacity of 10 MMBtu per hour, using propane as a backup fuel, with

uncontrolled emissions exhausting to stacks 7 and 8.

(B) One (1) natural gas-fired AOD ladle preheater, identified as LP #4a, approved for construction in 2007, with a heat input capacity of 10 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.

(C) One (1) natural gas-fired ladle preheater, identified as LP #5a, approved for construction in 2007, with a heat input capacity of 10 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.

(D) One (1) natural gas-fired ladle preheater, identified as LP #6, approved for construction in 2006, with a heat input capacity of 12 MMBtu/hour, utilizing low-NOx burners, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.

(E) One (1) natural gas-fired ladle preheater/dryer, identified as LP #7a, approved for construction in 2007, with a heat input capacity of 10 MMBtu/hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.

(2a) Ladle Dryer, identified as LDS #1, constructed in 1989, consisting of a low NO_x natural gas fired burner, with a heat input capacity of 5 MMBtu per hour. Emissions are uncontrolled and exhausting to stack 12.

(2b) One (1) natural gas-fired Ladle Dryer, identified as LDS #1a, approved for construction in 2007, with a heat input capacity of 5 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stack S-12.

(3) Four (4) Tundish Preheaters, identified as TPH #1 - #4, constructed in 1995, consisting of 4 low NOx natural gas fired heaters, each with a heat input capacity of 6 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stack S-10.

(4) Two (2) Tundish Dryout Stations, identified as TD #1 and TD #2. TD #1 was constructed in 1989, and TD#2 was constructed in 1990, each with a heat input capacity of 9 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stack S-10.

(5) Four (4) Tundish Nozzle Preheaters, identified as TNP #1- #4, constructed in 1995, consisting of a low NOx natural gas fired Preheaters, each with a heat input capacity of 0.8 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stack S-10.

(6) One (1) natural gas-fired tundish dryout station, identified as TD #3, approved for construction in 2007, with a maximum heat input capacity of 2.4 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stack S-10.

(7) Two (2) natural gas-fired mandrel dryers, identified as MD #1 and MD #2, approved for construction in 2007, each with a heat input capacity of 1.5 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stack S-10.

D.33 – INSIGNIFICANT ACTIVITIES – MELTSHOP (See Condition A.4)

D.34 – INSIGNIFICANT ACTIVITIES – MISCELLANEOUS SILOS (See Condition A.4)

A.4 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

D.5 – INSIGNIFICANT ACTIVITIES – MISCELLANEOUS SILOS

(a) Raw materials handling/storage, including silos which contain the following materials:

(1) One (1) lime silo TFS-1.

(2) Baghouse #1 lime silo (HRE #1).

(3) One (1) Iron Oxide Silo (IOS #1).

(4) Three (3) Baghouse Dust Silos (BHS#1, BHS#2, BHS#3).

(5) One (1) Soda Ash Silo (SAS #1) (this will become the sand silo).

(6) One (1) Iron Carbide Silo #1 (no longer in service).

(7) One (1) Lime Silo (#1 SEAF).

(8) One (1) Lime Silo (#2 SEAF).

(9) One (1) Lime Silo (#3 NEAF).

(10) One (1) Lime Silo (#4 NEAF).

(11) One (1) Injection Carbon Silo #1.

(12) One (1) Injection Carbon Silo #2.

(13) One (1) Charge Carbon Silo #1.

(14) One (1) Charge Carbon Silo #2.

(15) Three (3) AOD alloy system silos (AOD#1, AOD#2, and AOD#3).

(16) Ten (10) Melt Shop Alloy Feed System silos (MS alloy #1, MS alloy #2, MS alloy #3, MS alloy #4, MS alloy #5, MS alloy #6, MS alloy #7, MS alloy #8, MS alloy #9, MS alloy #10).

D.6 – INSIGNIFICANT ACTIVITIES – CASTRIP – COILERS, COIL CUTTING, AND HOT ROLLING STAND

Activities with emissions equal to or less than the thresholds provided in 326 IAC 2-7-1(21):

(b) Two (2) coilers, identified as C-1 and C-2, constructed in 2002. Fugitive particulate emissions from this process are controlled by the application of water to the coilers and exhausting to the roof monitor S-21. These coil the steel strip from the continuous strip caster.

(c) Scrap coil cutting in the Castrip area, identified as CC-1, constructed in 2002, occurs on an as needed basis, controlled by the Castrip LMS Baghouse and exhausting to stack S-20.

(d) Two (2) hot rolling stands, identified as HRS #1 and HRS #2, constructed in 2002. These stands roll the steel strip from the continuous strip caster to the desired gauge. Fugitive

particulate emissions controlled by the application of water to the steel strip, and exhausting to the LMS roof monitor identified as S-21.

D.10 – INSIGNIFICANT ACTIVITIES – PAVED AND UNPAVED ROADS

(e) Paved and unpaved roads and parking lots with public access. Transport on new and existing paved roadways and parking lots, unpaved roadways, and unpaved areas around existing raw material storage piles.

D. 13 – INSIGNIFICANT ACTIVITIES – SCRAP HANDLING AND PROCESSING

Activities with emissions equal to or less than the thresholds provided in 326 IAC 2-7-1(21):

(f) Scrap handling, processing and cutting of ferrous metals and scrap substitutes. These activities exhaust indoors to general ventilation which in turn exhausts to Meltshop EAF baghouses 1 and 2.

D.15 – INSIGNIFICANT ACTIVITIES – GASOLINE DISPENSING FACILITIES

(g) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles or other mobile equipment, having a storage capacity less than or equal to 10,500 gallons.

(1) Two (2) 10,000 gallon gasoline storage tanks, each handling less than 1,000 gallons per day.

(2) Two (2) 10,000 gallon diesel storage tanks, each handling less than 3,000 gallons per day.

(3) One (1) 1,000 gallon diesel storage tank handling less than 500 gallons per day.

D.22 – INSIGNIFICANT ACTIVITIES – COLD MILL – QUALITY CONTROL/REWIND INSPECTION LINE

Activities with emissions equal to or less than the thresholds provided in 326 IAC 2-7-1(21):

(h) The unwinding and rewinding of steel coil for quality control inspections.

D.25 – INSIGNIFICANT ACTIVITIES – WELDING

(i) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment including the galvanizing line welder.

(j) Structural steel and bridge fabrication activities using 80 tons or less of welding consumables.

D.26 – INSIGNIFICANT ACTIVITIES – MISCELLANEOUS SHEARS AND SIDE TRIMMERS

Activities with emissions equal to or less than the thresholds provided in 326 IAC 2-7-1(21):

(k) Various shears located at various sites throughout the facility.

(l) Three (3) side trimmers in total. The side trimmers are located at the skin pass mill and at both pickle lines. Various side trimmers located at various sites throughout the facility.

D.29 – INSIGNIFICANT ACTIVITIES – DEGREASING

(m) Activities with emissions equal to or less than the thresholds provided in 326 IAC 2-7-1(21) consisting of: Degreasing operations, identified as DG, with a maximum throughput greater than 145 gallons per 12 months, uncontrolled and exhausting to the atmosphere.

D.33 – INSIGNIFICANT ACTIVITIES – MELTSHOP

(n) Activities with emissions equal to or less than the thresholds provided in 326 IAC 2-7-1(21):

(1) Ladle tap hole cleaning and repair.

(2) Ladle/tundish refractory application and curing.

(3) Tundish dumping.

(4) Ladle dumping.

(5) Ladle/tundish refractory loading and removal.

A.5 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-7-5(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour, and the methods in 326 IAC 6-3-2(b) through (d) do not apply, shall not exceed 0.551 pounds per hour.

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the plan submitted on December 2004. The plan is included as Attachment A.

C.7 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of PM or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-1(3), 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4, and 326 IAC 1-7-5(a), (b), and (d) are not federally enforceable.

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at

least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Demolition and renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

(g) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-7-6(1)]

C.9 Performance Testing [326 IAC 3-6]

(a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the Permittee submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.10 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.11 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

C.12 Maintenance of Continuous Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

(a) The Permittee shall install, calibrate, maintain, and operate all necessary continuous emission monitoring systems (CEMS) and related equipment.

(b) In the event that a breakdown of a continuous emission monitoring system occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.

(c) Unless otherwise provided by a rule or in a D Section of this permit, whenever a continuous emission monitor other than an opacity monitor is malfunctioning or will be down for calibration, maintenance, or repairs for a period of four (4) hours or more, a calibrated backup CEMS shall be brought online within four (4) hours of shutdown of the primary CEMS, and shall be operated until such time as the primary CEMS is back in operation.

(d) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 36 IAC 2-2.

C.13 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

C.14 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale.

(b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.15 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on December 13, 1991.

(b) Upon direct notification by IDEM, OAQ, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level.
[326 IAC 1-5-3]

C.16 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

C.17 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal

or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records;

(3) inspection of the control device, associated capture system, and the process.

(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

(e) The Permittee shall maintain the following records:

(1) monitoring data;

(2) monitor performance data, if applicable; and

(3) corrective actions taken.

C.18 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.19 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]

(a) Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit by July 1 of each year an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

(1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);

(2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1 (32) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule") from the source, for purpose of fee assessment.

The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

The emission statement does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

C.20 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2] [326 IAC 2-3]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

(c) If there is a project (as defined in 326 IAC 2-2-1(qq)) at an existing emissions unit which is not part of a "major modification" (as defined in 326 IAC 2-2-1(ee)) and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(rr)), the Permittee shall comply with following:

(1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1(qq)) at an existing emissions unit, document and maintain the following records:

(A) A description of the project.

(B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.

(C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:

(i) Baseline actual emissions;

(ii) Projected actual emissions;

(iii) Amount of emissions excluded under section 326 IAC 2-2-1(rr)(2)(A)(iii); and

(iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.

(2) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and

(3) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

C.21 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2] [326 IAC 2-3]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

(f) If the Permittee is required to comply with the recordkeeping provisions of (c) in Section C.20 (General Record Keeping Requirements) for any "project" (as defined in 326 IAC 2-2-1(qq), and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:

(1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C - General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1, for that regulated NSR pollutant, and

(2) The emissions differ from the preconstruction projection as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(ii).

(3) The report for project at an existing emissions unit shall be submitted within sixty (60) days after the end of the year and contain the following:

(A) The name, address, and telephone number of the major stationary source.

(B) The annual emissions calculated in accordance with (c)(2) and (3) in Section C- General Record Keeping Requirements.

(C) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3).

(D) Any other information that the Permittee deems fit to include in this report,

Reports required in this part shall be submitted to:

Indiana Department of Environmental Management
Air Compliance Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

(g) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C - General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.

SECTION D.8 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

SLAG PROCESSING

(p) Slag processing, identified as EU-10, constructed in 1989, is performed by Whitesville Mill Service Company, an on-site contractor. Slag and other steel mill related materials are transported by slag pots or other mobile equipment, processed, and stockpiled with a maximum throughput of 305 tons/hr. This emission unit consists of storage piles (unprocessed and processed materials), grizzly feeding, slag processing (screening, conveying, and crushing), slag pot dumping, product loading for transport, and unpaved roads. The fugitive emissions from slag processing are controlled by water sprays and exhaust to the atmosphere.

(q) One (1) mill scale screen and conveyor system, identified as MSS-1, constructed in 2001, with a maximum throughput rate of 350 tons of mill scale per hour, with emissions uncontrolled, and exhausting to the atmosphere.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.8.1 PSD (Prevention of Significant Deterioration) - BACT [326 IAC 2-2]

(a) Pursuant to PSD 107-2764-00038, issued on November 30, 1993, the Fugitive Dust Control Plan (included as Attachment A to this permit), shall be implemented to control fugitive dust from paved roads, unpaved roads, parking lots, traveled open areas, and uncontrolled slag process and storage pile emissions. Adherence to the fugitive dust control plan is considered BACT.

(b) Pursuant to A 107-8255-00038 to PSD 107-2764-00038, issued November 30, 1993, and 326 IAC 2-2, the fugitive dust emissions from the various slag handling and processing operations shall be controlled in accordance with the Fugitive Dust Control Plan approved on March 28, 1999 (attached as Attachment A to this permit) such that the following opacity limitations are not exceeded at each point where such slag handling and processing operations occur:

Slag Handling/Processing Operation	Opacity Limitation*
Transferring of skull slag to slag pot	10% Opacity
Pouring of liquid slag from EAF or Caster to slag pots	3% Opacity
Dumping of liquid slag from slag pot to slag pit and cooling	3% Opacity
Transferring of skull slag from slag pot to skull pit	5% Opacity
Digging skull slag pits	5% Opacity
Digging slag pits	3% Opacity
Stockpiling of slag adjacent to the grizzly feeder	3% Opacity
Wind erosion of stockpiles	3% Opacity
Crushing	3% Opacity
Screening	3% Opacity
Conveyor transfer points	3% Opacity

Slag Handling/Processing Operation	Opacity Limitation*
Continuous stacking of processed slag to stockpiles	3% Opacity
Loadout of processed slag from stockpiles to haul trucks for shipment	3% Opacity
Inplant hauling of slag pots (filled) and processed slag	3% Opacity

*All opacity limitations are based on six (6) minute averages.

These emission limits are considered BACT.

D.8.2 Prevention of Significant Deterioration (PSD) Minor Limit [326 IAC 2-2]

Pursuant to MSM 107-15599-00038, issued April 10, 2002, the mill scale throughput rate to the mill scale screen and conveyor system (MSS-1) shall not exceed 1,092,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month. Compliance with this limit is equivalent to less than or equal to 18.8 tons/yr of PM emissions and less than or equal to 9.0 tons/yr of PM10 emissions. Emissions from the 2002 modification limited to less than 25 tons per year of PM and 15 tons per year of PM10. Compliance with this limit renders the requirements of 326 IAC 2-2 not applicable.

D.8.3 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the allowable particulate emission rate from the mill scale screen and conveyor system (MSS-1) shall not exceed 64.8 pounds per hour when operating at a process weight rate of 350 tons per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

D.8.4 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the allowable particulate emission rate from the slag processing operation (EU-10) shall not exceed 63.2 pounds per hour when operating at a process weight rate of 305 tons per hour.

Interpolation and extrapolation of the data for the process weight rate in excess of 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

Compliance Determination Requirements

D.8.5 PM/PM10 Emissions

Compliance with Condition D.8.2 shall be demonstrated within 30 days of the end of each month based on the total throughput weight for the most recent twelve (12) consecutive month period.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.8.6 Visible Emissions Notations

(a) Visible emission notations of the exhaust from MSS-1 shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

(e) If abnormal emissions are observed, the Permittee shall take reasonable steps in accordance with Section C – Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.8.7 Record Keeping Requirements

(a) To document compliance with Condition D.8.2, the Permittee shall maintain records of the mill scale throughput weight for each compliance period.

(b) To document compliance with Condition D.8.6, the Permittee shall maintain records of the once per day visible emission notations.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.8.8 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.8.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.9 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

BOC GASES PLANT

(r) The BOC Gases Plant is operated by BOC Gases, an on-site contractor. It provides gases (oxygen, nitrogen, hydrogen, argon, and liquid air) consisting of:

(1) One (1) natural gas-fired boiler identified as ID No. 1, constructed in 1989, with a heat input capacity of 9 MMBtu per hour, with emissions uncontrolled, and exhausting to stack S-36. This boiler uses propane as a backup fuel.

Under 40 CFR Part 63, Subpart DDDDD, this unit is considered an existing boiler in the small gaseous fuel subcategory.

(2) One (1) natural gas-fired boiler, identified as ID No. 2, constructed in 1994, with a heat input capacity of 15.0 MMBtu per hour, with emissions uncontrolled, and exhausting to stack S-37. This boiler uses propane as a backup fuel.

Under 40 CFR Part 63, Subpart DDDDD, this unit is considered an existing boiler in the large gaseous fuel subcategory.

Under 40 CFR Part 60, Subpart Dc, this unit is considered a steam generating unit.

(3) One (1) natural gas-fired boiler, identified as the hydrogen plant boiler, constructed in 1996, with a heat input capacity of 9.98 MMBtu per hour, with Emissions uncontrolled, and exhausting to stack S-30. This boiler uses propane as a backup fuel.

Under 40 CFR Part 63, Subpart DDDDD, this unit is considered an existing boiler in the small gaseous fuel subcategory.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.9.1 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the one (1) natural gas-fired boiler (ID No. 2) rated at 15.0 MMBtu per hour, except when otherwise specified in 40 CFR Part 63, Subpart DDDDD. The Permittee must comply with these requirements on and after the effective date of 40 CFR Part 63, Subpart DDDDD.

D.9.2 National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD]

(a) The one (1) natural gas-fired boiler (ID No. 2) rated at 15.0 MMBtu per hour is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, (40 CFR Part 63, Subpart DDDDD), as of the effective date of 40 CFR Part 63, Subpart DDDDD. Pursuant to this rule, the Permittee must comply with 40 CFR Part 63, Subpart DDDDD on and after September 13, 2007.

(b) The following emissions units comprise the affected source for the existing large gaseous fuel subcategory: One (1) BOC Gases natural gas-fired boiler (ID No. 2), rated at 15.0 MMBtu per hour. This boiler was installed in 1994.

(c) The definitions of 40 CFR Part 63, Subpart DDDDD at 40 CFR 63.7575 are applicable to the affected sources.

D.9.3 Preventive Maintenance Plan (PMP) [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan (PMP), in accordance with Section B – Preventive Maintenance Plan (PMP), of this permit, is required for the facilities listed in this section.

D.9.4 BOC Gases Boiler PSD BACT [326 IAC 2-2]

(a) Pursuant to 326 IAC 2-2 and PSD 107-5235-00038, issued June 20, 1996, the Permittee shall comply with the following BACT requirements:

(1) The 9.98 MMBtu per hour hydrogen plant boiler shall burn natural gas with propane as backup fuel.

(2) The NOx emissions from the 9.98 MMBtu per hour hydrogen plant boiler shall not exceed 100 pounds per million cubic feet of natural gas combusted.

(b) Pursuant to 326 IAC 2-2 and PSD 107-3702-00038, issued March 28, 1995:

(1) The 9.0 MMBtu per hour boiler (ID No. 1) and the 15.0 MMBtu per hour boiler (ID No. 2) shall burn natural gas with propane as backup fuel.

(2) The NOx emissions from the 15.0 MMBtu per hour boiler (ID No. 2) shall not exceed 140 pounds per million cubic feet of natural gas combusted.

(3) The NOx emissions from the 9.0 MMBtu per hour boiler (ID No. 1) shall not exceed 100 pounds per million cubic feet of natural gas combusted.

D.9.5 Particulate Matter Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-3, the particulate matter (PM) from:

(a) The 9.98 MMBtu per hour heat input hydrogen plant boiler shall be limited to 0.363 pounds per MMBtu heat input.

(b) The 9.0 MMBtu per hour heat input boiler (ID No. 1) shall be limited to 0.41 pounds per MMBtu heat input

(c) The 15.0 MMBtu per hour heat input boiler (ID No. 2) shall be limited to 0.379 pounds per MMBtu heat input

These limitations are based on the following equation:

$Pt = 1.09 / Q^{0.26}$ where Pt = Pounds of PM emitted per million Btu (lb/MMBtu) heat input, and
Q = Total source maximum operating capacity rating in million Btu per hour (MMBtu per hour) heat input.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.9.6 Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19][40 CFR Part 63, Subpart DDDDD][40 CFR Part 60 Subpart Dc]

(a) Pursuant to 40 CFR 60.48c(g), the Permittee shall keep records of the fuel used each day by Boiler ID No. 2, including the types of fuel and amount used.

(b) Pursuant to 40 CFR 63.7555(a)(1), the Permittee shall keep records of a copy of each notification and report to comply with 40 CFR Part 63, Subpart DDDDD, including all documentation supporting any Initial Notification.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements of this permit.

SECTION D.21 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

COLD MILL – ANNEALING FURNACES

(dd1) Eighteen (18) natural gas-fueled batch Annealing Furnaces, identified as EU-03, constructed in 2001. Each has a heat input capacity of 4.8 MMBtu per hour and a maximum throughput capacity of 200 tons of steel per hour. Emissions are uncontrolled and exhaust to roof vent (S-26).

(dd2) One (1) natural gas-fired annealing furnace, identified as AN-19, approved for construction in 2007, with a heat input capacity of 4.8 MMBtu per hour and a maximum throughput capacity of 200 tons of steel per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to roof vent (S-26).

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.21.1 Annealing Furnace PSD BACT [326 IAC 2-2]

Pursuant to 326 IAC 2-2 and PSD SSM 107-21359-00038, issued April 27, 2006, the eighteen (18) batch annealing furnaces identified as EU-03 and constructed in 2001 shall comply with the following BACT requirements:

(a) Each batch annealing furnace shall be equipped and operated with low NO_x burners.

(b) The NO_x emissions from each annealing furnace shall not exceed 0.10 lb/MMBtu.

(c) The CO emissions from each annealing furnace shall not exceed 0.084 lb/MMBtu.

(d) The annealing furnaces shall use natural gas as primary fuel and may utilize propane as a back up fuel.

D.21.2 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the allowable particulate emission rate from each of the nineteen (19) annealing furnaces in the Cold Mill shall not exceed 58.5 pounds per hour when operating at a process weight rate of 200 tons per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.21.3 PSD Limit [326 IAC 2-2]

The input of propane to annealing furnace AN-19, combined with the input of propane to emission units LP #4, LP #7, TD #3, MD #1, MD #2, LDS #1, LP #1, LP #2, LP #3, and LP #5 (permitted in Section D.34) shall be limited to less than 1,089 thousand gallons of propane (LPG) per twelve consecutive month period, with compliance determined at the end of each month. NOx emissions shall not exceed 0.208 pounds per MMBtu when burning propane.

Compliance with this limit will ensure that the potential to emit from the modification performed under SSM 107-23609-00038 is less than forty (40) tons of NOx per year and will render the requirements of 326 IAC 2-2 (PSD) not applicable.

Compliance Determination Requirements [326 IAC 2-1.1-11]

D.21.4 Vendor Certification

The Permittee shall submit the vendor guarantees for the above-mentioned batch annealing furnace which is yet to be installed to demonstrate compliance with Operation Conditions D.23.1(a), (b), and (c).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.21.5 Record Keeping Requirements

(a) To document compliance with Condition D.21.3, the Permittee shall maintain records of the actual quantity of propane (LPG) used in annealing furnace AN-19. Records shall be taken monthly and shall be complete and sufficient to establish compliance with the limit established in Condition D.21.3. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.21.6 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.21.3 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.32 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

MELTSHOP – LADLE METALLURGY FURNACES, PREHEATERS, AND DRYERS

(ss) Two (2) Meltshop Ladle Metallurgy Furnaces (LMFs)/Stirring Station, identified as EU-13, constructed in 1988, with a maximum capacity of 502 tons/hour each and controlled by a baghouse, identified as Meltshop LMF Baghouse, exhausting to stack S-13. The Meltshop LMF Baghouse has a design flow rate of 200,000 acf/min. The LMF baghouse was constructed in 1992.

(1a) Ladle Preheaters, identified as LP #1 - #5, uncontrolled and exhausting to stacks 7 and 8, consisting of:

(A) 3 units, identified as LP #1 - #3, constructed in 1989, each rated at 10 MMBtu per hour.

(B) 1 unit, identified as LP #4, constructed in 1994, rated at 7.5 MMBtu per hour.

(C) 1 unit, identified as LP #5, constructed in 1989, rated at 15 MMBtu per hour.

(1b) Ladle Preheaters, identified as LP #1a through LP #7a, consisting of:

(A) Three (3) natural gas-fired ladle preheaters, identified as LP #1a, LP #2a, and LP #3a, approved for construction in 2007, each with a heat input capacity of 10 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.

(B) One (1) natural gas-fired AOD ladle preheater, identified as LP #4a, approved for construction in 2007, with a heat input capacity of 10 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.

(C) One (1) natural gas-fired ladle preheater, identified as LP #5a, approved for construction in 2007, with a heat input capacity of 10 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.

(D) One (1) natural gas-fired ladle preheater, identified as LP #6, approved for construction in 2006, with a heat input capacity of 12 MMBtu/hour, utilizing low-NOx burners, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.

(E) One (1) natural gas-fired ladle preheater/dryer, identified as LP #7**a**, approved for construction in 2007, with a heat input capacity of 10 MMBtu/hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.

(2a) Ladle Dryer, identified as LDS #1, constructed in 1989, consisting of a low NO_x natural gas fired burner, with a heat input capacity of 5 MMBtu per hour. Emissions are uncontrolled and exhausting to stack 12.

(2b) One (1) natural gas-fired Ladle Dryer, identified as LDS #1a, approved for construction in 2007, with a heat input capacity of 5 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stack S-12.

(3) Four (4) Tundish Preheaters, identified as TPH #1 - #4, constructed in 1995, consisting of 4 low NOx natural gas fired heaters, each with a heat input capacity of 6 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stack S-

10.

(4) Two (2) Tundish Dryout Stations, identified as TD #1 and TD #2. TD #1 was constructed in 1989, and TD#2 was constructed in 1990, each with a heat input capacity of 9 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stack S-10.

(5) Four (4) Tundish Nozzle Preheaters, identified as TNP #1- #4, constructed in 1995, consisting of a low NOx natural gas fired Preheaters, each with a heat input capacity of 0.8 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stack S-10.

(6) One (1) natural gas-fired tundish dryout station, identified as TD #3, approved for construction in 2007, with a maximum heat input capacity of 2.4 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stack S-10.

(7) Two (2) natural gas-fired mandrel dryers, identified as MD #1 and MD #2, approved for construction in 2007, each with a heat input capacity of 1.5 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stack S-10.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.32.1 Meltshop LMFs PSD BACT [326 IAC 2-2]

Pursuant to 326 IAC 2-2 and PSD SSM 107-16823-00038, issued November 21, 2003, the Permittee shall comply with the following BACT requirements:

(a) The Meltshop LMFs (EU-13) shall be equipped with side draft hoods that evacuate to a baghouse (identified as Meltshop LMF Baghouse) capturing the particulate matter (PM).

(b) The filterable PM emissions from the Meltshop LMF Baghouse shall not exceed 0.0018 gr/dscf.

(c) The filterable and condensible PM_{10} emissions from the Meltshop LMF Baghouse shall not exceed 0.0052 gr/dscf.

(d) The visible emissions from the Meltshop LMF Baghouse shall not exceed 3% opacity, based on a 6-minute average.

(e) The NO_x emissions from the Meltshop LMF Baghouse shall not exceed 0.0176 lb/ton of steel produced and 8.8 pounds of NO_x per hour, based on a 3-hour block average.

(f) The SO_2 emissions from the Meltshop LMF Baghouse shall not exceed 0.185 lb/ton of steel produced and 92.87 pounds of SO_2 per hour, based on a 3-hour block average.

(g) The CO emissions from the Meltshop LMF Baghouse shall not exceed 0.07125 lb/ton of steel produced and 35.77 pounds of CO per hour, based on a 3-hour block average.

(h) The VOC emissions from the Meltshop LMF Baghouse shall not exceed 0.0086 lb/ton of steel produced and 4.32 pounds of VOC per hour, based on a 3-hour block average.

D.32.2 Ladle Dryer (LDS #1) PSD BACT [326 IAC 2-2]

Pursuant to 326 IAC 2-2 and PSD 107-2764-00038, issued November 30, 1993, amended June 23, 1997 via A 107-8255-00038, the Tundish Dryout Stations (TD #1 and TD #2) shall comply with the following BACT requirements:

(a) The Tundish Dryout Stations (TD #1 and TD#2) shall only burn natural gas, except as specified below, and shall be limited to 9.0 million Btu per hour heat input, each.

(b) PM/PM10 shall be limited to 3.0 pounds per million cubic feet of natural gas burned, 0.005 pounds per hour (total), and 0.02 tons per year (total).

(c) NOx emissions shall be limited to 100 pounds per million cubic feet of natural gas burned, 0.2 pounds per hour (total), and 0.7 tons per year (total).

(d) CO emissions shall be limited to 20.0 pounds per million cubic feet of natural gas burned, 0.02 pounds per hour, and 0.1 tons per year (total).

(e) VOC emissions from shall be limited to 5.3 pounds per million cubic feet of natural gas burned, 0.007 pounds per hour (total), and 0.03 tons per year (total).

(f) Visible emissions shall not exceed 5% opacity, based on a 6-minute average.

(g) The Tundish Dryout Stations (TD #1 and TD #2) shall only burn propane as a back-up fuel.

D.32.3 Ladle Preheaters PSD BACT [326 IAC 2-2]

(a) Pursuant to 326 IAC 2-2 and PSD 107-2764-00038, issued November 30, 1993, the four Ladle Preheaters (LP #1- #4) shall comply with the following BACT requirements:

(1) The four Ladle Preheaters (LP #1- #4) shall only burn natural gas, except as specified below. The three horizontal preheaters (LP#1 - #3) shall each be limited to 10.0 million Btu per hour heat input and the one vertical preheat station (LP#4) shall be limited to 7.5 million Btu per hour heat input.

(2) PM/PM10 emissions from each of the four Ladle Preheaters (LP #1- #4) shall be limited to 3.0 pounds per million cubic feet of natural gas burned, 0.1 pounds per hour, and 0.5 tons per year.

(3) NOx emissions from each of the four Ladle Preheaters (LP #1- #4) shall be limited to 100 pounds per million cubic feet of natural gas burned, 3.7 pounds per hour, and 16.4 tons per year.

(4) CO emissions from each of the four Ladle Preheaters (LP #1- #4) shall be limited to 20.0 pounds per million cubic feet of natural gas burned, 0.8 pounds per hour, and 3.3 tons per year.

(5) VOC emissions from each of the four Ladle Preheaters (LP #1- #4) shall be limited to 5.3 pounds per million cubic feet of natural gas burned, 0.2 pounds per hour, and 0.9 tons per year.

(6) The four Ladle Preheaters (LP #1- #4) shall only burn propane as a back-up fuel.

(7) Visible emissions from the four Ladle Preheaters (LP #1- #4) shall not exceed 5% opacity, based on a 6-minute average.

(b) Pursuant to 326 IAC 2-2 and PSD 107-5235-00038, issued June 20, 1996, the one Ladle Preheater (LP #5) shall comply with the following BACT requirements:

(1) The one Ladle Preheater (LP #5) shall burn natural gas with propane as a back-up fuel.

(2) NOx emissions from Ladle Preheater (LP #5) shall not exceed 140 lbs per million cubic feet of gas burned.

(c) Pursuant to 326 IAC 2-2 and PSD SSM 107-21359-00038, issued on April 27, 2006, ladle

preheater LP #6 shall comply with the following BACT requirements:

(1) The BACT for NOx shall be "good combustion practices", utilize "pipeline quality" natural gas as the primary fuel and may utilize propane as a backup fuel, proper operation and shall not exceed a NOx emission rate of 0.05 pounds per MMBtu and 0.60 lbs per hour.

(2) The BACT for SO_2 shall be "good combustion practices", utilize "pipeline quality" natural gas as the primary fuel and may utilize propane as a backup fuel, proper operation and shall not exceed a SO_2 emission rate of 0.0006 pounds per MMBtu and 0.007 lbs per hour.

(3) The BACT for CO shall be "good combustion practices", utilize "pipeline quality" natural gas as the primary fuel and may utilize propane as a backup fuel, proper operation and shall not exceed a CO emission rate of 0.084 pounds per MMBtu and 1.01 lbs per hour.

(4) The BACT for PM/PM10 (filterable plus condensable) shall be "good combustion practices", utilize "pipeline quality" natural gas as the primary fuel and may utilize propane as a backup fuel, proper operation and shall not exceed a PM/PM10 (filterable plus condensable) emission rate of 0.0076 pounds per MMBtu and 0.091 lbs per hour.

(5) The BACT for VOC shall be "good combustion practices", utilize "pipeline quality" natural gas as the primary fuel and may utilize propane as a backup fuel, proper operation and shall not exceed a VOC emission rate of 0.0054 pounds per MMBtu and 0.065 lbs per hour.

(6) The opacity from stacks 7 and 8 shall not exceed three percent (3%) opacity based on a six-minute average (24 readings taken in accordance with 40 CFR Part 60, Appendix A, Method 9). Compliance with this limitation satisfies the opacity limitations required by 326 IAC 5-1 (Opacity Limitations).

D.32.4 Tundish Dryout Station (TD #1) PSD BACT [326 IAC 2-2]

Pursuant to 326 IAC 2-2 and PSD 107-2764-00038, issued November 30, 1993, amended June 23, 1997 via A 107-8255-00038, the Tundish Dryout Stations (TD #1 and TD #2) shall comply with the following BACT requirements:

(a) The Tundish Dryout Station (TD #1 and TD #2) shall only burn natural gas, except as specified below, and shall be limited to 9.0 million Btu per hour heat input each.

(b) PM/PM10 shall be limited to 3.0 pounds per million cubic feet of natural gas burned, 0.005 pounds per hour (total), and 0.02 tons per year (total).

(c) NOx emissions shall be limited to 100 pounds per million cubic feet of natural gas burned, 0.2 pounds per hour (total), and 0.7 tons per year (total).

(d) CO emissions shall be limited to 20.0 pounds per million cubic feet of natural gas burned, 0.02 pounds per hour, and 0.1 tons per year (total).

(e) VOC emissions shall be limited to 5.3 pounds per million cubic feet of natural gas burned, 0.007 pounds per hour, 0.03 tons per year (total).

(f) Visible emissions shall not exceed 5% opacity, based on a 6-minute average.

(g) The Tundish Dryout Stations (TD #1 and TD #2) shall only burn propane as a back-up fuel.

D.32.5 PSD Limit [326 IAC 2-2]

The combined input of propane to emission units LP #4a, LP #7a, TD #3, MD #1, MD #2, LDS

#1a, LP #1a, LP #2a, LP #3a, and LP #5a, combined with the input of propane to annealing furnace AN-19 (permitted in Section D.21) shall be limited to less than 1,089 thousand gallons of propane (LPG) per twelve consecutive month period, with compliance determined at the end of each month. NOx emissions shall not exceed 0.208 pounds per MMBtu when burning propane.

Compliance with this limit will ensure that the potential to emit from the modification performed under SSM 107-23609-00038 is less than forty (40) tons of NOx per year and will render the requirements of 326 IAC 2-2 (PSD) not applicable.

D.32.6 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan (PMP), in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the LMFs (EU-13) and their control devices.

Compliance Determination Requirements [326 IAC 2-1.1-11]

D.32.7 Meltshop LMFs PSD BACT [326 IAC 2-2]

Pursuant to 326 IAC 2-2 and PSD SSM 107-16823-00038, issued November 21, 2003, the Permittee shall comply with the following BACT requirements:

(a) The Meltshop LMF Baghouse shall operate at all times that at least one of the Meltshop LMFs (EU-13) is operating, except during the times that one of the Meltshop EAF Baghouses serves as a back up.

(b) Good working practices shall be observed.

D.32.8 Testing Requirements [326 IAC 2-7-6(1),(6)]

Pursuant to 326 IAC 2-1.1-11:

(a) In order to demonstrate compliance with Condition D.32.1, the Permittee shall perform PM, PM10, and SO_2 testing for the Meltshop LMFs (EU-13).

(b) With the submission of the test protocol, at a minimum, the Permittee shall include estimates of the sulfur content of the raw materials to be used in testing and the sulfur content of the raw materials used from previous year.

(c) PM_{10} includes filterable and condensible PM10.

(d) The particulate testing shall utilize 40 CFR Part 60, Appendix A, Method 5, Method 201 or 201A, Method 202 or other methods as approved by the Commissioner.

(e) Any stack which has multiple processes which exhaust to the same stack shall operate all of the processes simultaneously in accordance with 326 IAC 3-5 (Source Sampling Procedures).

(f) The PM, PM10, and SO_2 tests shall be repeated at least once every 2.5 years from the date of a valid compliance demonstration.

(g) These tests shall be performed using methods as approved by the Commissioner.

(h) Testing shall be conducted in accordance with Section C - Performance Testing.

D.32.9 Sulfur Content [326 IAC 2-7-5(3)(A)(iii)][326 IAC 2-7-5(d)]

The Permittee shall monitor the sulfur content of the charge carbon and injection carbon added to the LMFs. Vendor certifications or analyses may verify the sulfur content of the charge carbon and injection carbon.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.32.10 Visible Emissions Notations [326 IAC 2-7-5(3)(A)(iii)][326 IAC 2-7-5(d)]

(a) Visible emission notations of the Meltshop LMF Baghouse shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

(e) If abnormal emissions are observed, the Permittee shall take reasonable steps in accordance with Section C – Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

D.32.11 Baghouses Parametric Monitoring [326 IAC 2-7-5(3)(A)(iii)][326 IAC 2-7-5(d)]

The Permittee shall record the pressure drop across the Meltshop LMF Baghouse used in conjunction with the Meltshop LMFs (EU-13), at least once per day, when one or more of the Meltshop LMFs is in operation. When for any one reading, the pressure drop across the baghouse is outside the range of 1 and 10 inches of water or a range established during the latest stack test, the Permittee shall take reasonable steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once annually.

The instrument used for determining the pressure shall have a range higher than 10 inches of water to accurately measure the range.

D.32.12 Broken or Failed Bag Detection

(a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.32.13 Record Keeping Requirements

(a) To document compliance with Condition D.32.10, the Permittee shall maintain once per day records of visible emission notation readings at the Meltshop LMF Baghouse stack exhaust.

(b) To document compliance with Condition D.32.9, the Permittee shall maintain records of the sulfur content of the charge carbon and injection carbon added to the LMFs (EU-13).

(c) To document compliance with Condition D.32.11, the Permittee shall maintain records of once per day total static pressure drop during normal operation.

(d) To document compliance with Condition D.32.5, the Permittee shall maintain records of the actual quantity of propane (LPG) used in the emission units identified as LP #4a, LP #7a, TD #3, MD #1, MD #2, LDS #1a, LP #1a, LP #2a, LP #3a, and LP #5a. Records shall be taken monthly and shall be complete and sufficient to establish compliance with the limit established in Condition D.32.5. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.32.14 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.32.5 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION E.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(b) One (1) natural gas fueled low-NO_x boiler, identified as Boiler ID No. 501, constructed in 2004, a heat input capacity of 71.04 MMBtu/hour, utilizing low-NOx burners, and exhausting to Stack 501. This boiler provides steam to the vacuum degasser. Propane will be used as back up fuel.

Under 40 CFR Part 63, Subpart DDDDD, this unit is considered a new boiler in the large gaseous fuel subcategory.

Under 40 CFR Part 60, Subpart Dc, this unit is considered a steam generating unit.

(aa) One (1) natural gas fueled Cold Mill Boiler (CMB #2), identified as EU-19, with a heat input capacity of 34 MMBtu per hour, with emissions exhausting to stack S-23. Propane is used as a back-up fuel. The Cold Mill Boiler (CMB #2) is not yet installed.

Under 40 CFR Part 63, Subpart DDDDD, this unit is considered a new boiler in the large gaseous fuel subcategory.

Under 40 CFR Part 60, Subpart Dc, this unit is considered a steam generating unit.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

E.1.1 General Provisions Relating to NESHAP [326 IAC 20-1] [40 CFR Part 63, Subpart A]

Pursuant to 40 CFR Part 63, Subpart DDDDD, the Permittee shall comply with the applicable provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, for boiler ID No. 501 rated at 71.04 MMBtu/hr and boiler ID No. CMB #2 rated at 34.00 MMBtu/hr, as specified in Appendix A of 40 CFR Part 63, Subpart DDDDD in accordance with schedule in 40 CFR Part 63, Subpart DDDDD.

E.1.2 National Emissions Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters: Requirements [40 CFR Part 63, Subpart DDDDD]

Pursuant to 40 CFR Part 63, Subpart DDDDD, boiler ID No. 501 rated at 71.04 MMBtu/hr and boiler ID No. CMB #2 rated at 34.0 MMBtu/hr shall comply with the following provisions:

Subpart DDDDD—National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters

Emission Limits and Work Practice Standards

§ 63.7500 What emission limits, work practice standards, and operating limits must I meet?

(a) You must meet the requirements in paragraphs (a)(1) and (b) of this section.

(1) You must meet each emission limit and work practice standard in Table 1 to this subpart that applies to your boiler or process heater, except as provided under §63.7507.

(b) As provided in §63.6(g), EPA may approve use of an alternative to the work practice standards in this section.

General Compliance Requirements

§ 63.7505 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limits (including operating limits) and the work practice standards in this subpart at all times, except during periods of startup, shutdown, and malfunction.

(b) You must always operate and maintain your affected source, including air pollution control and monitoring equipment, according to the provisions in §63.6(e)(1)(i).

(d) If you demonstrate compliance with any applicable emission limit through performance testing, you must develop a site-specific monitoring plan according to the requirements in paragraphs (d)(1) through (4) of this section. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under §63.8(f).

(2) In your site-specific monitoring plan, you must also address paragraphs (d)(2)(i) through (iii) of this section.

(i) Ongoing operation and maintenance procedures in accordance with the general requirements of §63.8(c)(1), (c)(3), and (c)(4)(ii);

(ii) Ongoing data quality assurance procedures in accordance with the general requirements of §63.8(d); and

(iii) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of §63.10(c), (e)(1), and (e)(2)(i).

(e) If you have an applicable emission limit or work practice standard, you must develop and implement a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in §63.6(e)(3).

Testing, Fuel Analyses, and Initial Compliance Requirements

§ 63.7510 What are my initial compliance requirements and by what date must I conduct them?

(a) For affected sources that elect to demonstrate compliance with any of the emission limits of this subpart through performance testing, your initial compliance requirements include conducting performance tests according to §63.7520 and Table 5 to this subpart, conducting a fuel analysis for each type of fuel burned in your boiler or process heater according to §63.7521 and Table 6 to this subpart, establishing operating limits according to §63.7530 and Table 7 to this subpart, and conducting CMS performance evaluations according to §63.7525.

(c) For affected sources that have an applicable work practice standard, your initial compliance requirements depend on the subcategory and rated capacity of your boiler or process heater. If your boiler or process heater is in any of the limited use subcategories or has a heat input capacity less than 100 MMBtu per hour, your initial compliance demonstration is conducting a performance test for carbon monoxide according to Table 5 to this subpart. If your boiler or process heater is in any of the large subcategories and has a heat input capacity of 100 MMBtu per hour or greater, your initial compliance demonstration is conducting a performance evaluation of your continuous emission monitoring system for carbon monoxide according to §63.7525(a).

(e) If your new or reconstructed affected source commenced construction or reconstruction between January 13, 2003 and November 12, 2004, you must demonstrate initial compliance with either the proposed emission limits and work practice standards or the promulgated emission limits and work practice standards no later than 180 days after November 12, 2004 or within 180 days after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(f) If your new or reconstructed affected source commenced construction or reconstruction between January 13, 2003, and November 12, 2004, and you chose to comply with the proposed emission limits and work practice standards when demonstrating initial compliance, you must conduct a second compliance demonstration for the promulgated emission limits and work practice

standards within 3 years after November 12, 2004 or within 3 years after startup of the affected source, whichever is later.

(g) If your new or reconstructed affected source commences construction or reconstruction after November 12, 2004, you must demonstrate initial compliance with the promulgated emission limits and work practice standards no later than 180 days after startup of the source.

§ 63.7515 When must I conduct subsequent performance tests or fuel analyses?

(a) You must conduct all applicable performance tests according to §63.7520 on an annual basis, unless you follow the requirements listed in paragraphs (b) through (d) of this section. Annual performance tests must be completed between 10 and 12 months after the previous performance test, unless you follow the requirements listed in paragraphs (b) through (d) of this section.

(e) If you have an applicable work practice standard for carbon monoxide and your boiler or process heater is in any of the limited use subcategories or has a heat input capacity less than 100 MMBtu per hour, you must conduct annual performance tests for carbon monoxide according to §63.7520. Each annual performance test must be conducted between 10 and 12 months after the previous performance test.

(g) You must report the results of performance tests and fuel analyses within 60 days after the completion of the performance tests or fuel analyses. This report should also verify that the operating limits for your affected source have not changed or provide documentation of revised operating parameters established according to §63.7530 and Table 7 to this subpart, as applicable. The reports for all subsequent performance tests and fuel analyses should include all applicable information required in §63.7550.

§ 63.7520 What performance tests and procedures must I use?

(a) You must conduct all performance tests according to §63.7(c), (d), (f), and (h). You must also develop a site-specific test plan according to the requirements in §63.7(c) if you elect to demonstrate compliance through performance testing.

(b) You must conduct each performance test according to the requirements in Table 5 to this subpart.

(e) You may not conduct performance tests during periods of startup, shutdown, or malfunction.

(f) You must conduct three separate test runs for each performance test required in this section, as specified in §63.7(e)(3). Each test run must last at least 1 hour.

§ 63.7530 How do I demonstrate initial compliance with the emission limits and work practice standards?

(a) You must demonstrate initial compliance with each emission limit and work practice standard that applies to you by either conducting initial performance tests and establishing operating limits, as applicable, according to §63.7520, paragraph (c) of this section, and Tables 5 and 7 to this subpart OR conducting initial fuel analyses to determine emission rates and establishing operating limits, as applicable, according to §63.7521, paragraph (d) of this section, and Tables 6 and 8 to this subpart.

Continuous Compliance Requirements

§ 63.7535 How do I monitor and collect data to demonstrate continuous compliance?

(a) You must monitor and collect data according to this section and the site-specific monitoring plan required by §63.7505(d).

(b) Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), you must monitor continuously (or collect data at all required intervals) at all times that the affected source is operating.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, or required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must use all the data collected during all other periods in assessing the operation of the control device and associated control system. Boilers and process heaters that have an applicable carbon monoxide work practice standard and are required to install and operate a CEMS, may not use data recorded during periods when the boiler or process heater is operating at less than 50 percent of its rated capacity.

§ 63.7540 How do I demonstrate continuous compliance with the emission limits and work practice standards?

(a) You must demonstrate continuous compliance with each emission limit, operating limit, and work practice standard in Tables 1 through 4 to this subpart that applies to you according to the methods specified in Table 8 to this subpart and paragraphs (a)(1) through (10) of this section.

(1) Following the date on which the initial performance test is completed or is required to be completed under §§63.7 and 63.7510, whichever date comes first, you must not operate above any of the applicable maximum operating limits or below any of the applicable minimum operating limits listed in Tables 2 through 4 to this subpart at all times except during periods of startup, shutdown and malfunction. Operating limits do not apply during performance tests. Operation above the established maximum or below the established minimum operating limits shall constitute a deviation of established operating limits.

(b) You must report each instance in which you did not meet each emission limit, operating limit, and work practice standard in Tables 1 through 4 to this subpart that apply to you. You must also report each instance during a startup, shutdown, or malfunction when you did not meet each applicable emission limit, operating limit, and work practice standard. These instances are deviations from the emission limits and work practice standards in this subpart. These deviations must be reported according to the requirements in §63.7550.

(c) During periods of startup, shutdown, and malfunction, you must operate in accordance with the SSMP as required in §63.7505(e).

(d) Consistent with §§63.6(e)and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the EPA Administrator's satisfaction that you were operating in accordance with your SSMP. The EPA Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in §63.6(e).

Notification, Reports, and Records

§ 63.7545 What notifications must I submit and when?

(a) You must submit all of the notifications in §§63.7(b) and (c), 63.8 (e), (f)(4) and (6), and 63.9 (b) through (h) that apply to you by the dates specified.

(b) As specified in §63.9(b)(2), if you startup your affected source before November 12, 2004, you must submit an Initial Notification not later than 120 days after November 12, 2004. The Initial Notification must include the information required in paragraphs (b)(1) and (2) of this section, as applicable.

(1) If your affected source has an annual capacity factor of greater than 10 percent, your Initial Notification must include the information required by §63.9(b)(2).

(c) As specified in §63.9(b)(4) and (b)(5), if you startup your new or reconstructed affected source on or after November 12, 2004, you must submit an Initial Notification not later than 15 days after the actual date of startup of the affected source.

(d) If you are required to conduct a performance test you must submit a Notification of Intent to conduct a performance test at least 30 days before the performance test is scheduled to begin.

(e) If you are required to conduct an initial compliance demonstration as specified in §63.7530(a), you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii). For each initial compliance demonstration, you must submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of the performance test and/or other initial compliance demonstrations according to §63.10(d)(2). The Notification of Compliance Status report must contain all the information specified in paragraphs (e)(1) through (9), as applicable.

(1) A description of the affected source(s) including identification of which subcategory the source is in, the capacity of the source, a description of the add-on controls used on the source description of the fuel(s) burned, and justification for the fuel(s) burned during the performance test.

(2) Summary of the results of all performance tests, fuel analyses, and calculations conducted to demonstrate initial compliance including all established operating limits.

(4) Identification of whether you plan to demonstrate compliance with each applicable emission limit through performance testing or fuel analysis.

(6) A signed certification that you have met all applicable emission limits and work practice standards.

(7) A summary of the carbon monoxide emissions monitoring data and the maximum carbon monoxide emission levels recorded during the performance test to show that you have met any applicable work practice standard in Table 1 to this subpart.

(9) If you had a deviation from any emission limit or work practice standard, you must also submit a description of the deviation, the duration of the deviation, and the corrective action taken in the Notification of Compliance Status report.

§ 63.7550 What reports must I submit and when?

(a) You must submit each report in Table 9 to this subpart that applies to you.

(b) Unless the EPA Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 9 to this subpart and according to the requirements in paragraphs (b)(1) through (5) of this section.

(1) The first compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.7495 and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the compliance date that is specified for your source in §63.7495.

(2) The first compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in §63.7495.

(3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) Each subsequent compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (4) of this section.

(c) The compliance report must contain the information required in paragraphs (c)(1) through (11) of this section.

(1) Company name and address.

(2) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) The total fuel use by each affected source subject to an emission limit, for each calendar month within the semiannual reporting period, including, but not limited to, a description of the fuel and the total fuel usage amount with units of measure.

(5) A summary of the results of the annual performance tests and documentation of any operating limits that were reestablished during this test, if applicable.

(6) A signed statement indicating that you burned no new types of fuel. Or, if you did burn a new type of fuel, you must submit the calculation of chlorine input, using Equation 5 of §63.7530, that demonstrates that your source is still within its maximum chlorine input level established during the previous performance testing (for sources that demonstrate compliance through performance testing) or you must submit the calculation of HCl emission rate using Equation 9 of §63.7530 that demonstrates that your source is still meeting the emission limit for HCl emissions (for boilers or process heaters that demonstrate compliance through fuel analysis). If you burned a new type of fuel, you must submit the calculation of TSM input, using Equation 6 of §63.7530, that demonstrates that your source is still within its maximum TSM input level established during the previous performance testing (for sources that demonstrate compliance through performance testing), or you must submit the calculation of TSM emission rate using Equation 10 of §63.7530 that demonstrates that your source is still meeting the emission limit for TSM emissions (for boilers or process heaters that demonstrate compliance through fuel analysis). If you burned a new type of fuel, you must submit the calculation of mercury input, using Equation 7 of §63.7530, that demonstrates that your source is still within its maximum mercury input level established during the previous performance testing (for sources that demonstrate compliance through performance testing), or you must submit the calculation of mercury emission rate using Equation 11 of §63.7530 that demonstrates that your source is still meeting the emission limit for mercury emissions (for boilers or process heaters that demonstrate compliance through fuel analysis).

(7) If you wish to burn a new type of fuel and you can not demonstrate compliance with the maximum chlorine input operating limit using Equation 5 of §63.7530, the maximum TSM input operating limit using Equation 6 of §63.7530, or the maximum mercury input operating limit using Equation 7 of §63.7530, you must include in the compliance report a statement indicating the intent to conduct a new performance test within 60 days of starting to burn the new fuel.

(9) If you had a startup, shutdown, or malfunction during the reporting period and you took actions consistent with your SSMP, the compliance report must include the information in §63.10(d)(5)(i).

(10) If there are no deviations from any emission limits or operating limits in this subpart that apply to you, and there are no deviations from the requirements for work practice standards in this subpart, a statement that there were no deviations from the emission limits, operating limits, or work practice standards during the reporting period.

(d) For each deviation from an emission limit or operating limit in this subpart and for each deviation from the requirements for work practice standards in this subpart that occurs at an affected source where you are not using a CMSs to comply with that emission limit, operating limit, or work practice standard, the compliance report must contain the information in paragraphs (c)(1) through (10) of this section and the information required in paragraphs (d)(1) through (4) of this section. This includes periods of startup, shutdown, and malfunction.

(1) The total operating time of each affected source during the reporting period.

(2) A description of the deviation and which emission limit, operating limit, or work practice standard from which you deviated.

(3) Information on the number, duration, and cause of deviations (including unknown cause), as applicable, and the corrective action taken.

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 40 CFR part 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a compliance report pursuant to Table 9 to this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the compliance report includes all required information concerning deviations from any emission limit, operating limit, or work practice requirement in this subpart, submission of the compliance report satisfies any obligation to report the same deviations in the semiannual monitoring report. However, submission of a compliance report does not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

(g) If you operate a new gaseous fuel unit that is subject to the work practice standard specified in Table 1 to this subpart, and you intend to use a fuel other than natural gas or equivalent to fire the affected unit, you must submit a notification of alternative fuel use within 48 hours of the declaration of a period of natural gas curtailment or supply interruption, as defined in §63.7575. The notification must include the information specified in paragraphs (g)(1) through (5) of this section.

(1) Company name and address.

(2) Identification of the affected unit.

§ 63.7555 What records must I keep?

(a) You must keep records according to paragraphs (a)(1) through (3) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that you submitted, according to the requirements in §63.10(b)(2)(xiv).

(2) The records in §63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

(3) Records of performance tests, fuel analyses, or other compliance demonstrations, performance evaluations, and opacity observations as required in §63.10(b)(2)(viii).

(d) For each boiler or process heater subject to an emission limit, you must also keep the records in paragraphs (d)(1) through (5) of this section.

(1) You must keep records of monthly fuel use by each boiler or process heater, including the type(s) of fuel and amount(s) used.

§ 63.7560 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review, according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). You can keep the records off site for the remaining 3 years.

Other Requirements and Information

§ 63.7565 What parts of the General Provisions apply to me?

Table 10 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you.

Table 1 to Subpart DDDDD of Part 63.—Emission Limits and Work Practice Standards

As stated in '63.7500, you must comply with the following applicable emission limits:

If your boiler or process heater is in this subcategory...	For the following pollutants...	You must meet the following emission limits and work practice standards...
7. New or reconstructed large gaseous fuel	Carbon Monoxide	400 ppm by volume on a dry basis corrected to 3 percent oxygen (30-day rolling average for units 100 MMBtu/hr or greater, 3-run average for units less than 100 MMBtu/hr)

Table 5 to Subpart DDDDD of Part 63 C Performance Testing Requirements

As stated in '63.7520, you must comply with the following requirements for performance test for existing, new or reconstructed affected sources:

To conduct a performance test for the following pollutant...	You must...	Using...
5. Carbon Monoxide	a. Select the sampling ports location and the number of traverse points.	Method 1 in appendix A to part 60 of this chapter.
	b. Determine velocity and volumetric flow-rate of the stack gas.	Method 2, 2F, or 2G in appendix A to part 60 of this chapter.
	c. Determine oxygen and carbon dioxide concentrations of the stack gas.	Method 3A or 3B in appendix A to part 60 of this chapter, or ASTM D6522-00 (IBR, see '63.14(b)), or ASME PTC 19, Part 10(1981)(IBR, see '63.14(i)).
	d. Measure the moisture content of the stack gas.	Method 4 in appendix A to part 60 of this chapter.
	e. Measure the carbon monoxide emission concentration.	Method 10, 10A, or 10 B in appendix A to part 60 of this chapter.
	f. Convert emissions concentration to lb per MMBtu emission rates.	Method 19 F-factor methodology in appendix A to part 60 of this chapter.

Table 9 to Subpart DDDDD of Part 63 -Reporting Requirements
As stated in §63.7550, you must comply with the following requirements for reports:

You must submit a(n)	The report must contain...	You must submit the report...
1. compliance report	a. information required in '63.7550(c)(1)through(11) AND b. if there are no deviations from any emission limitation (emission limit and operating limit) that applies to you and there are no deviations from the requirements for work practice standards in Table 8 to this subpart that apply to you, a statement that there were no deviations from the emission limitations and work practice standards during the reporting period. If there were no periods during which the CMSs, including continuous emissions monitoring system, continuous opacity monitoring system, and operating parameter monitoring systems, were out-of-control as specified in '63.8(c)(7), a statement that there were no periods during the which the CMSs were out-of-control during the reporting period AND c. if you have a deviation from any emission limitation (emission limit and operating limit) or work practice standard during the reporting period, the report must contain the information in '63.7550(d). If there were periods during which the CMSs, including continuous emissions monitoring system, continuous opacity monitoring system, and operating parameter monitoring systems, were out-of-control, as specified in '63.8(c)(7), the report must contain the information in '63.7550(e) AND d. if you had a startup, shutdown, or malfunction during the reporting period and you took actions consistent with your startup, shutdown, and malfunction plan, the compliance report must include the information in '63.10(d)(5)(i)	semiannually according to the requirements in '63.7550(b).
2. an immediate startup, shutdown, and malfunction report if you had a startup, shutdown, or malfunction during the reporting period that is not consistent with your startup, shutdown, and malfunction plan, and the source exceeds any	a. actions taken for the event AND	i. by fax or telephone within 2 working days after starting actions inconsistent with the plan; and

You must submit a(n)	The report must contain...	You must submit the report...
applicable emission limitation in the relevant emission standard.	b. The information in '63.10(d)(5)(ii)	ii. by letter within 7 working days after the end of the event unless you have made alternative arrangements with the permitting authority.

E.1.3 One Time Deadlines Relating to NESHAP: Industrial, Commercial, and Institutional Boilers and Process Heaters

Pursuant to 40 CFR Part 63.7510(e), the Permittee shall demonstrate initial compliance with either the proposed emission limits and work practice standards or the promulgated emission limits and work practice standards in 40 CFR Part 63, Subpart DDDDD no later than 180 days after November 12, 2004 or within 180 days after the startup of the source, whichever is later, according to 63.7(a)(2)(ix).

Pursuant to 40 CFR Part 63.7510(f), if the Permittee chose to comply with the proposed emission limits and work practice standards when demonstrating initial compliance, the Permittee must conduct a second compliance demonstration for the promulgated emission limits and work practice standards within 3 years after November 12, 2004 or within 3 years after startup of the affected source, whichever is later.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Nucor Steel
Source Address: 4537 South Nucor Road, Crawfordsville, Indiana 47933
Mailing Address: 4537 South Nucor Road, Crawfordsville, Indiana 47933
Part 70 Permit No.: T107-7172-00038
Facility: AN-19, LP #4a, LP #7a, TD #3, MD #1, MD #2, LDS #1a, LP #1a, LP #2a, LP #3a, and LP #5a
Parameter: Propane combusted
Limit: 1,089 thousand gallons per twelve consecutive month period.

QUARTER : YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

Mail to: Permit Administration & Development Section
Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

Nucor Steel
4357 South Nucor Road
Crawfordsville, Indiana 47933

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.

2. I hold the position of _____ for Nucor Steel.
(Title)

3. By virtue of my position with Nucor Steel, I have personal knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of Nucor Steel.

4. I hereby certify that Nucor Steel, 4357 South Nucor Road, Crawfordsville, Indiana 47933, completed construction of the additional equipment on _____in conformity with the requirements and intent of the construction permit application received by the Office of Air Quality on September 5, 2006 and as permitted pursuant to Significant Source Modification No. 107-23609-00038, Plant ID No. 107-00038, issued on _____.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

Signature_____

Date_____

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of Indiana on this _____ day of _____, 20 _____ .

My Commission expires:

Signature_____

_____
Name (typed or printed)

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document
for a Significant Source Modification and Significant Permit Modification
to a Part 70 (Title V) Operating Permit

Source Background and Description

Source Name:	Nucor Steel
Source Location:	4537 South Nucor Road, Crawfordsville, Indiana 47933
County:	Montgomery
SIC Code:	3312
Operation Permit No.:	107-7172-00038
Operation Permit Issuance Date:	December 29, 2006
Significant Source Modification No.:	SSM107-23609-00038
Significant Permit Modification No.:	SPM107-24022-00038
Permit Reviewer:	ERG/ST

On January 12, 2007, the Office of Air Quality (OAQ) had a notice published in the Journal Review, Crawfordsville, Indiana, stating that Nucor Steel had applied for a Significant Source Modification and Significant Permit Modification to their Part 70 (Title V) Operating Permit to operate a stationary steel mini-mill with control. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On February 6, 2007, Nucor Steel (Nucor) submitted comments on the proposed Significant Source Modification and Significant Permit Modification to their Part 70 (Title V) Operating Permit. U.S. EPA submitted comments on January 23, 2007, and these comments are documented beginning on page 28. The summary of the comments is as follows. Language added is shown in bold. Language deleted is shown in strikethrough. The Table Of Contents has been modified, if applicable, to reflect these changes.

NUCOR COMMENTS:
Comment 1: Nucor has the following general comments:

> Nucor's Part 70 Operating Permit, number T107-7172-00038, was issued on December 29, 2006. On January 26, 2007, Nucor submitted a Petition for Administrative Review, Request for Hearing and Petition for Stay of Effectiveness of Certain Permit Conditions of the Part 70 Operating Permit.
>
> This Significant Source Modification (SSM), number 107-23609-00038, addresses several changes at Nucor's operation. The SSM modified Sections D.3 and D.32 of Nucor's Part 70 Operating Permit. These modifications are being incorporated into the Part 70 Operating Permit as Significant Permit Modification (SPM) number 107-24022-00038. In addition, the SSM/SPM modified the corresponding portions of Section A.3 "Emission Units and Pollution Control Equipment Summary." Nucor's comments are limited to the SSM/SPM, numbers 107-23609-00038 and 107-24022-00038.

Nucor notes that when preparing SSM 107-23609-00038 and SPM 107-24022-00038, IDEM, OAQ copied Sections A.3, "Emission Units and Pollution Control Equipment Summary," and A.4, "Specifically Regulated Insignificant Activities," from the final version of Nucor's Part 70 Operating Permit, T107-7172-00038. As discussed, Nucor has appealed several conditions of the Part 70 Operating Permit, including several of the Emissions Summaries as they appear in Sections A.3 and A.4. Because the Emissions Summaries appear in this SSM and SPM, Nucor is providing comments for their revision. However, Nucor notes that revisions of the Emissions Summaries in Section A.3 and A.4 would require a corresponding revision to the Facility Descriptions found in the Section D of the Part 70 Operating Permit.

IDEM Response to Comment 1: IDEM notes that the source has summarized recent permit revisions and made note of certain outstanding appeals to those permits. The appealed conditions will be resolved by IDEM, OAQ through a separate appeal resolution process. No changes have been made.

Comment 2: In Sections A.3. and D.8, Nucor requests this description be revised to accurately reflect the operations performed by Nucor's contractor Whitesville Mill. The description as written states that the emission unit consists of "storage piles (unprocessed and processed slag)." Because the storage piles may contain more than slag, the description should read "storage piles (unprocessed and processed materials)."

IDEM Response to Comment 2: The permit has been changed as follows:

A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

. . .

D.8 – SLAG PROCESSING

(p) Slag processing, identified as EU-10, constructed in 1989, is performed by Whitesville Mill Service Company, an on-site contractor. Slag and other steel mill related materials are transported by slag pots or other mobile equipment, processed, and stockpiled with a maximum throughput of 305 tons/hr. This emission unit consists of storage piles (unprocessed and processed ~~slag~~ **materials**), grizzly feeding, slag processing (screening, conveying, and crushing), slag pot dumping, product loading for transport, and unpaved roads. The fugitive emissions from slag processing are controlled by water sprays and exhaust to the atmosphere.

. . .

SECTION D.8 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

SLAG PROCESSING

(p) Slag processing, identified as EU-10, constructed in 1989, is performed by Whitesville Mill Service Company, an on-site contractor. Slag and other steel mill related materials are transported by slag pots or other mobile equipment, processed, and stockpiled with a maximum throughput of 305 tons/hr. This emission unit consists of storage piles (unprocessed and processed ~~slag~~ **materials**), grizzly feeding, slag processing (screening, conveying, and crushing), slag pot dumping, product loading for transport, and unpaved roads. The fugitive emissions from slag processing are controlled by water sprays and exhaust to the atmosphere.

. . .

Comment 3: In Sections A.3 and D.9, Nucor requests that reference to BOC gases boiler #306 be removed because the boiler was never constructed. Although Nucor was permitted to construct this unit pursuant to permit PSD/SSM 107-16823-00038, it has not done so. Thus, it should be removed and all the conditions governing boiler #306's operation (in Section D.9) should be removed.

IDEM Response to Comment 3: The requirements for boiler ID No. 306 have been removed from the permit. Condition D.9.8 is a duplicate of Condition D.9.1 (which is applicable to boiler No. 2) and has been removed. Condition D.9.12 contains reporting requirements for boiler ID No. 306 only and has been removed. Boiler ID No. 2 has an initial notification requirement under 40 CFR 63, Subpart A. The permit has been changed as follows:

A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:
. . .

D.9 – BOC GASES PLANT

(r) The BOC Gases Plant is operated by BOC Gases, an on-site contractor. It provides gases (oxygen, nitrogen, hydrogen, argon, and liquid air) consisting of:

~~(1) One (1) natural gas fired boiler, identified as ID No.306, yet to be constructed, with a heat input capacity of 15.0 MMBtu per hour, with emissions controlled by low NOx burners, and exhausting to stack S-38. This boiler uses propane as a backup fuel.~~

~~Under 40 CFR Part 63, Subpart DDDDD, this unit is considered a new boiler in the large gaseous fuel subcategory.~~

~~Under 40 CFR Part 60, Subpart Dc, this unit is considered a steam generating unit.~~

~~(2)~~ **(1)** One (1) natural gas-fired boiler identified as ID No. 1, constructed in 1989, with a heat input capacity of 9 MMBtu per hour, with emissions uncontrolled, and exhausting to stack S-36. This boiler uses propane as a backup fuel.

Under 40 CFR Part 63, Subpart DDDDD, this unit is considered an existing boiler in the small gaseous fuel subcategory.

~~(3)~~ **(2)** One (1) natural gas-fired boiler, identified as ID No. 2, constructed in 1994, with a heat input capacity of 15.0 MMBtu per hour, with emissions uncontrolled, and exhausting to stack S-37. This boiler uses propane as a backup fuel.

Under 40 CFR Part 63, Subpart DDDDD, this unit is considered an existing boiler in the large gaseous fuel subcategory.

Under 40 CFR Part 60, Subpart Dc, this unit is considered a steam generating unit.

~~(4)~~ **(3)** One (1) natural gas-fired boiler, identified as the hydrogen plant boiler, constructed in 1996, with a heat input capacity of 9.98 MMBtu per hour, with emissions uncontrolled, and exhausting to stack S-30. This boiler uses propane as a backup fuel.

Under 40 CFR Part 63, Subpart DDDDD, this unit is considered an existing boiler in the small gaseous fuel subcategory.

SECTION D.9 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

BOC GASES PLANT

(r) The BOC Gases Plant is operated by BOC Gases, an on-site contractor. It provides gases (oxygen, nitrogen, hydrogen, argon, and liquid air) consisting of:

~~(1) One (1) natural gas fired boiler, identified as ID No.306, yet to be constructed, with a heat input capacity of 15.0 MMBtu per hour, with emissions controlled by low NOx burners, and exhausting to stack S-38. This boiler uses propane as a backup fuel.~~

~~Under 40 CFR Part 63, Subpart DDDDD, this unit is considered a new boiler in the large gaseous fuel subcategory.~~

~~Under 40 CFR Part 60, Subpart Dc, this unit is considered a steam generating unit.~~

~~(2)~~ **(1)** One (1) natural gas-fired boiler identified as ID No. 1, constructed in 1989, with a heat input capacity of 9 MMBtu per hour, with emissions uncontrolled, and exhausting to stack S-36. This boiler uses propane as a backup fuel.

Under 40 CFR Part 63, Subpart DDDDD, this unit is considered an existing boiler in the small gaseous fuel subcategory.

~~(3)~~ **(2)** One (1) natural gas-fired boiler, identified as ID No. 2, constructed in 1994, with a heat input capacity of 15.0 MMBtu per hour, with emissions uncontrolled, and exhausting to stack S-37. This boiler uses propane as a backup fuel.

Under 40 CFR Part 63, Subpart DDDDD, this unit is considered an existing boiler in the large gaseous fuel subcategory.

Under 40 CFR Part 60, Subpart Dc, this unit is considered a steam generating unit.

~~(4)~~ **(3)** One (1) natural gas-fired boiler, identified as the hydrogen plant boiler, constructed in 1996, with a heat input capacity of 9.98 MMBtu per hour, with Emissions uncontrolled, and exhausting to stack S-30. This boiler uses propane as a backup fuel.

Under 40 CFR Part 63, Subpart DDDDD, this unit is considered an existing boiler in the small gaseous fuel subcategory.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.9.1 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the one (1) natural gas-fired boiler (ID No. 2) rated at 15.0 MMBtu per hour ~~and the one (1) natural gas-fired boiler (ID No.306) rated at 15.0 MMBtu per hour~~, except when otherwise specified in 40 CFR Part 63, Subpart DDDDD. The Permittee must comply with these requirements on and after the effective date of 40 CFR Part 63, Subpart DDDDD.

~~D.9.3 National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial,~~

~~and Institutional Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD]~~

~~(a) The one (1) natural gas-fired boiler (ID No.306) rated at 15.0 MMBtu per hour is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, (40 CFR Part 63, Subpart DDDDD), and considered a new affected source because it will be constructed after January 13, 2003.~~

~~(b) The definitions of 40 CFR Part 63, Subpart DDDDD at 40 CFR 63.7575 are applicable to Boiler ID No. 306.~~

~~(c) Pursuant to 40 CFR 63.7500 and Table 1 to Subpart DDDDD, upon start up, the Permittee shall maintain the carbon monoxide (CO) emissions from Boiler ID No. 306 at or below an exhaust concentration of 400 parts per million (ppm) by volume on a dry basis corrected to 3% oxygen (3-run average for units less than 100 MMBtu per hour).~~

~~D.9.4 Startup, Shutdown and Malfunction Plan (SSMP) [40 CFR Part 63, Subpart DDDDD]~~

~~(a) Pursuant 40 CFR Part 63.7505(e), the Permittee shall develop and implement a written startup, shutdown and malfunction plan for Boiler ID No. 306 according to the provisions of 40 CFR Part 63.6(e)(3).~~

~~(b) Pursuant to 40 CFR Part 63.7540(c), during periods of startup, shutdown or malfunctions, the Permittee shall operate in accordance with the written SSMP.~~

~~(c) Pursuant to 40 CFR Part 63.7540(d), deviations that occur during a period of startup, shutdown, or malfunction are not violations if the Permittee demonstrates that operations were in accordance with the written SSMP.~~

~~D.9.5~~ **D.9.3** Preventive Maintenance Plan (PMP) [326 IAC 2-7-5(13)]

~~(a)~~ A Preventive Maintenance Plan (PMP), in accordance with Section B – Preventive Maintenance Plan (PMP), of this permit, is required for the facilities listed in this section.

~~(b) To the extent the Permittee is required by 40 CFR Part 63, Subpart DDDDD to have a Startup, Shutdown or Malfunction plan (SSMP) for Boiler ID No. 306, such SSM Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for Boiler ID No. 306.~~

~~D.9.6~~ **D.9.4** BOC Gases Boiler PSD BACT [326 IAC 2-2]

~~(a) Pursuant to 326 IAC 2-2 and PSD SSM 107-16823-00038, issued November 21, 2003, the Permittee shall comply with the following BACT requirements:~~

~~(1) The Boiler ID No. 306 shall use pipeline natural gas as primary fuel and propane as back up fuel.~~

~~(2) Boiler ID No. 306 boiler shall be equipped and operated with low NO_x burners.~~

~~(3) The NO_x emissions from Boiler ID No. 306 shall not exceed 0.035 lb/MMBtu.~~

~~(4) The CO emissions from Boiler ID No. 306 shall not exceed 0.061 lb/MMBtu.~~

~~(5) The VOC emissions from Boiler ID No. 306 shall not exceed 0.0026 lb/MMBtu.~~

~~(6) The SO_2 emissions from Boiler ID No. 306 shall not exceed 0.0006 lb/MMBtu.~~

~~(7) The filterable and condensible PM_{10} emissions from Boiler ID No. 306 shall not exceed 0.0076 lb/MMBtu.~~

~~(8) The filterable PM emissions from Boiler ID No. 306 shall not exceed 0.0019 lb/MMBtu.~~

~~(9) Good combustion shall be practiced.~~

~~(b)~~ **(a)** Pursuant to 326 IAC 2-2 and PSD 107-5235-00038, issued June 20, 1996, the Permittee shall comply with the following BACT requirements:

(1) The 9.98 MMBtu per hour hydrogen plant boiler shall burn natural gas with propane as backup fuel.

(2) The NOx emissions from the 9.98 MMBtu per hour hydrogen plant boiler shall not exceed 100 pounds per million cubic feet of natural gas combusted.

~~(c)~~ **(b)** Pursuant to 326 IAC 2-2 and PSD 107-3702-00038, issued March 28, 1995:

(1) The 9.0 MMBtu per hour boiler (ID No. 1) and the 15.0 MMBtu per hour boiler (ID No. 2) shall burn natural gas with propane as backup fuel.

(2) The NOx emissions from the 15.0 MMBtu per hour boiler (ID No. 2) shall not exceed 140 pounds per million cubic feet of natural gas combusted.

(3) The NOx emissions from the 9.0 MMBtu per hour boiler (ID No. 1) shall not exceed 100 pounds per million cubic feet of natural gas combusted.

~~D.9.7~~ **D.9.5** Particulate Matter Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-3, the particulate matter (PM) from:

~~(a) The 15.0 MMBtu per hour heat input boiler (ID No.306) shall be limited to 0.346 pounds per MMBtu heat input.~~

~~(b)~~ **(a)** The 9.98 MMBtu per hour heat input hydrogen plant boiler shall be limited to 0.363 pounds per MMBtu heat input.

~~(c)~~ **(b)** The 9.0 MMBtu per hour heat input boiler (ID No. 1) shall be limited to 0.41 pounds per MMBtu heat input

~~(d)~~ **(c)** The 15.0 MMBtu per hour heat input boiler (ID No. 2) shall be limited to 0.379 pounds per MMBtu heat input

These limitations are based on the following equation:

$Pt = 1.09 / Q^{0.26}$ where Pt = Pounds of PM emitted per million Btu (lb/MMBtu) heat input, and
Q = Total source maximum operating capacity rating in million Btu per hour (MMBtu per hour) heat input.

~~D.9.8 General Provisions Relating to NSPS [326 IAC 12-1][40 CFR Part 60, Subpart A]~~

~~The provisions of 40 CFR Part 60, Subpart A (General Provisions), which are incorporated by reference in 326 IAC 12-1, apply to boilers ID No.306 and ID No. 2, except when otherwise specified in 40 CFR Part 60, Subpart Dc.~~

~~Compliance Determination Requirements [326 IAC 2-1.1-11]~~

~~D.9.9 Annual Carbon Monoxide (CO) Performance Tests 40 CFR Part 63, Subpart DDDDD~~

~~Pursuant to 40 CFR Part 63.7515(a), and PSD SSM 107-16823-00038, issued November 21, 2003, the Permittee shall conduct a CO performance test on an annual basis for Boiler ID No. 306. CO annual performance tests must be completed between 10 and 12 months after the previous performance test using methods approved by the Commissioner. Testing shall be conducted in accordance with Section C - Performance Testing.~~

~~D.9.10 Natural Gas Fuel [326 IAC 2-2]~~

~~Pursuant to PSD SSM 107-16823-00038, issued November 21, 2003, and as revised by this Part 70 permit, boiler ID No. 306 shall use only natural gas that is a naturally occurring fluid mixture of hydrocarbons (e.g., methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions. Natural gas contains 20.0 grains or less of total sulfur per 100 standard cubic feet. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1100 Btu per standard cubic foot. Natural gas does not include the following gaseous fuels: landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coal-derived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable sulfur content or heating value.~~

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

~~D.9.11~~ **D.9.6** Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19][40 CFR Part ~~60~~ **63**, Subpart DDDDD][40 CFR Part 60 Subpart Dc]

(a) Pursuant to 40 CFR 60.48c(g), the Permittee shall keep records of the fuel used each day by ~~Boiler ID No. 306 and~~ Boiler ID No. 2, including the types of fuel and amount used.

(b) Pursuant to 40 CFR 63.7555(a)(1), the Permittee shall keep records of a copy of each notification and report to comply with 40 CFR Part 63, Subpart DDDDD, including all documentation supporting any Initial Notification ~~or Notification of Compliance Status or semiannual compliance report~~.

~~(c) Pursuant to 40 CFR Part 63.7555(a)(2), the Permittee shall keep records related to startup, shutdown and malfunction for Boiler ID No. 306.~~

~~(d)~~ **(c)** All records shall be maintained in accordance with Section C - General Record Keeping Requirements of this permit.

~~D.9.12 Reporting Requirements [326 IAC 2-1.1-11] [40 CFR Part 63, Subpart DDDDD]~~

~~(a) Pursuant to 40 CFR Part 63. 7550 and Table 10 to Subpart DDDDD, the Permittee shall submit a semiannual compliance report, using the Semiannual Report Form at the end of this permit or its equivalent.~~

~~(1) The first semiannual compliance report must cover the period beginning on the compliance date specified in 40 CFR 63.7495 and ending June 30 or December 31, whichever date is the first date that occurs at least 180 days after the compliance date that is specified for this source in 40 CFR 63.7595.~~

~~This first compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified in 40 CFR 63.7495.~~

~~(2) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Each subsequent compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.~~

~~(3) The compliance report must contain the following information:~~

~~(A) Company name and address. [40 CFR 63.7550(c)(1)]~~

~~(B) Responsible Official Certification. [40 CFR 63.7550(c)(2)]~~

~~(C) Date of report and beginning and ending dates of the reporting period. [40 CFR 63.7550(c)(3)]~~

~~(D) The total fuel used by Boiler ID No. 306, for each calendar month within the semiannual reporting period, including, but not limited to a description of the fuel and the total fuel usage amount. [40 CFR 63.7550(c)(4)]~~

~~(E) A signed statement indicating that no new type of fuel was burned. [40 CFR 63.7550(c)(6)]~~

~~(F) Actions taken consistent with the SSMP during start up, shutdown, or malfunction. [40 CFR 63.7550(c)(9)]~~

SECTION E.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(b) One (1) natural gas fueled low-NO_x boiler, identified as Boiler ID No. 501, constructed in 2004, a heat input capacity of 71.04 MMBtu/hour, utilizing low-NOx burners, and exhausting to Stack 501. This boiler provides steam to the vacuum degasser. Propane will be used as back up fuel.

Under 40 CFR Part 63, Subpart DDDDD, this unit is considered a new boiler in the large gaseous fuel subcategory.

Under 40 CFR Part 60, Subpart Dc, this unit is considered a steam generating unit.

~~(r) The BOC Gases Plant is operated by BOC Gases, an on-site contractor. It provides gases (oxygen, nitrogen, hydrogen, argon, and liquid air) consisting of:~~

~~(1) One (1) natural gas fired boiler, identified as ID No.306, yet to be constructed, with a heat input capacity of 15 MMBtu per hour, with emissions controlled by low NOx burners, and exhausting to stack S-38. This boiler uses propane as a backup fuel.~~

~~Under 40 CFR Part 63, Subpart DDDDD, this unit is considered a new boiler in the large gaseous fuel subcategory.~~

~~Under 40 CFR Part 60, Subpart Dc, this unit is considered a steam generating unit.~~

(aa) One (1) natural gas fueled Cold Mill Boiler (CMB #2), identified as EU-19, with a heat input capacity of 34 MMBtu per hour, with emissions exhausting to stack S-23. Propane is used as a back-up fuel. The Cold Mill Boiler (CMB #2) is not yet installed.

Under 40 CFR Part 63, Subpart DDDDD, this unit is considered a new boiler in the large gaseous fuel subcategory.

Under 40 CFR Part 60, Subpart Dc, this unit is considered a steam generating unit.

(The information describing the process contained in this facility description box is descriptive

information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

E.1.1 General Provisions Relating to NESHAP [326 IAC 20-1] [40 CFR Part 63, Subpart A]

Pursuant to 40 CFR Part 63, Subpart DDDDD, the Permittee shall comply with the applicable provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, for boiler ID No. 501 rated at 71.04 MMBtu/hr~~, boiler ID No. 306 rated at 15.0 MMBtu/hr,~~ and boiler ID No. CMB #2 rated at 34.00 MMBtu/hr, as specified in Appendix A of 40 CFR Part 63, Subpart DDDDD in accordance with schedule in 40 CFR Part 63, Subpart DDDDD.

E.1.2 National Emissions Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters: Requirements [40 CFR Part 63, Subpart DDDDD]

Pursuant to 40 CFR Part 63, Subpart DDDDD, boiler ID No. 501 rated at 71.04 MMBtu/hr~~, boiler ID No. 306 rated at 15.0 MMBtu/hr,~~ and boiler ID No. CMB #2 rated at 34.0 MMBtu/hr shall comply with the following provisions:

Comment 4: In Sections A.3 and D.12, Nucor requests that the description in the cooling tower table should specify the "Average Capacity" rather than the "Design Capacity" of the cooling towers. Currently, one column uses the caption "Average Capacity" while another uses the caption "Design Capacity." It is more accurate to express the capacity of cooling towers as "average capacity" rather than "design capacity." Thus, Nucor requests that the third column be corrected to state "Average Capacity." Also, in this Table the number of cells of the meltshop caster contact cooling tower should be "2". IDEM, OAQ intended to correct this table when it released the final version of the Part 70 Operating Permit. However, while IDEM, OAQ intended to revise the number of cells from 4 to 2 (as evidenced by the strike-though on the 4 and the 2 in bold), the revision did not make it into the final version of the Part 70 Operating Permit and thus into this modification. Nucor requests that this revision be made at this time. The table in Sections A.3 and D.12 also includes the "Castrip Compressor Non Contact" and the "Main Compressor Non Contact" cooling towers. However, these cooling towers have not been constructed at the facility. For this reason, each of these cooling towers should be removed from the table.

IDEM Response to Comment 4: These comments address equipment that are not the subject of this modification. These comments are being addressed in Nucor's appeal, currently under review. The appealed conditions will be resolved by IDEM, OAQ through a separate appeal resolution process.

Comment 5: In Sections A.3 and D.16, Nucor requests that the description be revised to clarify that pickle line number 2 is an "existing" continuous pickle line. The description in D.16(x)(2) states that Pickle Line 2 is "considered a continuous pickle line." However, because this unit was constructed on or before September 18, 1997 (pursuant to PSD/SSM 107-3702-00038, issued March 28, 1995), the unit is an "existing" pickle line. There are different regulatory requirements for "existing" and "new" or "reconstructed" pickle lines. Thus, "existing" should be included in the description before "continuous" to ensure that the correct regulations are imposed upon Nucor's pickle lines.

IDEM Response to Comment 5: This comment addresses equipment that are not the subject of this modification. IDEM suggests that Nucor apply for a permit modification to address this issue. The appealed conditions will be resolved by IDEM, OAQ through a separate appeal resolution process.

Comment 6: In Sections A.3 and D.24, Nucor requests that the descriptions be revised because the description fails to specify that each of the burners may use propane as a backup fuel. These burners were permitted by PSD/SSM 107-14297-00038. The Technical Support Document for

that permit specifies that the burners may use propane as a backup fuel. As a result, the sentence "The burners use natural gas as primary fuel and propane as backup fuel" should be added to the description in D.24(ff) and (gg)(1). In addition, the description in D.24(ff) is inaccurately organized and contains a sentence fragment ("Exhausts to roof ventilation"). As a result, it does not provide an accurate description and creates confusion. Nucor proposes that the description be revised to read:

> Thirty six (36) Main Burners, identified as PHB #1 - PHB #36, constructed in 1992, and modified in 2002, input capacity of 1.622 MMBtu per hour each, and three (3) Auxiliary Burners, each with a heat input capacity of 0.1 MMBtu per hour in the preheat furnace section of the galvanizing line using natural gas rated at maximum total capacity of 58.7 MMBtu per hour. The burners use natural gas as primary fuel and propane as backup fuel. The main burners exhaust to stack S-27. The NOx emissions from PHB #1 - PHB #36 are controlled by a Selective Catalytic Reduction/Selective Non-Catalytic Reduction (SCRISNCR) Systems. A continuous emissions monitor (CEM) is used to monitor NOx emissions from S-27. The galvanizing line has an electric static oiler. The three (3) Auxiliary Burners exhaust to the atmosphere.

IDEM Response to Comment 6: These comments address equipment that are not the subject of this modification. These comments are being addressed in Nucor's appeal, currently under review. The appealed conditions will be resolved by IDEM, OAQ through a separate appeal resolution process.

Comment 7: In Sections A.3 and D.27, Nucor requests that the description be revised because the description does not accurately reflect the emission units at the source. Pursuant to Nucor's permit number 107-3702-00038, Nucor is allowed to use propane as a backup fuel in the tunnel furnace system. Thus, in each description in subsection (jj) should include the sentence "Propane may be used as a backup fuel."

IDEM Response to Comment 7: These comments address equipment that are not the subject of this modification. These comments are being addressed in Nucor's appeal, currently under review. The appealed conditions will be resolved by IDEM, OAQ through a separate appeal resolution process.

Comment 8: In Sections A.3 and D.30, Nucor requests that the description be revised because the description does not accurately reflect the operations at the source. The description currently includes two material transfer stations. Material transfer station number 2, in subsection (mm), is inside and not outside as stated in the permit. Thus, the description in (mm) should be changed to "inside." Also, Nucor has three material transfer stations. The third material transfer station was added by letter notice as an insignificant activity. Nucor requested in its comments to the public notice version of the Part 70 Operating Permit, number T107-7172-00038, that the description in D.30 be revised to include the third material transfer station. From the language of the Technical Support Document Addendum (TSDA) to the Part 70 Operating Permit, it is evident that IDEM, OAQ believed it had made this change. The TSDA states that "IDEM made all the recommended changes" Nucor suggested for Section A.3 except those involving sections D.11 and D.32. For this reason, it appears that IDEM inadvertently failed to include the third material transfer station when it issued the final version of the Part 70 Permit. This is an existing unit authorized to operate under Indiana law, disclosed during the permitting process, and should be included in the Part 70 Permit and this modification. Thus, Nucor proposes that the third material transfer station be inserted using the following language:

> An existing material transfer station, located outside, exhausting to the atmosphere, which will service both the EAFs and the LMFs, used to transfer various types and grades of lime, carbon, foamy slag, and other alloys from rail cars. Rail cars are unloaded to trucks, which transfer materials to silos, or the meltshop alloy handling system. Identified as MT #3, and consisting of:

Rail car bottom unloading through a rubber boot to a conveyor with emissions uncontrolled.

One (1) totally enclosed conveyor, identified as MTC #2 with emissions controlled by a bin vent dust collector and exhausting to the atmosphere.

One (1) loading spout connected to the load truck with emissions uncontrolled.

IDEM Response to Comment 8: These comments address equipment that are not the subject of this modification. These comments are being addressed in Nucor's appeal, currently under review. The appealed conditions will be resolved by IDEM, OAQ through a separate appeal resolution process.

Comment 9: In Sections A.3 and D.31, Nucor requests that the description be revised to include "Argon-Oxygen Decarburization (AOD) Dryout and Preheat Burner." These units were constructed pursuant to CP 107-3599-00038, issued September 22, 1994, revised via AA107-4631-00038, issued September 28, 1995. The Part 70 Operating Permit governs emissions from these sources in Condition D.31.1(b). However, they do not appear in the facility description. In addition, Nucor requests that the description in Sections A.3 and D.31(rr)(4)(B) be revised to remove reference to the cyclone. The underlying permit, PSD/SSM 107-16823-00038, does not require Nucor to have a cyclone at the dust treatment facility. Thus, IDEM, OAQ is beyond its authority in requiring one pursuant to the Part 70 Permit. For this reason, reference to the cyclone should be removed in D.31(rr)(4)(B).

IDEM Response to Comment 9: These comments address equipment that are not the subject of this modification. These comments are being addressed in Nucor's appeal, currently under review. The appealed conditions will be resolved by IDEM, OAQ through a separate appeal resolution process.

Comment 10: In Sections A.3 and D.32(ss)(1)(C) This description provides an inaccurate construction date for ladle preheater, LP#5. This ladle preheater was constructed in 1994 rather than 1989 as reported in the permit. For this reason, "constructed in 1989" should be removed and the sentence "LP#1-LP#4 were constructed in 1989, while LP#5 was constructed in 1994" should be added to the end of subsection (1).

IDEM Response to Comment 10: These comments address equipment that are not the subject of this modification. These comments are being addressed in Nucor's appeal, currently under review. The appealed conditions will be resolved by IDEM, OAQ through a separate appeal resolution process.

Comment 11: In Sections A.3 and D.32(ss)(1)(D) This description should be revised to clarify that the 2004 approval for construction of the natural gas-fired ladle preheater was reissued in 2006. Thus, 2004 should be replaced with 2006.

IDEM Response to Comment 11: Ladle Preheater LP #6 was permitted to be constructed under PSD SSM 107-18314-00038, issued on May 27, 2004 and conditions regarding its operation were modified in PSD SSM 107-21359-00038, issued April 27, 2006. The permit has been changed as shown, and please note that the revisions shown include changes discussed on page 17 of this addendum, in the additional changes section.

A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

. . .

D.32 – MELTSHOP – LADLE METALLURGY FURNACES, PREHEATERS, AND DRYERS

(ss) Two (2) Meltshop Ladle Metallurgy Furnaces (LMFs)/Stirring Station, identified as EU-13, constructed in 1988, with a maximum capacity of 502 tons/hour each and controlled by a baghouse, identified as Meltshop LMF Baghouse, exhausting to stack S-13. The Meltshop LMF Baghouse has a design flow rate of 200,000 acf/min. The LMF baghouse was constructed in 1992.

(1**b**) Ladle Preheaters, identified as LP #1**a** through LP #7**a**, consisting of:

. . .

(D) One (1) natural gas-fired ladle preheater, identified as LP #6, approved for construction in ~~2004~~ **2006**, with a heat input capacity of 12 MMBtu/hour, utilizing low-NOx burners, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.

. . .

SECTION D.32 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

MELTSHOP – LADLE METALLURGY FURNACES, PREHEATERS, AND DRYERS

(ss) Two (2) Meltshop Ladle Metallurgy Furnaces (LMFs)/Stirring Station, identified as EU-13, constructed in 1988, with a maximum capacity of 502 tons/hour each and controlled by a baghouse, identified as Meltshop LMF Baghouse, exhausting to stack S-13. The Meltshop LMF Baghouse has a design flow rate of 200,000 acf/min. The LMF baghouse was constructed in 1992.

(1**b**) Ladle Preheaters, identified as LP #1**a** through LP #7**a**, consisting of:

. . .

(D) One (1) natural gas-fired ladle preheater, identified as LP #6, approved for construction in ~~2004~~ **2006**, with a heat input capacity of 12 MMBtu/hour, utilizing low-NOx burners, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.

. . .

Comment 12: In Sections A.4 and D.13, Nucor requests the description be revised because it is so vague that does not accurately reflect the operations at the source. There are numerous activities at Nucor that could arguably fall under "scrap handling" and "scrap processing." The intent of the description in D.13 and the associated conditions (i.e., D.13.1-D.13.4) is to govern emissions that result from the cutting of scrap. In addition, it is inaccurate to state that all the activities will exhaust to the Melt Shop EAF baghouses. The underlying permit allows scrap cutting in any building. As a result, "handling, processing, and" should be removed from this description and "which in turn exhausts to MeItshop EAF baghouses 1 and 2" should be removed from the description.

IDEM Response to Comment 12: These comments address equipment that are not the subject of this modification. These comments are being addressed in Nucor's appeal, currently under review. The appealed conditions will be resolved by IDEM, OAQ through a separate appeal resolution process.

Comment 13: In Sections A.4 and D.22, Nucor requests that the description be revised to include all relevant activities. Nucor operates a Cold Mill Quality Control Furnace that is an insignificant activity that should be included in the description to the "Insignificant Activities - Cold Mill - Quality Control/Rewind Inspection Line." The furnace qualifies as an insignificant activity because of its low fuel combustion (i.e., less than 10 MMBtu/hr). See 326 IAC 2-7-1(21). This unit should be included in this description.

IDEM Response to Comment 13: These comments address equipment that are not the subject of this modification. These comments are being addressed in Nucor's appeal, currently under review. The appealed conditions will be resolved by IDEM, OAQ through a separate appeal resolution process.

Comment 14: In Sections A.4 and D.26(1), please revise the description to accurately reflect the operations at the facility. Because the use of side trimmers constitutes an insignificant activity (they generate no emissions), Nucor should not be limited to an exact number on-site. See 326 IAC 2-7-1(21). In its comments to the public notice version of the Part 70 Operating Permit, Nucor informed IDEM, OAQ that because the use of side trimmers constitutes an insignificant activity, Nucor should not be limited to an exact number on-site. IDEM, OAQ agreed and added the final sentence of this Condition. However, it appears that IDEM, OAQ inadvertently failed to eliminate the initial two sentences of this description. Nucor proposes that this description be corrected by eliminating the initial two sentences of the description.

IDEM Response to Comment 14: These comments address equipment that are not the subject of this modification. These comments are being addressed in Nucor's appeal, currently under review. The appealed conditions will be resolved by IDEM, OAQ through a separate appeal resolution process.

Comment 15: In Section D.3.1(a)(2), the table states that there are four ladle preheaters governed by Condition D.3.1. This should be changed to three.

IDEM Response to Comment 15: These comments address equipment that are not the subject of this modification. These comments are being addressed in Nucor's appeal, currently under review. The appealed conditions will be resolved by IDEM, OAQ through a separate appeal resolution process.

Comment 16: In Section D.3.1(c), the nitrogen oxides (NOx) BACT emission limit for the ladle preheaters in this condition is incorrect. This condition in SSM 107-23609-00038 and SPM 107-24022-00038 incorporated the emission limits as they appeared in the final version of PSD/SSM 107-21359-00038. These emissions limits as they appear in PSD/SSM 107-21359-00038 are currently under appeal with the Indiana Office of Environmental Adjudication. These ladle preheaters were originally permitted as part of PSD/SSM 107-18314-00038. During the permitting process for PSD/SSM 107-18314-00038, there was a question as to whether BACT for these units resulted in a NOx emission limit of 0.10 lbs/MMBtu or 0.05 lbs/MMBtu. At that time, IDEM, OAQ cited one facility, the SDI Hendricks plant, that had a NOx emission limit of 0.05 lbs/MMBtu. During the comment period to PSD/SSM 107-18314-00038, Nucor explained that it contacted Air Liquide, the vendor for SDI Hendrix. Air Liquide would not a guarantee a NOx emission rate of 0.05 lbs/MMBtu for the ladle preheaters. Instead, Air Liquide stated the emission rate would be 0.35 to 0.45 lbs/MMBtu. Likewise, Nucor's vendor, Process Technology International (PTI), would not guarantee a NOx emission rate of 0.05 lbs/MMBtu for its ladle preheaters. Instead, Nucor's vendor would guarantee a NOx emission rate of 0.10 lbs/MMBtu. As a result of this evidence, IDEM, OAQ imposed a BACT NOx emission limit of 0.10 lbs/MMBtu for the ladle preheaters. When IDEM, OAQ originally drafted PSD/SSM 107-21359-00038, it imposed a NOx emission limit of 0.10 lbs/MMBtu for the ladle preheaters. At the same time, the BACT analysis cited four sources. Two of these sources had an emission limit of 0.10 lbs/MMBtu. A third source cited in the BACT analysis was purportedly a 2003 Nucor permit with an emission limit of 0.05 lbs/MMBtu. In its comments, Nucor informed IDEM, OAQ that this citation was incorrect and that the correct citation was to a 2004 permit (i.e., permit PSDISSM 107-18314-00038) with an

emission limit of 0.10 lbs/MMbtu. The fourth source IDEM, OAQ cited was the same SDI Hendrix source that IDEM, OAQ had decided was inapplicable when determining BACT in PSD/SSM 107-18314-00038 (as discussed above). Unfortunately, when EPA reviewed the BACT determination it did not know that the 2003 Nucor emission limit was incorrect or that IDEM, OAQ had previously determined that the SDI Hendrix emission limit was inapplicable to BACT at Nucor. Thus, EPA questioned why IDEM, OAQ had not imposed a BACT emission limit of 0.05 lbs/MMBtu rather than 0.10 lbs/MMBtu. In response to this comment, IDEM, OAQ reduced the NOx emission limit from 0.10 to 0.05 lbs/MMBtu for all the ladle preheaters, even though only LP#4 was modified as a result of PSD/SSM 107-21359-00038. In other words, IDEM, OAQ improperly changed the emission limits of units unaffected by the PSD permit. As a result, IDEM, OAQ's initial decision to establish a NOx emission limit of 0.10 lbs/MMBtu in PSD/SSM 107-21359-00038 was correct. The reduction in the emission limit in the final version of PSD/SSM 107-21359-00038 was based upon (1) inaccurate information (i.e., the "2003" permit that is actually a 2004 permit with a limit of 0.10 lbs/MMBtu) and (2) an emission limit that has already been determined inapplicable to Nucor (i.e., the SDI Hendrix limit). For these reasons, IDEM, OAQ should take this opportunity to re-establish the correct NOx BACT emission limit of 0.10 lbs/MMBtu for all the ladle preheaters.

IDEM Response to Comment 16: The conditions for these ladle preheaters were established in PSD/SSM 107-21359-00038, and cannot be changed without a review of the original PSD permit. This limit can only be changed in a PSD BACT permit, and not in this Significant Permit Modification. Any revisions to this limit will be made pending the outcome of the appeal. No changes have been made as a result of this comment.

Comment 17: Please revise Condition D.32.3(a)(1) to reflect the fact that ladle preheater 4 (LP#4) has a heat input capacity of 10 MMBtu per hour.

IDEM Response to Comment 17: The preheater (LP#4) that is listed as 7.5 MMBtu hour is the existing preheater. The new preheater (LP#4a) is already listed as 10 MMBtu/hour.

Comment 18: In Section D.32.3(c)(1) The BACT NOx emission limit for ladle preheater 6 (LP#6) in this condition is incorrect. LP#6 was originally permitted for construction as LP#4 in PSD/SSM 107-21359-00038. However, as explained in Nucor's comments to Condition D.3.1(c) above, IDEM, OAQ imposed a BACT emission limit upon this unit based upon inaccurate information. Nucor hereby incorporates the comments to Condition D.3.1(c) and requests that the BACT emissions limits be revised to 0.10 pounds per MMBtu and 1.20 pounds per hour for LP#6.

IDEM Response to Comment 18: The conditions for this ladle preheaters were established in PSD/SSM 107-21359-00038, and cannot be changed without a review of the original PSD permit. This limit can only be changed in a PSD BACT permit, and not in this Significant Permit Modification. Any revisions to this limit will be made pending the outcome of the appeal. No changes have been made as a result of this comment.

Comment 19: Nucor also has the following comments on the Technical Support Document. In part (h) of the Description of Proposed Modification, "1989" should be replaced with "1994." As discussed above, LP#5 was constructed in 1994. Likewise, in part (i) of the Description of Proposed Modification, "2004" should be replaced with "2006." As discussed above, approval for construction of the natural gas-fired ladle preheater was reissued in 2006.

IDEM Response to Comment 19: These comments address equipment that are not the subject of this modification. These comments are being addressed in Nucor's appeal, currently under review. The appealed conditions will be resolved by IDEM, OAQ through a separate appeal resolution process.

U.S. EPA COMMENTS

U. S. EPA Comment 1: It appears that this facility was issued a PSD permit on April 27, 2006 (107-21359-00038) to increase the capacity of its Strip Caster Line from 135 tpy to 270 tpy. Based on the information provided in the TSD, we believe this modification could potentially be considered part of the April 2006 PSD permit. Please explain why this project (107-23609-00038) was not aggregated with the 2006 PSD permit.

IDEM Response to U.S. EPA Comment 1: The previous project (107-21359-00038) was for an increase in capacity at the new continuous strip caster. The project did not allow for an increase in metal production at the melt shop, just more flexibility for the strip caster. This project (107-23609-00038) involves the replacement and addition of small combustion units at the old cast strip line which is separate from the new continuous cast strip. These are in different areas of the plant and the operations are not dependent or interchangeable. Nucor processes the metal melted at the EAFs through one of the cast lines, and whatever portion sent to the old cast strip line would not be processed at the new continuous strip caster. There is no impact on the amount of metal melted, and the existing melt limit has not been changed as part of 107-23609-00038 or 107-21359-00038. Therefore, the two projects are considered to be independent projects.

U.S. EPA Comment 2: In Section D.21, please clarify how many batch annealing furnaces will be located at this source; 18 or 19 or 20?

IDEM Response to U.S. EPA Comment 2: The permit record shows that in PSD/SSM107-16823-00038, Nucor was permitted to construct eighteen (18) annealing furnaces in the cold mill. PSD/SSM 107-21359-00038 also includes requirements for these eighteen (18) annealing furnaces. On September 5, 2006, IDEM received the application for SSM107-23609-00038/SPM107-24022-00038 (this permit). This application included a request to add an additional annealing furnace to the cold mill, and further requested that the annealing furnace be designated "AN-19". During preparation of this TSD Addendum, the source confirmed that after this modification, there will be nineteen (19) batch annealing furnaces. Therefore, Paragraph (dd1) covers the existing eighteen (18) and paragraph (dd2) covers the new AN-19. The permit has been changed as follows:

A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

. . .

D.21 – COLD MILL – ANNEALING FURNACES

(dd1) ~~Nineteen (19)~~ **Eighteen (18)** natural gas-fueled batch Annealing Furnaces, identified as EU-03, constructed in 2001 ~~and 2006~~. Each has a heat input capacity of 4.8 MMBtu per hour and a maximum throughput capacity of 200 tons of steel per hour. Emissions are uncontrolled and exhaust to roof vent (S-26).

(dd2) One (1) natural gas-fired annealing furnace, identified as AN-19, approved for construction in 2007, with a heat input capacity of 4.8 MMBtu per hour and a maximum throughput capacity of 200 tons of steel per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to roof vent (S-26).

SECTION D.21 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

COLD MILL – ANNEALING FURNACES

(dd1) ~~Nineteen (19)~~ **Eighteen (18)** natural gas-fueled batch Annealing Furnaces, identified as EU-03, constructed in 2001 ~~and 2006~~. Each has a heat input capacity of 4.8 MMBtu per hour and a maximum throughput capacity of 200 tons of steel per hour. Emissions are uncontrolled and exhaust to roof vent (S-26).

(dd2) One (1) natural gas-fired annealing furnace, identified as AN-19, approved for construction in 2007, with a heat input capacity of 4.8 MMBtu per hour and a maximum throughput capacity of 200 tons of steel per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to roof vent (S-26).

D.21.2 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the allowable particulate emission rate from each of the ~~20~~ **nineteen (19)** annealing furnaces in the Cold Mill shall not exceed 58.5 pounds per hour when operating at a process weight rate of 200 tons per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

ADDITIONAL CHANGES

Upon further review, the OAQ has decided to make the following revisions to the permit (bolded language has been added, the language with a line through it has been deleted). The Table of Contents has been modified, if applicable, to reflect these changes.

1. The Responsible Official information has been removed from the permit.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary steel mini-mill.

~~Responsible Official:~~	~~General Manager~~
Source Address:	4537 South Nucor Road, Crawfordsville, Indiana 47933
Mailing Address:	4537 South Nucor Road, Crawfordsville, Indiana 47933
General Source Phone Number:	(765) 364-1323
SIC Code:	3312
County Location:	Montgomery
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD Rules Major Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

2. Condition C.20 General Record Keeping Requirements has been revised as follows to clarify its intent:

C.20 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2] [326 IAC 2-3]

. . .

(c) If there is a **project** ~~reasonable possibility that a "project"~~ (as defined in 326 IAC 2-2-1(qq)) at an existing emissions unit which is not part of a "major modification" (as defined in 326 IAC 2-2-1(ee)) ~~may result in significant emissions increase~~ and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(rr)), the Permittee shall comply with following:

. . .

3. The emission unit descriptions in Section A.3 and D.32 do not accurately describe the emission units onsite and those permitted for construction in this significant source modification/significant permit modification. The descriptions for the original ladle preheaters, as described in T107-7172-00038, have been corrected to show that they remain unchanged. The new emission units receiving approval for construction in this significant source modification/significant permit modification have been added separately, as they are subject to different requirements.

A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

. . .

D.32 – MELTSHOP – LADLE METALLURGY FURNACES, PREHEATERS, AND DRYERS

(ss) Two (2) Meltshop Ladle Metallurgy Furnaces (LMFs)/Stirring Station, identified as EU-13, constructed in 1988, with a maximum capacity of 502 tons/hour each and controlled by a baghouse, identified as Meltshop LMF Baghouse, exhausting to stack S-13. The Meltshop LMF Baghouse has a design flow rate of 200,000 acf/min. The LMF baghouse was constructed in 1992.

(1a) Ladle Preheaters, identified as LP #1 - #5, uncontrolled and exhausting to stacks 7 and 8, consisting of:

(A) 3 units, identified as LP #1 - #3, constructed in 1989, each rated at 10 MMBtu per hour.

(B) 1 unit, identified as LP #4, constructed in 1994, rated at 7.5 MMBtu per hour.

(C) 1 unit, identified as LP #5, constructed in 1989, rated at 15 MMBtu per hour.

(1**b**) Ladle Preheaters, identified as LP #1**a** through LP #7**a**, consisting of:

(A) Three (3) natural gas-fired ladle preheaters, identified as LP #1**a**, LP #2**a**, and LP #3**a**, ~~each constructed in 1989,~~ approved for ~~replacement~~ **construction** in 2007, each with a heat input capacity of 10 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.

(B) One (1) natural gas-fired AOD ladle preheater, identified as LP #4**a**, approved for construction in 2007, with a heat input capacity of 10 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.

(C) One (1) natural gas-fired ladle preheater, identified as LP #5**a**, ~~constructed in 1989,~~ approved for ~~replacement~~ **construction** in 2007, with a heat input capacity of 10 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.

(D) One (1) natural gas-fired ladle preheater, identified as LP #6, approved for construction in ~~2004~~**2006**, with a heat input capacity of 12 MMBtu/hour, utilizing low-NOx burners, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.

(E) One (1) natural gas-fired ladle preheater/dryer, identified as LP #7**a**, approved for construction in 2007, with a heat input capacity of 10 MMBtu/hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.

(2a) Ladle Dryer, identified as LDS #1, constructed in 1989, consisting of a low NO_x natural gas fired burner, with a heat input capacity of 5 MMBtu per hour. Emissions are uncontrolled and exhausting to stack 12.

(2**b**) One (1) natural gas-fired Ladle Dryer, identified as LDS #1**a**, ~~constructed in 1989,~~ approved for ~~replacement~~ **construction** in 2007, with a heat input capacity of 5 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stack S-12.

. . .

SECTION D.32 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

MELTSHOP – LADLE METALLURGY FURNACES, PREHEATERS, AND DRYERS

(ss) Two (2) Meltshop Ladle Metallurgy Furnaces (LMFs)/Stirring Station, identified as EU-13, constructed in 1988, with a maximum capacity of 502 tons/hour each and controlled by a baghouse, identified as Meltshop LMF Baghouse, exhausting to stack S-13. The Meltshop LMF Baghouse has a design flow rate of 200,000 acf/min. The LMF baghouse was constructed in 1992.

(1a) Ladle Preheaters, identified as LP #1 - #5, uncontrolled and exhausting to stacks 7 and 8, consisting of:

(A) 3 units, identified as LP #1 - #3, constructed in 1989, each rated at 10 MMBtu per hour.

(B) 1 unit, identified as LP #4, constructed in 1994, rated at 7.5 MMBtu per hour.

(C) 1 unit, identified as LP #5, constructed in 1989, rated at 15 MMBtu per hour.

(1**b**) Ladle Preheaters, identified as LP #1**a** through LP #7**a**, consisting of:

(A) Three (3) natural gas-fired ladle preheaters, identified as LP #1**a**, LP #2**a**, and LP #3**a**, ~~each constructed in 1989,~~ approved for ~~replacement~~ **construction** in

2007, each with a heat input capacity of 10 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.

(B) One (1) natural gas-fired AOD ladle preheater, identified as LP #4**a**, approved for construction in 2007, with a heat input capacity of 10 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.

(C) One (1) natural gas-fired ladle preheater, identified as LP #5**a**, ~~constructed in 1989,~~ approved for ~~replacement~~ **construction** in 2007, with a heat input capacity of 10 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.

(D) One (1) natural gas-fired ladle preheater, identified as LP #6, approved for construction in ~~2004~~**2006**, with a heat input capacity of 12 MMBtu/hour, utilizing low-NOx burners, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.

(E) One (1) natural gas-fired ladle preheater/dryer, identified as LP #7**a**, approved for construction in 2007, with a heat input capacity of 10 MMBtu/hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.

(2a) Ladle Dryer, identified as LDS #1, constructed in 1989, consisting of a low NO_x natural gas fired burner, with a heat input capacity of 5 MMBtu per hour. Emissions are uncontrolled and exhausting to stack 12.

(2**b**) One (1) natural gas-fired Ladle Dryer, identified as LDS #1**a**, ~~constructed in 1989,~~ approved for ~~replacement~~ **construction** in 2007, with a heat input capacity of 5 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stack S-12.

(3) Four (4) Tundish Preheaters, identified as TPH #1 - #4, constructed in 1995, consisting of 4 low NOx natural gas fired heaters, each with a heat input capacity of 6 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stack S-10.

(4) Two (2) Tundish Dryout Stations, identified as TD #1 and TD #2. TD #1 was constructed in 1989, and TD#2 was constructed in 1990, each with a heat input capacity of 9 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stack S-10.

(5) Four (4) Tundish Nozzle Preheaters, identified as TNP #1- #4, constructed in 1995, consisting of a low NOx natural gas fired Preheaters, each with a heat input capacity of 0.8 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stack S10.

(6) One (1) natural gas-fired tundish dryout station, identified as TD #3, approved for construction in 2007, with a maximum heat input capacity of 2.4 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stack S-10.

(7) Two (2) natural gas-fired mandrel dryers, identified as MD #1 and MD #2, approved for construction in 2007, each with a heat input capacity of 1.5 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stack S-10.

(The information describing the process contained in this facility description box is descriptive

information and does not constitute enforceable conditions.)

D.32.5 PSD Limit [326 IAC 2-2]

The combined input of propane to emission units LP #4**a**, LP #7**a**, TD #3, MD #1, MD #2, LDS #1**a**, LP #1**a**, LP #2**a**, LP #3**a**, and LP #5**a**, combined with the input of propane to annealing furnace AN-19 (permitted in Section D.21) shall be limited to less than 1,089 thousand gallons of propane (LPG) per twelve consecutive month period, with compliance determined at the end of each month. NOx emissions shall not exceed 0.208 pounds per MMBtu when burning propane.

Compliance with this limit will ensure that the potential to emit from the modification performed under SSM 107-23609-00038 is less than forty (40) tons of NOx per year and will render the requirements of 326 IAC 2-2 (PSD) not applicable.

D.32.13 Record Keeping Requirements

(a) To document compliance with Condition D.32.10, the Permittee shall maintain once per day records of visible emission notation readings at the Meltshop LMF Baghouse stack exhaust.

(b) To document compliance with Condition D.32.9, the Permittee shall maintain records of the sulfur content of the charge carbon and injection carbon added to the LMFs (EU-13).

(c) To document compliance with Condition D.32.11, the Permittee shall maintain records of once per day total static pressure drop during normal operation.

(d) To document compliance with Condition D.32.5, the Permittee shall maintain records of the actual quantity of propane (LPG) used in the emission units identified as LP #4**a**, LP #7**a**, TD #3, MD #1, MD #2, LDS #1**a**, LP #1**a**, LP #2**a**, LP #3**a**, and LP #5**a**. Records shall be taken monthly and shall be complete and sufficient to establish compliance with the limit established in Condition D.32.5. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name:	Nucor Steel
Source Address:	4537 South Nucor Road, Crawfordsville, Indiana 47933
Mailing Address:	4537 South Nucor Road, Crawfordsville, Indiana 47933
Part 70 Permit No.:	T107-7172-00038
Facility:	AN-19, LP #4**a**, LP #7**a**, TD #3, MD #1, MD #2, LDS #1**a**, LP #1**a**, LP #2**a**, LP #3**a**, and LP #5**a**
Parameter:	Propane combusted
Limit:	1,089 thousand gallons per twelve consecutive month period.

. . .

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Significant Source Modification and a Significant Permit Modification to a Part 70 Operating Permit

Source Description and Location

Source Name:	Nucor Steel
Source Location:	4357 South Nucor Road, Crawfordsville, Indiana 47933
County:	Montgomery
SIC Code:	3312
Operation Permit No.:	107-7172-00038
Operation Permit Issuance Date:	December 29, 2006
Significant Source Modification No.:	107-23609-00038
Significant Permit Modification No.:	107-24022-00038
Permit Reviewer:	ERG/ST

Source Definition

This steel mini-mill consists of a source with on-site contractors:

(a) Nucor Steel, the primary operation, is located at 4357 South Nucor Road, Crawfordsville, Indiana 47933;

(b) Whitesville Mill Service Company, the supporting operation, is located at 4357 South Nucor Road, Crawfordsville, Indiana, 47933;

(c) BOC Gases, the supporting operation, is located at 4357 South Nucor Road, Crawfordsville, Indiana, 47933; and

(d) Heritage Environmental Services, the supporting operation, is located at 4357 South Nucor Road, Crawfordsville, Indiana, 47933.

Existing Approvals

The source was issued Part 70 Operating Permit No. T107-7172-00038 on December 29, 2006.

County Attainment Status

The source is located in Montgomery County.

Pollutant	Status
PM10	Attainment
PM2.5	Attainment
SO_2	Attainment
NO_2	Attainment
8-hour Ozone	Attainment
CO	Attainment
Lead	Attainment

(a) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC emissions and NOx are considered when evaluating the rule applicability relating to ozone. Montgomery County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions and NOx were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the *State Rule Applicability – 326 IAC 2-2* section of this document for more information.

(b) Montgomery County has been classified as attainment for PM2.5. U.S. EPA has not yet establied the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM 2.5 emissions. Therefore, until the U.S.EPA adopts specific provisions for PSD review for PM2.5 emissions, it has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.

(c) Montgomery County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)).

(d) Fugitive Emissions
Since this type of operation is in one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are counted toward the determination of PSD and Emission Offset applicability.

Source Status

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

Pollutant	Potential to Emit (tons/year)
PM	greater than 100
PM10	greater than 100
SO_2	greater than 100
VOC	less than 100
CO	greater than 100
NO_x	greater than 100

(a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a regulated pollutant is emitted at a rate of 100 tons per year or more, and it is in one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).

(b) These emissions are based upon previous approvals issued to this source.

The table below summarizes the potential to emit HAPs for the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

HAPs	Potential to Emit (tons/year)
Single HAP	greater than 10
Total HAPs	greater than 25

This existing source is a major source of HAPs, as defined in 40 CFR 63.41, because HAP emissions are greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for a combination of HAPs. Therefore, this source is a major source under Section 112 of the Clean Air Act (CAA).

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2003 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM	124
PM10	124
PM2.5	93
SO_2	152
VOC	54
CO	642
NO_x	238
Pb	0.40

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by Nucor Steel on September 5, 2006, relating to: the addition of one (1) annealing furnace, one (1) ladle preheater/dryer, one (1) tundish dryer, two (2) mandrel dryers, and one (1) AOD ladle preheater; the replacement of existing equipment of like kind with one (1) ladle dryer and four (4) ladle preheaters; and the relocation of one (1) permitted (but not yet constructed) ladle preheater from the Castrip to the EAF Meltshop.

The following is a list of the proposed emission units to be added in this source modification:

(a) One (1) natural gas-fired annealing furnace, identified as AN-19, approved for construction in 2007, with a heat input capacity of 4.8 MMBtu per hour and a maximum throughput capacity of 200 tons of steel per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to roof vent (S-26). [This emission unit is located in the Cold Mill.]

(b) One (1) natural gas-fired AOD ladle preheater, identified as LP #4, approved for construction in 2007, with a heat input capacity of 10 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8. [This emission unit is located in the EAF Melt Shop.]

(c) One (1) natural gas-fired ladle preheater/dryer, identified as LP #7, approved for construction in 2007, with a heat input capacity of 10 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8. [This emission unit is located in the EAF Melt Shop.]

(d) One (1) natural gas-fired tundish dryout station, identified as TD #3, approved for construction in 2007, with a maximum heat input capacity of 2.4 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stack S-10. [This emission unit is located in the EAF Melt Shop.]

(e) Two (2) natural gas-fired mandrel dryers, identified as MD #1 and MD #2, approved for construction in 2007, each with a heat input capacity of 1.5 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stack S-10. [This emission unit is located in the EAF Melt Shop.]

The following is a list of the existing emission units that the source proposes to replace with like/kind equipment. In each case, the change consists of replacing an existing unit with a similar emission unit.

(f) One (1) natural gas-fired ladle dryer, identified as LDS #1, constructed in 1989, approved for replacement in 2007, with a heat input capacity of 5 MMBtu per hour, using propane

as a backup fuel, with uncontrolled emissions exhausting to stack S-12. [This emission unit is located in the EAF Melt Shop.]

(g) Three (3) natural gas-fired ladle preheaters, identified as LP #1, LP #2, and LP #3, each constructed in 1989, approved for replacement in 2007, each with a heat input capacity of 10 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8. [This emission unit is located in the EAF Melt Shop.]

(h) One (1) natural gas-fired ladle preheater, identified as LP #5, constructed in 1989, approved for replacement in 2007, with a heat input capacity of 10 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8. [This emission unit is located in the EAF Melt Shop.]

Ladle Preheater LP-4 was permitted to be constructed under PSD SSM 107-18314-00038, issued on May 27, 2004 and conditions regarding its operation were modified in PSD SSM 107-21359-00038, issued April 27, 2006. This emission unit has not yet been constructed. The Permittee proposes to relocate this ladle preheater from the Castrip to the EAF Meltshop. The emission unit will be re-named LP #6. The PSD and BACT conditions from PSD SSM 107-21359-00038 that apply to ladle preheater LP-4 (renamed LP #6) are unchanged and will remain applicable to LP-4 (renamed LP #6) in its new location.

(i) One (1) natural gas-fired ladle preheater, identified as LP #6, approved for construction in 2004, with a heat input capacity of 12 MMBtu per hour, utilizing low-NOx burners, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8. [This emission unit is located in the EAF Melt Shop.]

Enforcement Issues

There are no pending enforcement actions related to this modification.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
S-26	AN-19	76.8	7	85,000	95
S-7, S-8	LP #4	121	4	50,000	95
S-7, S-8	LP #7	121	4	50,000	95
S-10	TD #3	121	4	25,000	95
S-10	MD #1	121	4	25,000	95
S-10	MD #2	121	4	25,000	95
S-12	LDS #1	121	4	5,000	95
S-7, S-8	LP #1	121	4	50,000	95
S-7, S-8	LP #2	121	4	50,000	95
S-7, S-8	LP #3	121	4	50,000	95
S-7, S-8	LP #5	121	4	50,000	95
S-7, S-8	LP #6	121	4	50,000	95

Emission Calculations

See Appendix A (pages 1 through 3) of this document for detailed emission calculations.

Permit Level Determination – Part 70

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount

of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency."

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE of the modification before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	1.46
PM10	2.45
SO_2	0.19
VOC	1.82
CO	27.1
NO_x	51.0

HAPs	Potential To Emit (tons/year)
TOTAL	0.61

The PTE figures represent worst case emissions when burning natural gas or propane.

This source modification is subject to 326 IAC 2-7-10.5(f)(4)(C), as the potential to emit of NOx is greater than twenty-five (25) tons per year. Additionally, the modification will be incorporated into the pending Part 70 Operating Permit through a Significant Permit Modification issued pursuant to 326 IAC 2-7-12(d) because this permit modification requires a case-by-case determination of an emission limitation.

Permit Level Determination – PSD or Emission Offset

The table below summarizes the potential to emit, reflecting all limits, of the emission units added in this source modification. Any control equipment is considered federally enforceable only after issuance of this Part 70 source modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

	Potential to Emit (tons/year)					
Process/Emission Unit	**PM**	**PM10**	**SO_2**	**NO_X**	**CO**	**VOC**
AN-19*	0.05	0.17	0.01	2.55	1.80	0.13
LP #4*	0.11	0.36	0.03	5.31	3.74	0.27
LP #7*	0.11	0.36	0.03	5.31	3.74	0.27
TD #3*	0.03	0.09	0.01	1.27	0.90	0.07
MD #1*	0.02	0.05	0.00	0.80	0.56	0.04
MD #2*	0.02	0.05	0.00	0.80	0.56	0.04
LDS #1**	0.06	0.18	0.01	2.65	1.87	0.14
LP #1**	0.11	0.36	0.03	5.31	3.74	0.27
LP #2**	0.11	0.36	0.03	5.31	3.74	0.27
LP #3**	0.11	0.36	0.03	5.31	3.74	0.27
LP #5**	0.11	0.36	0.03	5.31	3.74	0.27

	Potential to Emit (tons/year)					
Total for Modification	0.83	2.67	0.20	39.9	28.2	2.05
Significant Level or Major Source Threshold	25	15	40	40	100	40

* New emission units.
** Existing emission units being replaced.
PTE figures represent worst case emissions based on unlimited combustion of natural gas and limited combustion of propane.

This source is considered a major PSD source. The unrestricted potential to emit of NOx of the emission units in this source modification (AN-19, LP #4, LP #7, TD #3, MD #1, MD #2, LDS #1, LP #1, LP #2, LP #3, and LP #5) is less than 40 tons per year when burning natural gas, and the source cannot burn propane and natural gas simultaneously. Therefore, no limit on usage of natural gas is required. However, the unrestricted potential to emit of this modification is greater than forty (40) tons of NOx per year when burning propane as backup fuel. Therefore, this source has elected to limit the potential to emit of this modification as follows:

The combined input of propane to the emission units in this source modification (AN-19, LP #4, LP #7, TD #3, MD #1, MD #2, LDS #1, LP #1, LP #2, LP #3, and LP #5) shall be limited to less than 1,089 thousand gallons of propane (LPG) per twelve consecutive month period, with compliance determined at the end of each month. NOx emissions shall not exceed 0.208 pounds per MMBtu when burning propane.

Compliance with this limit will ensure that the potential to emit from this modification is less than forty (40) tons of NOx per year and therefore will render the requirements of 326 IAC 2-2 (PSD) not applicable.

Federal Rule Applicability Determination

(a) 40 CFR Part 63, Subpart FFFFF (National Emission Standards for Hazardous Air Pollutants: Integrated Iron and Steel Manufacturing) was promulgated on May 20, 2003. Pursuant to 40 CFR 63.7782, this source is not subject to the requirements of the rule because it does not utilize a sinter plant, blast furnace, or basic oxygen process furnace shop.

(b) 40 CFR Part 63, Subpart EEEEE (National Emission Standards for Hazardous Air Pollutants: Iron and Steel Foundries) was promulgated April 22, 2004. This source is not subject to the requirements of the rule because the source does not meet the definition of an iron and steel foundry. The rule defines a foundry as "A facility or portion of a facility that melts scrap, ingot, and/or other forms of iron and/or steel and pours the resulting molten metal into molds to produce final or near final shape products for introduction into commerce." The rule defines molds as molds composed of an aggregate and/or binder. Nucor Steel does not pour molten metal into molds composed of aggregate and/or binder and therefore does not meet the definition of an iron and steel foundry.

(c) The new emission units at this source and the emission units to be replaced in this source modification (AN-19, LP #4, LP #7, TD #3, MD #1, MD #2, LDS #1, LP #1, LP #2, LP #3, and LP #5) are not subject to the provisions of 40 CFR Part 64, Compliance Assurance Monitoring (CAM) at this time. In order for this rule to apply, a pollutant-specific-emissions-unit at a source that requires a Part 70 or Part 71 permit must meet three criteria for a given pollutant: 1) the unit has potential emissions (before controls), of the applicable regulated air pollutant, equal or greater than 100 percent of the amount required for a source to be classified as a major source, 2) the unit is subject to an applicable emission limitation or standard for the applicable regulated air pollutant, and 3) the unit uses a control device to achieve compliance with the applicable emission limitation or standard.

(d) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) or National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 326 IAC 20, 40 CFR 61, and 40 CFR Part 63) included in this permit for the annealing furnace (AN-19).

(e) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) or National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 326 IAC 20, 40 CFR 61, and 40 CFR Part 63) included in this permit for the ladle dryers, preheaters, tundish dryers, and mandrel dryers.

State Rule Applicability Determination

326 IAC 2-2 (Prevention of Significant Deterioration)

Nucor Steel began operation in 1989. Nucor Steel belongs to one of the twenty-eight (28) listed source categories with a PSD major source threshold of 100 tons per year. From the initial start-up, Nucor Steel was a major source. This modification to a major PSD source does not trigger PSD review because the increase in potential to emit of PM, PM10, PM2.5, SO_2, CO, NOx, and VOC is limited to less than the PSD significant levels.

326 IAC 2-4.1 (New Source Toxics Control)

The emission units in this modification do not have the potential to emit greater than 10 tons per year of a single HAP or 25 tons per year of any combination of HAPs. Therefore, the requirements of 326 IAC 2-4.1 do not apply.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting) because it is required to have an operating permit under 326 IAC 2-7, Part 70 program. Pursuant to this rule, the Permittee shall submit an emission statement certified pursuant to the requirements of 326 IAC 2-6. In accordance with the compliance schedule in 326 IAC 2-6-3, an emission statement must be submitted triennially by July 1 beginning in 2005 and every 3 years after. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in the permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 9 (CO Emission Rules)

Nucor Steel is subject to this rule because it is a source of CO emissions and commenced operation after March 21, 1972. However, no emission limits are specified for steel mill operations pursuant to this rule.

326 IAC 10 (NO_x Rules)

This rule does not apply to Nucor Steel because it is not located in Clark or Floyd Counties.

326 IAC 11 (Source Specific limitations)

Steel Mill operations are not one of the operations listed in this rule.

State Rule Applicability - Individual Facilities

326 IAC 2-2 (PSD BACT)

(a) The three Ladle Preheaters (LP #1, LP #2, and LP #3) are subject to 326 IAC 2-2, pursuant to 107-2764-00038, issued November 30, 1993. These requirements remain unchanged and are specified in the permit.

(b) The Ladle Dryer (LDS #1) is subject to 326 IAC 2-2, pursuant to 107-2764-00038, issued November 30, 1993. These requirements remain unchanged and are specified in the permit.

(c) The Ladle Preheater (LP #5) is subject to 326 IAC 2-2, pursuant to 107-5235-00038, issued June 20, 1996. These requirements remain unchanged and are specified in the permit.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

The annealing furnace in the Cold Mill (AN-19), tundish dryout station (TD #3), mandrel dryers (MD #1 and MD #2), ladle dryer (LDS #1), and ladle preheaters (LP #1, LP #2, LP #3, LP #4, and LP #5) , and ladle preheater/dryer (LP #7) each have the potential to emit particulate less than 0.551 pounds per hour. Therefore, pursuant to 326 IAC 6-3-1(b)(14), these emission units are not subject to the requirements of 326 IAC 6-3-2.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

The annealing furnace (AN-19), tundish dryout station (TD #3), mandrel dryers (MD #1 and MD #2), ladle dryer (LDS #1), and ladle preheaters (LP #1, LP #2, LP #3, LP #4, and LP #5) , and ladle preheater/dryer (LP #7) are not subject to the requirements of 326 IAC 7-1.1 because they each have potential to emit less than 25 tons of SO_2 per year.

326 IAC 8-1-6 (Volatile Organic Compounds)

The annealing furnace (AN-19), tundish dryout station (TD #3), mandrel dryers (MD #1 and MD #2), ladle dryer (LDS #1), and ladle preheaters (LP #1, LP #2, LP #3, LP #4, and LP #5) , and ladle preheater/dryer (LP #7) are not subject to the requirements of 326 IAC 8-1-6 because they each have potential VOC emissions less than 25 tons per year.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source=s failure to take the appropriate corrective actions within a specific time period.

There are no Compliance Determination Requirements applicable to this modification.

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. 107-7172-00038. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

Descriptions of the tundish preheaters (TPH #1 - #4), tundish dryers (TD #1 - #2), and tundish nozzle preheaters (TNP #1 - #4) have been updated in Section D.32 of the permit. These emission units were permitted with propane as backup fuel, and no other changes are made as a result of this change to the description.

Ladle Preheater LP-4 has been re-located from Section D.3 to Section D.32 and re-named as LP #6. The PSD and BACT conditions that previously applied to ladle preheater LP-4 in Section D.3 (Conditions D.3.1(a)(1), D.3.1(c), D.3.2(b), D.3.3(b), D.3.4(b), D.3.4(c), and D.3.5(b)) have been added to Section D.32 as a new condition (D.32.3(c)). These conditions apply to emission unit LP #6 (formerly LP-4) in its new location.

In Conditions D.32.13(a) and (c), the frequency of recordkeeping has been changed to "once per day" to match the Compliance Monitoring requirements in the current Title V Operating Permit.

A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

D.3 - CASTRIP – PREHEATERS, DRYERS, AND ALLOY UNLOADING

(d) **Two (2)** ~~Three (3)~~ natural gas-fired ladle preheaters, identified as LP-1~~,~~ **and** LP-2, ~~and LP-4,~~ and one (1) natural gas-fired ladle dryer identified as LD-1, each constructed in 2002, to be modified in 2006, ~~(except LP-4, which is yet to be constructed),~~ a heat input capacity of 12 MMBtu/hour each, utilizing low-NOx burners, and the capability to utilize propane as a backup fuel. The preheaters exhaust to roof monitor S-21. The ladle dryer exhausts to baghouse stack S-20.

D.21 – COLD MILL – ANNEALING FURNACES

(dd**1**) Nineteen (19) natural gas-fueled batch Annealing Furnaces, identified as EU-03, constructed in 2001 and 2006. Each has a heat input capacity of 4.8 MMBtu per hour and a maximum throughput capacity of 200 tons of steel per hour. Emissions are uncontrolled and exhaust to roof vent (S-26).

(dd2) One (1) natural gas-fired annealing furnace, identified as AN-19, approved for construction in 2007, with a heat input capacity of 4.8 MMBtu per hour and a maximum throughput capacity of 200 tons of steel per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to roof vent (S-26).

D.32 – MELTSHOP – LADLE METALLURGY FURNACES, PREHEATERS, AND DRYERS

(ss) Two (2) Meltshop Ladle Metallurgy Furnaces (LMFs)/Stirring Station, identified as EU-13, constructed in 1988, with a maximum capacity of 502 tons/hour each and controlled by a baghouse, identified as Meltshop LMF Baghouse, exhausting to stack S-13. The Meltshop LMF Baghouse has a design flow rate of 200,000 acf/min. The LMF baghouse was constructed in 1992.

(1) Ladle Preheaters, identified as LP #1 **through** ~~- #5~~ **LP #7**, ~~constructed in 1989, uncontrolled and exhausting to stacks 7 and 8,~~ consisting of:

(A) ~~3 units, identified as LP #1 - #3, each rated at 10 MMBtu per hour.~~ **Three (3) natural gas-fired ladle preheaters, identified as LP #1, LP #2, and LP #3, each constructed in 1989, approved for replacement in 2007, each with a heat input capacity of 10 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.**

(B) ~~1 unit, identified as LP #4, rated at 7.5 MMBtu per hour~~ **One (1) natural gas-fired AOD ladle preheater, identified as LP #4, approved for construction in 2007, with a heat input capacity of 10 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.**

(C) **One (1) natural gas-fired ladle preheater,** identified as LP #5, ~~rated at 15 MMBtu per hour.~~ **constructed in 1989, approved for replacement in 2007, with a heat input capacity of 10 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.**

(D) One (1) natural gas-fired ladle preheater, identified as LP #6, approved for construction in 2004, with a heat input capacity of 12 MMBtu/hour, utilizing low-NOx burners, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.

(E) One (1) natural gas-fired ladle preheater/dryer, identified as LP #7, approved for construction in 2007, with a heat input capacity of 10 MMBtu/hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.

(2) **One (1) natural gas-fired** Ladle Dryer, identified as LDS #1, constructed in 1989, **approved for replacement in 2007,** ~~consisting of a low NOx natural gas fired burner,~~ with a heat input capacity of 5 MMBtu per hour**, using propane as a backup fuel, with** ~~. Emissions are~~ uncontrolled **emissions** ~~and~~ exhausting to stack **S-**12.

(3) Four (4) Tundish Preheaters, identified as TPH #1 - #4, constructed in 1995, consisting of 4 low NOx natural gas fired heaters, each with a heat input capacity of 6 MMBtu per hour**, using propane as a backup fuel, with** ~~. Emissions are~~ uncontrolled **emissions** ~~and~~ exhausting to stack S-10.

(4) Two (2) Tundish Dryout Stations, identified as TD #1 and TD #2. TD #1 was constructed in 1989, and TD#2 was constructed in 1990, each with a heat input capacity of 9 MMBtu per hour**, using propane as a backup fuel, with** ~~.~~ ~~Emissions are~~ uncontrolled **emissions** ~~and~~ exhausting to stack S-10.

(5) Four (4) Tundish Nozzle Preheaters, identified as TNP #1- #4, constructed in 1995, consisting of a low NOx natural gas fired Preheaters, each with a heat input capacity of 0.8 MMBtu per hour**, using propane as a backup fuel, with** ~~.~~ ~~Emissions are~~ uncontrolled **emissions** ~~and~~ exhausting to stack S10.

(6) One (1) natural gas-fired tundish dryout station, identified as TD #3, approved for construction in 2007, with a maximum heat input capacity of 2.4 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stack S-10.

(7) Two (2) natural gas-fired mandrel dryers, identified as MD #1 and MD #2, approved for construction in 2007, each with a heat input capacity of 1.5 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stack S-10.

B.21 Source Modification Requirement [326 IAC 2-7-10.5] **[326 IAC 2-2-2]**

(a) A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-7-10.5.

(b) Any modification at an existing major source is governed by the requirements of 326 IAC 2-2-2.

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

CASTRIP – PREHEATERS, DRYERS, AND ALLOY UNLOADING

. . .

(d) **Two (2)** ~~Three (3)~~ natural gas-fired ladle preheaters, identified as LP-1~~,~~ **and** LP-2, ~~and LP-4,~~ and one (1) natural gas-fired ladle dryer identified as LD-1, each constructed in 2002, to be modified in 2006, ~~(except LP-4, which is yet to be constructed),~~ a heat input capacity of 12 MMBtu/hour each, utilizing low-NOx burners, and the capability to utilize propane as a backup fuel. The preheaters exhaust to roof monitor S-21. The ladle dryer exhausts to baghouse stack S-20.

D.3.1 Nitrogen Oxides (NO_X) Emission Limitations

(a) Pursuant to 326 IAC 2-2 and PSD SSM 107-21359-00038, issued April 27, 2006, the small combustion units consisting of ladle preheaters LP-1, LP-2, **and** LP-3, ~~and LP-4,~~ tundish dryers TD-1, TD-2, and TD-3, and the transition piece dryers TPD-1 and TPD-2, shall comply with the following requirements:

(1) Each combustion facility shall utilize “good combustion practices”, utilize “pipeline quality” natural gas as the primary fuel and may utilize propane as a backup fuel; and

(2) The following combustion facilities shall vent to S-21 roof monitor:

Combustion Facility	No. Units	Each Unit’s Max Heat Input Rate (MMBtu/hr)	Burner Type (or equivalent)	Stack
Ladle Preheaters LP-1, LP-2, **and** LP-3~~, and LP-4~~	4	12	Low-NOx	S-21
Tundish Dryer TD-1	1	4	Low-NOx	S-21
Tundish Dryer TD-2	1	3	Low-NOx	S-21
Tundish Dryer TD-3	1	1	Low-NOx	S-21
Transition Piece Dryers TPD-1 and TPD-2	2	0.15	Low-NOx	S-21

. . .

(c) Pursuant to 326 IAC 2-2 and PSD SSM 107-21359-00038, issued April 27, 2006, the BACT for NOx from each ladle preheater identified as LP-1, LP-2, **and** LP-3~~, and LP-4~~ shall be proper operation and shall not exceed a NOx mission rate of 0.05 pounds per MMBtu and 0.60 lbs per hour.

D.3.2 Sulfur Dioxide (SO_2) Emission Limitations

Pursuant to 326 IAC 2-2 and PSD SSM 107-21359-00038, issued April 27, 2006, the combustion units specified in Condition D.3.1(a) shall utilize "good combustion practices", utilize "pipeline quality" natural gas as the primary fuel and may utilize propane as a backup fuel. The combustion units shall comply with the following requirements:

. . .

(b) BACT for SO_2 from each ladle preheater identified as LP-1, LP-2, **and** LP-3~~, and LP-4~~ shall be proper operation and shall not exceed a SO_2 emission rate of 0.0006 pounds per MMBtu and 0.007 lbs per hour.

D.3.3 Carbon Monoxide (CO) Emission Limitations

Pursuant to 326 IAC 2-2 and PSD SSM 107-21359-00038, issued April 27, 2006, the combustion units specified in Condition D.3.1(a) shall utilize "good combustion practices", utilize "pipeline quality" natural gas as the primary fuel and may utilize propane as a backup fuel, and comply with the following requirements:

. . .

(b) BACT for CO from each ladle preheater identified as LP-1, LP-2, **and** LP-3~~, and LP-4~~ shall be proper operation and shall not exceed a CO emission rate of 0.084 pounds per MMBtu and 1.01 lbs per hour.

D.3.4 Particulate Matter (PM/PM10) Emission Limitations

Pursuant to 326 IAC 2-2 and PSD SSM 107-21359-00038, issued April 27, 2006, the combustion units specified in Condition D.3.1(a) shall utilize proper operation, utilize "pipeline quality" natural gas as the primary fuel, and may utilize propane as a backup fuel, and shall comply with the following requirements:

. . .

(b) BACT for PM/PM10 (filterable plus condensable) from each ladle preheater identified as LP-1, LP-2, **and** LP-3~~, and LP-4~~ shall be utilization of "good combustion practices" and shall not exceed a PM/PM10 (filterable plus condensable) emission rate of 0.0076 pounds per MMBtu and 0.091 lbs per hour.

D.3.5 Volatile Organic Compounds (VOC) Emission Limitations

Pursuant to 326 IAC 2-2 and PSD SSM 107-21359-00038, issued April 27, 2006, the combustion units specified in Condition D.3.1(a) shall utilize "good combustion practices", utilize "pipeline quality" natural gas as the primary fuel and may utilize propane as a backup fuel, and comply with the following requirements:

. . .

(b) BACT for VOC from each ladle preheater identified as LP-1, LP-2, **and** LP-3~~, and LP-4~~ shall be proper operation and shall not exceed a VOC emission rate of 0.0054 pounds per MMBtu and 0.065 lbs per hour.

SECTION D.21 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

COLD MILL – ANNEALING FURNACES

(dd**1**) Nineteen (19) natural gas-fueled batch Annealing Furnaces, identified as EU-03, constructed in 2001 and 2006. Each has a heat input capacity of 4.8 MMBtu per hour and a maximum throughput capacity of 200 tons of steel per hour. Emissions are uncontrolled and exhaust to

roof vent (S-26).

(dd2) One (1) natural gas-fired annealing furnace, identified as AN-19, approved for construction in 2007, with a heat input capacity of 4.8 MMBtu per hour and a maximum throughput capacity of 200 tons of steel per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to roof vent (S-26).

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.21.1 Annealing Furnace PSD BACT [326 IAC 2-2]

Pursuant to 326 IAC 2-2 and PSD SSM 107-21359-00038, issued April 27, 2006, the eighteen (18) batch annealing furnaces **identified as EU-03 and constructed in 2001** shall comply with the following BACT requirements:

(a) Each batch annealing furnace shall be equipped and operated with low NO_x burners.

(b) The NO_x emissions from each annealing furnace shall not exceed 0.10 lb/MMBtu.

(c) The CO emissions from each annealing furnace shall not exceed 0.084 lb/MMBtu.

(d) The annealing furnaces shall use natural gas as primary fuel and may utilize propane as a back up fuel.

D.21.2 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the allowable particulate emission rate from each of the ~~18~~ **20** annealing furnaces in the Cold Mill shall not exceed 58.5 pounds per hour when operating at a process weight rate of 200 tons per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

D.21.3 PSD Limit [326 IAC 2-2]

The input of propane to annealing furnace AN-19, combined with the input of propane to emission units LP #4, LP #7, TD #3, MD #1, MD #2, LDS #1, LP #1, LP #2, LP #3, and LP #5 (permitted in Section D.34) shall be limited to less than 1,089 thousand gallons of propane (LPG) per twelve consecutive month period, with compliance determined at the end of each month. NOx emissions shall not exceed 0.208 pounds per MMBtu when burning propane.

Compliance with this limit will ensure that the potential to emit from the modification performed under SSM 107-23609-00038 is less than forty (40) tons of NOx per year and will render the requirements of 326 IAC 2-2 (PSD) not applicable.

D.21.~~3~~**4** Vendor Certification

The Permittee shall submit the vendor guarantees for the above-mentioned batch annealing furnace which is yet to be installed to demonstrate compliance with Operation Conditions D.23.1(a), (b), and (c).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.21.5 Record Keeping Requirements

(a) To document compliance with Condition D.21.3, the Permittee shall maintain records of the actual quantity of propane (LPG) used in annealing furnace AN-19. Records shall be taken monthly and shall be complete and sufficient to establish compliance with the limit established in Condition D.21.3. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.21.6 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.21.3 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.32 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

MELTSHOP – LADLE METALLURGY FURNACES, PREHEATERS, AND DRYERS

(ss) Two (2) Meltshop Ladle Metallurgy Furnaces (LMFs)/Stirring Station, identified as EU-13, constructed in 1988, with a maximum capacity of 502 tons/hour each and controlled by a baghouse, identified as Meltshop LMF Baghouse, exhausting to stack S-13. The Meltshop LMF Baghouse has a design flow rate of 200,000 acf/min. The LMF baghouse was constructed in 1992.

(1) Ladle Preheaters, identified as LP #1 **through** ~~- #5~~ **LP #7**, ~~constructed in 1989, uncontrolled and exhausting to stacks 7 and 8,~~ consisting of:

(A) ~~3 units, identified as LP #1 - #3, each rated at 10 MMBtu per hour.~~ **Three (3) natural gas-fired ladle preheaters, identified as LP #1, LP #2, and LP #3, each constructed in 1989, approved for replacement in 2007, each with a heat input capacity of 10 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.**

(B) ~~1 unit, identified as LP #4, rated at 7.5 MMBtu per hour~~ **One (1) natural gas-fired AOD ladle preheater, identified as LP #4, approved for construction in 2007, with a heat input capacity of 10 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.**

(C) **One (1) natural gas-fired ladle preheater,** identified as LP #5, ~~rated at 15 MMBtu per hour.~~ **constructed in 1989, approved for replacement in 2007, with a heat input capacity of 10 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.**

(D) One (1) natural gas-fired ladle preheater, identified as LP #6, approved for construction in 2004, with a heat input capacity of 12 MMBtu/hour, utilizing low-NOx burners, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.

(E) One (1) natural gas-fired ladle preheater/dryer, identified as LP #7, approved for construction in 2007, with a heat input capacity of 10 MMBtu/hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stacks 7 and 8.

(2) **One (1) natural gas-fired** Ladle Dryer, identified as LDS #1, constructed in 1989, **approved for replacement in 2007,** ~~consisting of a low NOx natural gas fired burner,~~ with a heat input capacity of 5 MMBtu per hour**, using propane as a backup fuel, with** ~~. Emissions are~~ uncontrolled **emissions** ~~and~~ exhausting to stack **S-**12.

(3) Four (4) Tundish Preheaters, identified as TPH #1 - #4, constructed in 1995, consisting of 4 low NOx natural gas fired heaters, each with a heat input capacity of 6 MMBtu per hour**, using propane as a backup fuel, with** ~~. Emissions are~~ uncontrolled **emissions** ~~and~~ exhausting to stack S-10.

(4) Two (2) Tundish Dryout Stations, identified as TD #1 and TD #2. TD #1 was constructed in 1989, and TD#2 was constructed in 1990, each with a heat input capacity of 9 MMBtu per hour**, using propane as a backup fuel, with** ~~. Emissions are~~ uncontrolled **emissions** ~~and~~ exhausting to stack S-10.

(5) Four (4) Tundish Nozzle Preheaters, identified as TNP #1- #4, constructed in 1995, consisting of a low NOx natural gas fired Preheaters, each with a heat input capacity of 0.8 MMBtu per hour**, using propane as a backup fuel, with** ~~. Emissions are~~ uncontrolled **emissions** ~~and~~ exhausting to stack S10.

(6) One (1) natural gas-fired tundish dryout station, identified as TD #3, approved for construction in 2007, with a maximum heat input capacity of 2.4 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stack S-10.

(7) Two (2) natural gas-fired mandrel dryers, identified as MD #1 and MD #2, approved for construction in 2007, each with a heat input capacity of 1.5 MMBtu per hour, using propane as a backup fuel, with uncontrolled emissions exhausting to stack S-10.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

D.32.3 Ladle Preheaters PSD BACT [326 IAC 2-2]

. . .

(c) Pursuant to 326 IAC 2-2 and PSD SSM 107-21359-00038, issued on April 27, 2006, ladle preheater LP #6 shall comply with the following BACT requirements:

(1) The BACT for NOx shall be "good combustion practices", utilize "pipeline quality" natural gas as the primary fuel and may utilize propane as a backup fuel, proper operation and shall not exceed a NOx emission rate of 0.05 pounds per MMBtu and 0.60 lbs per hour.

(2) The BACT for SO_2 shall be "good combustion practices", utilize "pipeline quality" natural gas as the primary fuel and may utilize propane as a backup fuel, proper operation and shall not exceed a SO_2 emission rate of 0.0006 pounds per MMBtu and 0.007 lbs per hour.

(3) The BACT for CO shall be "good combustion practices", utilize "pipeline quality" natural gas as the primary fuel and may utilize propane as a backup fuel, proper operation and shall not exceed a CO emission rate of 0.084 pounds per MMBtu and 1.01 lbs per hour.

(4) The BACT for PM/PM10 (filterable plus condensable) shall be "good combustion practices", utilize "pipeline quality" natural gas as the primary fuel and may utilize propane as a backup fuel, proper operation and shall not exceed a PM/PM10 (filterable plus condensable) emission rate of 0.0076 pounds per MMBtu and 0.091 lbs per hour.

(5) The BACT for VOC shall be "good combustion practices", utilize "pipeline quality" natural gas as the primary fuel and may utilize propane as a backup fuel, proper operation and shall not exceed a VOC emission rate of 0.0054 pounds per MMBtu and 0.065 lbs per hour.

(6) The opacity from stacks 7 and 8 shall not exceed three percent (3%) opacity based on a six-minute average (24 readings taken in accordance with 40 CFR Part 60, Appendix A, Method 9). Compliance with this limitation satisfies the opacity limitations required by 326 IAC 5-1 (Opacity Limitations).

D.32.5 PSD Limit [326 IAC 2-2]

The combined input of propane to emission units LP #4, LP #7, TD #3, MD #1, MD #2, LDS #1, LP #1, LP #2, LP #3, and LP #5, combined with the input of propane to annealing furnace AN-19 (permitted in Section D.21) shall be limited to less than 1,089 thousand gallons of propane (LPG) per twelve consecutive month period, with compliance determined at the end of each month. NOx emissions shall not exceed 0.208 pounds per MMBtu when burning propane.

Compliance with this limit will ensure that the potential to emit from the modification performed under SSM 107-23609-00038 is less than forty (40) tons of NOx per year and will render the requirements of 326 IAC 2-2 (PSD) not applicable.

~~D.32.5~~ **D.32.6** Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan (PMP), in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the LMFs (EU-13) and their control devices.

~~D.32.6~~ **D.32.7** Meltshop LMFs PSD BACT [326 IAC 2-2]

~~D.32.7~~ **D.32.8** Testing Requirements [326 IAC 2-7-6(1),(6)]

~~D.32.8~~ **D.32.9** Sulfur Content [326 IAC 2-7-5(3)(A)(iii)][326 IAC 2-7-5(d)]

~~D.32.9~~ **D.32.10** Visible Emissions Notations [326 IAC 2-7-5(3)(A)(iii)][326 IAC 2-7-5(d)]

~~D.32.10~~**D.32.11** Baghouses Parametric Monitoring [326 IAC 2-7-5(3)(A)(iii)][326 IAC 2-7-5(d)]

~~D.32.11~~ **D.32.12** Broken or Failed Bag Detection

~~D.32.12~~ **D.32.13** Record Keeping Requirements

(a) To document compliance with Condition ~~D.32.9~~ **D.32.10**, the Permittee shall maintain once per ~~shift~~ **day** records of visible emission notation readings at the Meltshop LMF Baghouse stack exhaust.

(b) To document compliance with Condition ~~D.32.8~~ **D.32.9**, the Permittee shall maintain records of the sulfur content of the charge carbon and injection carbon added to the LMFs (EU-13).

(c) To document compliance with Condition ~~D.32.10~~ **D.32.11**, the Permittee shall maintain records of once per ~~shift~~ **day** total static pressure drop during normal operation.

(d) To document compliance with Condition D.32.5, the Permittee shall maintain records of the actual quantity of propane (LPG) used in the emission units identified as LP #4, LP #7, TD #3, MD #1, MD #2, LDS #1, LP #1, LP #2, LP #3, and LP #5. Records shall be taken monthly and shall be complete and sufficient to establish compliance with the limit established in Condition D.32.5. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(~~d~~ **e**) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.32.14 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.32.5 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Nucor Steel
Source Address: 4537 South Nucor Road, Crawfordsville, Indiana 47933
Mailing Address: 4537 South Nucor Road, Crawfordsville, Indiana 47933
Part 70 Permit No.: T107-7172-00038
Facility: AN-19, LP #4, LP #7, TD #3, MD #1, MD #2, LDS #1, LP #1, LP #2, LP #3, and LP #5
Parameter: Propane combusted
Limit: 1,089 thousand gallons per twelve consecutive month period.

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ **No deviation occurred in this quarter.**

☐ **Deviation/s occurred in this quarter.**
Deviation has been reported on:

Submitted by:
Title / Position:
Signature:
Date:
Phone:

Attach a signed certification to complete this report.

Conclusion and Recommendation

The construction and operation of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 107-23609-00038 and Part 70 Significant Permit Modification No. 107-24022-00038. The staff recommends to the Commissioner that this Part 70 Significant Source Modification and Part 70 Significant Permit Modification be approved.

Appendix A: Emission Calculations
Unlimited Combustion Emissions - Natural Gas

Company Name: Nucor Steel
Address: 4357 South Nucor Road, Crawfordsville, Indiana 47933
SSM: 107-23609-00038
SPM: 107-24022-00039
Reviewer: ERG/ST
Date: January 4, 2007

Scenario 1: Source Burns Natural Gas 8760 Hours Per Year.

	Pollutant						
	PM*	PM10*	SO_2	NO_X**	CO	VOC	HAPs
Emission Factor (lbs/MMCF)	1.9	7.6	0.6	100	84.0	5.5	1.89

				Potential To Emit (tons/year)						
Emission Unit ID	Unit Type	Heat Input Capacity (MMBtu/hour)	Potential Throughput (MMCF/year)	PM	PM10	SO_2	NO_X	CO	VOC	HAPs
AN-19	New	4.8	41.2	0.04	0.16	0.012	2.06	1.73	0.11	0.039
LP #4	New	10.0	85.9	0.08	0.33	0.026	4.29	3.61	0.24	0.081
LP #7	New	10.0	85.9	0.08	0.33	0.026	4.29	3.61	0.24	0.081
TD #3	New	2.4	20.6	0.02	0.08	0.006	1.03	0.87	0.06	0.019
MD #1	New	1.5	12.9	0.01	0.05	0.004	0.64	0.54	0.04	0.012
MD #2	New	1.5	12.9	0.01	0.05	0.004	0.64	0.54	0.04	0.012
LDS #1	Replaced	5.0	42.9	0.04	0.16	0.013	2.15	1.80	0.12	0.041
LP #1	Replaced	10.0	85.9	0.08	0.33	0.026	4.29	3.61	0.24	0.081
LP #2	Replaced	10.0	85.9	0.08	0.33	0.026	4.29	3.61	0.24	0.081
LP #3	Replaced	10.0	85.9	0.08	0.33	0.026	4.29	3.61	0.24	0.081
LP #5	Replaced	10.0	85.9	0.08	0.33	0.026	4.29	3.61	0.24	0.081
		Totals for All Units		**0.61**	**2.45**	**0.19**	**32.3**	**27.1**	**1.78**	**0.61**

*PM10 emission factor is for condensable and filterable PM combined. PM emission factor is for filterable PM only
**Emission factor for NO_x: Uncontrolled = 100 lbs/MMCF

Emission factors from AP-42, Chapter 1.4 - Natural Gas Combustion, Tables 1.4-1, 1.4-2, 1.4-3 and 1.4-4. SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03. (AP-42 Supplement D 7/98)

Methodology

Potential Throughput (MMCF/year) = Heat Input Capacity (MMBtu/hour) x 8,760 (hours/year) x 1 MMCF/1,020 MMBtu
PTE (tons/year) = Potential Throughput (MMCF/year) x Emission Factor (lbs/MMCF) x 1 ton/2,000 lbs

Appendix A: Emission Calculations
Unlimited Combustion Emissions - Propane

Company Name: Nucor Steel
Address: 4357 South Nucor Road, Crawfordsville, Indiana 47933
SSM: 107-23609-00038
SPM: 107-24022-00039
Reviewer: ERG/ST
Date: January 4, 2007

Scenario 2: Source Burns Propane 8760 Hours Per Year.	Sulfur Content ($gr/100\ ft^3$)	Emission Factors (lbs/1,000 gals)					
		PM	**PM10**	**SO_2**	**NO_X**	**CO**	**VOC**
	0.16	0.4	0.4	0.016	14	1.9	0.5

Emission Unit ID	Unit Type	Heat Input Capacity (MMBtu/hour)	Potential Throughput (1,000 gals/year)	PM	PM10	SO_2	NO_X	CO	VOC
AN-19	New	4.8	465	0.09	0.09	0.00	3.25	0.44	0.12
LP #4	New	10.0	968	0.19	0.19	0.01	6.78	0.92	0.24
LP #7	New	10.0	968	0.19	0.19	0.01	6.78	0.92	0.24
TD #3	New	2.4	232	0.05	0.05	0.00	1.63	0.22	0.06
MD #1	New	1.5	145	0.03	0.03	0.00	1.02	0.14	0.04
MD #2	New	1.5	145	0.03	0.03	0.00	1.02	0.14	0.04
LDS #1	Replaced	5.0	484	0.10	0.10	0.00	3.39	0.46	0.12
LP #1	Replaced	10.0	968	0.19	0.19	0.01	6.78	0.92	0.24
LP #2	Replaced	10.0	968	0.19	0.19	0.01	6.78	0.92	0.24
LP #3	Replaced	10.0	968	0.19	0.19	0.01	6.78	0.92	0.24
LP #5	Replaced	10.0	968	0.19	0.19	0.01	6.78	0.92	0.24
		Totals for All Units		**1.46**	**1.46**	**0.06**	**51.0**	**6.92**	**1.82**

Emission factors are from AP-42, Chapter 1.5 - Emission Factors for LPG Combustion, Table 1.5-1, SCC #1-03-010-02, Commercial Boilers (AP-42 Supplement B
1 MMBtu = 1,000,000 Btu
1,000 gallons Propane = 90.5 MMBtu
All emission factors are based on normal firing.

Methodology
Potential Throughput (1,000 gals/year) = Heat Input Capacity (MMBtu/hour) x 8,760 (hours/year) x 1,000 gals/90.5 MMBtu
PTE (tons/year) = Potential Throughput (1,000 gals/year) x Emission Factor (lbs/1,000 gals) x 1 ton/2,000 lbs

Appendix A: Emission Calculations
Limited Combustion Emissions

Company Name: Nucor Steel
Address: 4357 South Nucor Road, Crawfordsville, Indiana 47933
SSM: 107-23609-00038
SPM: 107-24022-00039
Reviewer: ERG/ST
Date: January 4, 2007

Scenario 3: No Limit on Natural Gas Usage, Propane Usage Limited.

Natural Gas Combustion

Unlimited Natural Gas Combustion *		Pollutant						
		PM	PM10	SO_2	NO_X	CO	VOC	HAPs
8760 hours per year	Emission Factor (lbs/MMSCF)	1.9	7.6	0.6	100	84.0	5.5	1.89

				Potential To Emit (tons/year)						
Emission Unit ID	Unit Type	Heat Input Capacity (MMBtu/hour)	Potential Throughput (MMSCF/year)	PM	PM10	SO_2	NO_X	CO	VOC	HAPs
AN-19	New	4.8	41.2	0.04	0.16	0.012	2.06	1.73	0.11	0.039
LP #4	New	10.0	85.9	0.08	0.33	0.026	4.29	3.61	0.24	0.081
LP #7	New	10.0	85.9	0.08	0.33	0.026	4.29	3.61	0.24	0.081
TD #3	New	2.4	20.6	0.02	0.08	0.006	1.03	0.87	0.06	0.019
MD #1	New	1.5	12.9	0.01	0.05	0.004	0.64	0.54	0.04	0.012
MD #2	New	1.5	12.9	0.01	0.05	0.004	0.64	0.54	0.04	0.012
LDS #1	Replaced	5.0	42.9	0.04	0.16	0.013	2.15	1.80	0.12	0.041
LP #1	Replaced	10.0	85.9	0.08	0.33	0.026	4.29	3.61	0.24	0.081
LP #2	Replaced	10.0	85.9	0.08	0.33	0.026	4.29	3.61	0.24	0.081
LP #3	Replaced	10.0	85.9	0.08	0.33	0.026	4.29	3.61	0.24	0.081
LP #5	Replaced	10.0	85.9	0.08	0.33	0.026	4.29	3.61	0.24	0.081
		Totals for All Units		**0.61**	**2.45**	**0.19**	**32.3**	**27.1**	**1.78**	**0.61**

* Natural gas usage is unmetered. NOx emissions when burning natural gas are less than 40 tons per year.

Propane Combustion

Limited Propane Usage (1,000 gallons/year)	Sulfur Content ($gr/100\ ft^3$)	Emission Factors (lbs/1,000 gals)					
		PM	**PM10**	**SO_2**	**NO_X**	**CO**	**VOC**
1,089	0.16	0.4	0.4	0.016	14	1.9	0.5

Emission Unit ID	Unit Type	Heat Input Capacity (MMBtu/hour)	Limited Throughput (1,000 gals/year)	PM	PM10	SO_2	NO_X	CO	VOC
AN-19	New	4.8							
LP #4	New	10.0							
LP #7	New	10.0							
TD #3	New	2.4							
MD #1	New	1.5							
MD #2	New	1.5							
LDS #1	Replaced	5.0							
LP #1	Replaced	10.0							
LP #2	Replaced	10.0							
LP #3	Replaced	10.0							
LP #5	Replaced	10.0							
	Totals for All Units		**1089**	**0.22**	**0.22**	**0.01**	**7.62**	**1.03**	**0.27**

Methodology

Potential Throughput (Natural Gas) (MMSCF/year) = Heat Input Capacity (MMBtu/hour) x 8,760 hours/year x 1 MMSCF/1,020 MMBtu
PTE (Natural Gas) (tons/year) = Potential Throughput (Natural Gas) (MMCF/year) x Emission Factor (lbs/MMCF) x 1 ton/2,000 lb
PTE (Propane) (tons/year) = Limited Throughput (Propane) (1,000 gals/year) x Emission Factor (lbs/1,000 gals) x 1 ton/2,000 lbs

Total Potential to Emit When Burning a Combination of Natural Gas and Propane	Fuel	Hours of Operation	PM	PM10	SO_2	NO_X	CO	VOC	HAPs
	Natural Gas	8760 hours per year	0.61	2.45	0.19	32.3	27.1	1.78	0.61
	Propane	1,089 (1,000 gal/year)	0.22	0.22	0.01	7.62	1.03	0.27	
	Total		**0.83**	**2.67**	**0.20**	**39.9**	**28.2**	**2.05**	**0.61**