ADEQ OPERATING AIR PERMIT

Pursuant to the Regulations of the Arkansas Operating Air Permit Program, Regulation 26:

Permit No.: 35-AOP-R5
IS ISSUED TO:
Arkansas Steel Associates, LLC
2803 Van Dyke Road
Newport, AR 72112
Jackson County
AFIN: 34-00033

THIS PERMIT AUTHORIZES THE ABOVE REFERENCED PERMITTEE TO INSTALL, OPERATE, AND MAINTAIN THE EQUIPMENT AND EMISSION UNITS DESCRIBED IN THE PERMIT APPLICATION AND ON THE FOLLOWING PAGES. THIS PERMIT IS VALID BETWEEN:

AND

THE PERMITTEE IS SUBJECT TO ALL LINHEREIN.	MITS AND CONDITIONS CONTAINED
Signed:	
Michael Bonds Chief, Air Division	Date

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List of Acronyms and Abbreviations

A.C.A. Arkansas Code Annotated

AFIN ADEQ Facility Identification Number

CFR Code of Federal Regulations

CO Carbon Monoxide

HAP Hazardous Air Pollutant

lb/hr Pound Per Hour

MVAC Motor Vehicle Air Conditioner

No. Number

NO_x Nitrogen Oxide

PM Particulate Matter

PM10 Particulate Matter Smaller Than Ten Microns

SNAP Significant New Alternatives Program (SNAP)

SO₂ Sulfur Dioxide

SSM Startup, Shutdown, and Malfunction Plan

Tpy Tons Per Year

UTM Universal Transverse Mercator

VOC Volatile Organic Compound

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SECTION I: FACILITY INFORMATION

PERMITTEE: Arkansas Steel Associates, LLC

AFIN: 34-00033

PERMIT NUMBER: 35-AOP-R5

FACILITY ADDRESS: 2803 Van Dyke Road

Newport, AR 72112

MAILING ADDRESS: 2803 Van Dyke Road

Newport, AR 72112

COUNTY: Jackson

Billy E. Ferguson CONTACT POSITION:

TELEPHONE NUMBER: (870) 523-3693

REVIEWING ENGINEER: Shawn Hutchings

UTM North South (Y): 3946.200 UTM East-West (Y): 659.000

Zone 15

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SECTION II: INTRODUCTION

Arkansas Steel Associates, LLC (hereinafter "Arkansas Steel or "ASA") located at 2803 Van Dyke Road in Newport, Arkansas owns and operates a steel mill.

Summary of Permit Activity

This permit is the Title V renewal permit for the facility. Arkansas Steel is making a few changes to the permit in the renewal. These changes include adding an additional baghouse to act in parallel with the existing baghouse for SN-01. The new baghouse will have its own stack. The old baghouse will still exhaust through its 16 existing stacks. With this modification the canopy hood inside the meltshop also was enlarged to increase the capture efficiency of particulate matter. Airflow will be divided roughly equally between the two baghouses. There is no associated emission increase with this project. Arkansas Steel is also adding two additional oxygen lances to their Electric Arc Furnaces. These lances may create NO_x emissions greater than current actual levels but should still be below permitted levels.

Regulations

The following table contains the regulations applicable to this permit.

Regulations
Arkansas Air Pollution Control Code, Regulation 18, effective February 15, 1999
Regulations of the Arkansas Plan of Implementation for Air Pollution Control, Regulation 19, effective February 15, 1999 Regulations of the Arkansas Operating Air Permit Program, Regulation 26, effective
September 26, 2002 40 CFR 52.21, Prevention of Significant Deterioration
40 CFR Part 60 Subpart AA-Standards of Performance for Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974, and on or Before August 17, 1983.

The following table is a summary of emissions from the facility. This table, in itself, is not an enforceable condition of the permit.

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Emission Summary

	EMISSION SUMMARY				
Source	Description	Pollutant	Emissio	n Rates	
Number	Description	Fonutant	lb/hr	tpy	
		PM	26.8	117.3	
		PM_{10}	20.8	84.4	
Tota	l Allowable Emissions	SO_2	45.7	167.9	
100	I Allowable Ellissions	VOC	63.6	104.3	
		СО	513.1	1957.2	
		NO_X	72.3	257.0	
	HAPs	Lead* Xylene*	0.8 0.76	2.4 0.0091	
SN-01	EAF Baghouse	PM PM ₁₀ SO ₂ VOC CO NO _x Pb	11.3 11.3 41.0 25 420.0 50.0 0.4	49.2 49.2 152.0 92.0 1600.0 181.5 1.5	
SN-02	Meltshop Fugitives	PM PM ₁₀ SO ₂ VOC CO NO _x Pb	7.0 4.1 4.1 2.5 44.0 5.0 0.3	25.5 14.8 15.2 9.2 168.0 18.2 0.8	
SN-03	Ladle Metallurgy Station	PM PM ₁₀ CO	1.0 0.8 42.0	4.5 3.4 160.0	

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	I		I	
SN-04	Reheat Furnace	PM	1.0	4.2
		PM_{10}	1.0	4.2
		SO_2	0.1	0.2
		VOC	0.4	1.7
		CO	4.3	18.0
		NO_x	14.0	43.0
SN-05	Ladle Preheaters	PM	0.2	0.7
	(3 units)	PM_{10}	0.2	0.7
		SO_2	0.1	0.1
		VOC	0.1	0.4
		CO	1.4	5.9
		NO_x	1.6	7.0
SN-06	Ladle Dryer	PM	0.1	0.2
		PM_{10}	0.1	0.2
		SO_2	0.1	0.1
		VOC	0.1	0.1
		CO	0.1	0.3
		NO_x	0.3	1.3
SN-07	Tundish Preheaters	PM	0.1	0.3
		PM_{10}	0.1	0.3
		SO_2	0.1	0.1
		VOC	0.1	0.2
		CO	0.7	2.8
		NO_x	0.8	3.4
SN-08	Unpaved Roads	PM	N/A	14.0
	1	PM_{10}	N/A	5.0
SN-09	Paved Roads	PM	N/A	9.7
		PM_{10}	N/A	1.9
SN-10	Slag Processing	PM	5.7	8.3
		PM_{10}	2.9	4.1
SN-11	Baghouse Dust Handling	PM	0.2	0.5
		PM_{10}	0.1	0.4
		Pb	0.1	0.1

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SN-12	Tundish Dryer	PM	0.1	0.1
	-	PM_{10}	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.1
		CO	0.3	1.1
		NO_x	0.3	1.3
SN-12a	Tundish Dryer	PM	0.1	0.1
	J	PM_{10}	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.1
		CO	0.3	1.1
		NO_x	0.3	1.3
SN-13	Tie Plate Dipping Process	VOC	35.2	0.5
	11 6	Xylene*	0.76	0.0091

^{*}HAPs included in the VOC or PM totals. Other HAPs are not included in any other totals unless specifically stated.

^{**}Air Contaminants such as ammonia, acetone, and certain halogenated solvents are not VOCs or HAPs.

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SECTION III: PERMIT HISTORY

The facility began operations in 1971, and Arkansas Steel Associates (ASA) purchased the facility in 1989 from Razorback Steel Corporation. The mill had two electric arc furnaces with a holding capacity of 35 tons each. The furnaces were equipped with side draft hoods for evacuating the emissions during melting and refining.

In December of 1993, emission testing was done on the EAF baghouse, melt shop roof monitor, caster, and the reheat furnace, for the purpose of establishing an emission baseline.

Permit 35-A

Permit 35-A was issued on November 20, 1970.

Permit 174-A

Permit 174-A was issued on December 22, 1973 to Tennessee Forging Steel Corp. At some point the name on the permit was changed to Razorback Steel Corp. This permit states it supercedes permit 35-A.

Permit 35-AR-1

This permit was on September 20, 1985. This permit stated it rescinded both permit 35-A and 174-A.

Another permit, 35-AR-1, was issued on August 28, 1987. This permit added maintenance requirements for the EAF Baghouse.

Permit 35-AR-2

Permit 35-AR-2 was issued on October 31, 1989. This permit was a transfer of ownership to Arkansas Steel Corp from Razorback Steel. It has the same conditions as the second permit 35-AR-1.

Permit 35-AR-3

On 6/2/94, Permit #35-AR-3 was issued for the installation of a used 50 ton electric arc furnace, and utilizing the existing arc furnaces as a ladle metallurgy station. The installation of the new EAF increased the mill's production capacity and affected the potential emissions from most sources at the mill. One source not affected by this project was the reheat furnace. Although a ladle metallurgy station (LMS) was proposed in the application for 35-AR-3, that source was

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never constructed. When permit 35-AR-3 was issued in 1994, it was believed that the modernization project did not constitute a "major modification" as defined in 40 CFR 52.21. Emissions were estimated based on standard EPA estimation methods and field testing, and the proposed emission increases were less than the major modification thresholds in 40 CFR 52.21(b)(23)(i).

The new electric arc furnace was purchased from the Armco facility at Baltimore Works second hand at a capital cost of less than 50% of the capital cost of a new electric arc furnace. The reconstruction cost was estimated at \$5,095,498, while the cost of a new furnace was estimated at \$14,275,998. Despite this cost analysis, the arc furnace was constructed at the Armco facility during the applicable period of 40 CFR Subpart AA--Standards of Performance for Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974, and On or Before August 17, 1983. It is the Department's contention that this is construction of an affected facility and therefore subject to the above referenced regulation.

Permit 35-AOP-R0

After the new EAF was installed and began operating, the facility was tested for PM, CO, and NO_x emissions. Results of testing on January 5 and 6, 1995, indicated that actual emissions of CO and NO_x were substantially greater than original estimates. ASA then was required to submit a PSD application. This application triggered the baseline date for NO_2 and SO_2 . The minor source baseline date (NO_2 and SO_2) is 5/10/96 for Jackson County. Permit 35-AOP-R0 was issued on 9/24/98. This permit was the first Title V Operating Air Permit and the first PSD permit issued for this facility. This permit also included an EPA approved alternative monitoring plan for the EAF baghouse. This alternative monitoring plan included daily opacity observations on the melt shop emissions as a substitute for electric arc furnace pressure monitoring. This alternative monitoring plan was approved by this Department and the EPA Region VI.

Summary of PSD Issues Addressed in Permit 35-AOP-R0

In 1994, ASA requested authorization from this Department to modernize the facility and increase production capacity. At that time, ASA proposed that a used 50 ton electric arc furnace (EAF) be installed and the existing EAF be converted to a ladle metallurgy station (LMS). The proposed modification was authorized June 2, 1994, with permit No. 35-AR-3. The 50 ton EAF was subsequently installed and began operating. The proposed conversion of the old EAF to a LMS had not yet occurred.

The installation of the new EAF increased production capacity and affected the potential emissions from most sources at the mill. Emissions from the EAF and meltshop fugitives were affected by the changes to the operations and production capacity increase. The existing natural gas fired ladle preheaters were modernized, and a third preheater was added. Fugitive emissions

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from roads increased due to increased traffic. The increased production capacity also increased the potential emissions from slag processing and baghouse dust handling operations.

One source not affected by the 1994 project was the reheat furnace. Potential throughput and emissions from the reheat furnace were not affected, so the reheat furnace was not included in the sources affected by PSD issues addressed in ASA's Title V Operating Air Permit No. 35-AOP-R0.

When the permit application was prepared in 1994, it was believed that the modernization project did not constitute a major modification as defined in 40 CFR 52.21 because the estimated emission increases were less than the significant levels. After permit 35-AR-3 was issued, the testing showed emission rate increases greater than the PSD significant levels; therefore, permit 35-AOP-R0 was a retroactive PSD permitting action.

Arkansas Steel is considered a major stationary source under the prevention of significant (PSD) regulations. Sulfur dioxide (SO₂), carbon monoxide (CO), nitrogen dioxide (NO₂), and volatile organic compound (VOC) emission increases associated with the 1994 modifications were 122 tpy, 777.9 tpy, 191.7 tpy, and 44 tpy, respectively. These increases exceeded the PSD significance levels and were subject to PSD review. Emission increases of 44 tpy volatile organic compounds (VOC) associated with the 1994 modification were below 100 tpy; therefore, monitoring was not required for ozone. The particulate and lead emissions decreased with the 1994 modification.

The PSD regulations mandate that a case-by-case Best Available Control Technology (BACT) analysis be performed on all sources which were directly associated with the 1994 modernization project. These sources included the electric arc furnace and the miscellaneous natural gas fired equipment. BACT was not required for the roads, slag processing, or baghouse dust handling because they do not emit a pollutant subject to PSD review. The previous reheat furnace was not affected by this project, so it was not subject to PSD review either. The BACT determination is summarized below.

	Summary of BACT Determination				
Source	Description	Pollutant	Control Technology	BACT Limit	
SN-01	Electric Arc Furnace	VOC	Direct Evacuation System (DEC) with air gap for long residence time.	0.35 lb/ton	

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	Summary of BACT Determination				
Source	Description	Pollutant	Control Technology	BACT Limit	
		SO ₂	DEC with no add-on controls	0.7 lb/ton	
		СО	DEC with air gap for CO combustion	6.0 lb/ton	
		NO _x	DEC with no add-on controls	1.0 lb/ton	
SN-05	Ladle Preheaters	VOC			
SN-06 SN-07	Ladle Dryer Tundish Preheater	SO_2	Natural Gas Combustion Co	Good Combustion	
		СО		Practice	
		NO _x			

Permit 35-AOP-R1

Permit 35-AOP-R1 was issued on March 15, 1999, for the construction and operation of a new reheat furnace (SN-04). This new reheat furnace is replacing the old reheat furnace. The new reheat furnace has a rated heat input capacity of 68 MMBtu/hr and will combust natural gas. The permittee submitted a PSD netting analysis demonstrating that the furnace replacement does not trigger PSD review. The results of this netting demonstration (as modified) resulted in a net emission increase of 29 tpy of nitrogen oxides, which is below the significant level of 40 tpy. Consequently, this modification is not subject to PSD review. The netting analysis referred to herein was submitted to the Department as an appendix to ASA's Application for Modification of Draft Operating Air Permit, 35-AOP-R0, dated March 9, 1998, and modified by subsequent submittal in January, 1999.

Permit 35-AOP-R1 also involved several pollution control projects undertaken on the EAF baghouse system in the melt shop. These changes were a new water cooled duct, a new duct and damper coming off the EAF fourth hole, new air moving fans, a new damper valve for the canopy hood, magnehelic gauges as replacements for the existing manometric pressure sensing devices, and a computerized programmable logic control (PLC) system.

35-AOP-R2

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Permit 35-AOP-R2 was issued to Arkansas Steel on June 29, 2000. This permit modification was to add a new tundish dryer, SN-12, to replace their ladle dryer, SN-06, to correctly permit SN-07, the tundish preheaters, as two separate preheaters which cannot, by design, operate simultaneously and to add the tie plate dipping process, SN-13, which was previously permitted as an insignificant activity.

35-AOP-R3

Permit 35-AOP-R3 was issued to Arkansas Steel on January 5, 2001. This modification to Arkansas Steel's permit is to include a Ladle Metallurgy Station, SN-03, and a production increase at the facility. Emissions of CO, PM₁₀, and lead will increase above the PSD significance level and will require the facility to undergo PSD review for those pollutants. The increase in emissions from all other pollutants is below the PSD significance level.

Summary of PSD Issues Addressed in Permit 35-AOP-R3

The Arkansas Steel facility has undergone PSD review under pervious permits. Summaries of the PSD issues of these permits are in the Permit History section of this permit. This modification to the Arkansas Steel facility adds the Ladle Metallurgy Station, SN-03, and an increase in production. This modification is significant only for CO, PM₁₀, and lead emissions. All other pollutants increases in emissions are below the PSD significance level.

Best Available Control Technology

The PSD regulations mandate that a case-by-case Best Available Control Technology (BACT) analysis be performed on all new or modified affected sources at which a net emissions increase will occur. The following table is a summary of the BACT determinations made in this permit for Arkansas Steel. BACT determinations for the facility made in previous permits can be found in the Permit History section of this permit.

	BACT Analysis Summary			
Source	Description	Pollutant	Control Technology	Bact Limit
01	EAF Baghouse	PM ₁₀ lead	Baghouse Baghouse DEC with air gap for CO combustion	0.0052 gr/dscf 3% of baghouse dust 0.6 lb/ton

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03	Ladle Metallurgy Station	PM ₁₀ CO	Baghouse DEC with air gap for CO combustion	0.0052 gr/dscf 0.6 lb/ton
04 05 06 07 12	Reheat Furnace Ladle Preheaters Ladle Dryer Tundish Preheaters Tundish Dryer	PM ₁₀ CO	Natural Gas Combustion	Good Combustion Practice
08 09	Paved and Unpaved Roads	PM ₁₀	Water Applications	6.9 tpy
10	Slag Processing	PM ₁₀	Water Applications	4.1 tpy
11	Baghouse Dust Handling	PM ₁₀ lead	No feasible controls	0.4 tpy

BACT Requirements for PM₁₀ and Lead Emissions

Particulate and lead emissions from SN-01, the electric arc furnace, EAF, are controlled by a baghouse. This is the only type of add on controls found for EAFs on the RACT/BACT/LAER clearinghouse. Since baghouses represent the highest level of particulate control, it is BACT for this source.

The emissions from SN-02, the Meltshop Fugitives, are un-captured emissions from the EAF, SN-01, the LMS, SN-03, and the natural gas combustion sources at the facility. Both the EAF and the LMS are controlled by baghouses. For the other sources, natural gas combustion is used to control particulate emissions. There were no additional controls found on the RACT/BACT/LAER clearinghouse for this type of source. The amount of airflow through the roof monitor, SN-02, make add on controls for this source unfeasible.

Particulate and lead emissions from SN-02, the Ladle Metallurgy Station (LMS), will be controlled by a baghouse. This is the only type of add on controls found for a LMS on the RACT/BACT/LAER clearinghouse. Since baghouses represent the highest level of particulate control, it is BACT for this source.

Sources SN-04, 05, 06, 07, and 12 are all combustion sources. BACT for these sources was found to be natural gas combustion to control particulate emissions.

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Arkansas Steel currently employs water sprays to reduce fugitive emission from their slag processing operation, SN-10. This type of control is consistent with those found on the RACT/BACT/LAER clearinghouse and is BACT for this source.

Arkansas Steel also currently applies water to their roads to reduce fugitive emissions caused by traffic on SN-8 and 9. This type of control will provide dust suppression equal to the level of control found on the RACT/BACT/LAER clearinghouse for this type of source and is BACT for this source.

BACT Requirements for CO Emissions

The only type of controls for carbon monoxide emissions found for electric arc furnace and the ladle metallurgy station on the RACT/BACT/LAER clearinghouse was a direct evacuation chamber DEC system. This is the current method of control for the EAF at Arkansas Steel and is what will be installed on the LMS. The DEC system represents BACT for these sources.

Sources SN-04, 05, 06, 07, and 12 are all combustion sources. BACT for these sources was found to be natural gas combustion combined with good combustion practice to control carbon monoxide emissions.

35-AOP-R3 Administrative Amendment

An Administrative Amendment to 35-AOP-R3 was issued on March 9, 2001. This amendment corrected a number of typographical errors in the permit.

35-AOP-R4

Permit 35-AOP-R4 was issued on August 21, 2002. This modification to Arkansas Steel's permit changed the rated heat input capacity for the ladle preheaters, SN-05, to allow both of the tundish preheaters, SN-07, to operate simultaneously, and to add a new tundish dryer, SN-12a. The new tundish dryer and allowed both preheaters to operate simultaneously were not large enough to trigger PSD review and did not debottleneck or increase capacity at the facility. The ladle preheater has undergone PSD review for some pollutants. The source was given PSD limits at its actual capacity.

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SECTION IV: SPECIFIC CONDITIONS

SN-01 EAF Baghouses

Source Description

The electric arc furnace (EAF) that Arkansas Steel Associates operates has a rated capacity of 50 tons and has a tap-to-tap time of approximately 45 to 55 minutes. The EAF typically requires three phases or periods of operation: scrap charging, melting and refining, and tapping. The EAF is subject to NSPS Subpart AA.

During charging, the roof of the EAF is opened and the furnace is charged with recycled scrap material. The charge is dropped into the furnace from a large crane bucket. Most of the resulting plume is captured in a deep storage canopy hood. Gases evacuated from the deep storage canopy hood are directed to two EAF baghouses, which have a combined flow rate capacity of 500,000 ACFM. That airflow is divided, roughly equally, between the two baghouses.

During melting and refining, the furnace remains covered. The direct evacuation system (DEC) pulls exhaust gases at approximately 3500°F from the "fourth hole" located at the top of the furnace. Because of the high temperature, a water-cooled duct is utilized. Combustion air is added to the duct at the "air gap" in order to combust carbon monoxide and volatile organic compounds coming from the furnace. Because of the residence time and high temperature, this is especially effective in destroying CO and VOC emissions. The DEC also increases particulate control by providing close capture of process emissions.

Exhaust gas from the DEC then enters a spark box. The spark box allows large particles to drop and provides additional residence time for CO combustion. The hot furnace gas is then mixed with approximately 380,000 ACFM of dilution air from the canopy hood. The dilution air lowers the overall temperature of the gas to about 250 degrees F before it enters the EAF baghouses. Of the two EAF baghouses one is a positive pressure shaker-type baghouse with 16 compartments. Each compartment of that baghouse has its own exhaust stack. The other baghouse is a negative pressure, pulse jet-type, baghouse with 12 compartments and a single stack.

After the melting and refining period is completed, the steel melted in the EAF is tapped into a refractory lined ladle. It hence goes to the ladle metallurgy station (SN-03). The molten steel is then cast into billets in the casting area of the facility. Though refining can take place in the EAF, the majority of refining takes place at the ladle metallurgy station, SN-03.

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Specific Conditions

1. The permittee shall not exceed the emission rates set forth in the following table at SN-01. Compliance with this condition shall be demonstrated by complying with the steel production limits specified in this permit and the testing in Specific Conditions 2, 5, and 12. [Regulation 19, §19.901 et seq., effective February 15, 1999 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM PM ₁₀ SO ₂ VOC CO NO _x Pb	11.3 11.3 41.0 25.0 420.0 50.0 0.4	49.2 49.2 152.0 92.0 1600.0 181.5 1.5

2. The permittee shall measure the particulate emissions from the EAF baghouses, SN-01, every twelve months. The sampling time and sample volume for each run shall be at least 4 hours and 4.50 dscm (160 dscf). Each test shall consist of three runs. The permittee shall test the single stack from the new baghouse with Method 5 and shall test 12 stacks from the old baghouse with Method 5D. The 12 stacks tested on the old baghouse are to be chosen at random, by the Department. Each of the three runs on the old baghouse shall be conducted on a group of 4 of those 12 stacks. Each run shall be conducted on four stacks not tested in a previous run. Each of the 4 stacks in a run shall be tested for at least one hour. The permittee shall notify the Department, in writing, at least 15 days prior to performing the tests. [Regulation 19, §19.702 and 40 CFR Part 52, Subpart E]

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- 3. The particulate concentration in the exhaust of SN-01 shall not exceed 0.0052 gr/dscf. Compliance with this condition shall be demonstrated by Method 5 testing as described in Specific Condition 2. [Regulation 19, §19.304 and 40 CFR Part 60.272(a)(1)]
- 4. The permittee shall not emit carbon monoxide emissions from SN-01 in excess of 6.0 pounds of CO per ton of steel produced, 0.35 pounds of VOC per ton of steel produced, 0.58 pounds of SO₂ per ton of steel produced or 0.5 pound of NO_x per ton of steel produced. The particulate concentration in the exhaust of SN-01 shall not exceed 0.0052 gr/dscf. The lead content of the baghouse dust shall not exceed 3.0% by weight. Compliance with this condition will be shown by Specific Conditions 2, 5, and 12. [Regulation 19, §19.901 et seq., effective February 15, 1999 and 40 CFR Part 52, Subpart E]
- 5. The permittee shall measure the VOC, CO, NO_x, and SO₂ emissions from SN-01 using method 25A, 10, 7E, and 6C, respectively, every twelve months. The permittee shall notify the Department, in writing, at least 15 days prior to performing the tests. The testing of the new baghouse shall be conducted with the testing of the existing baghouse on the annual schedule already established. [Regulation 19, §19.702 and 40 CFR Part 52, Subpart E]
- 6. The permittee shall not emit any gasses from SN-01 which have an opacity greater than 3%, as measured by Method 9. Visible emission observations shall be conducted on SN-01 at least once per day by a certified visible emission observer when the furnace is operating in the melting and refining period and records of these observations shall be kept on site and available for inspection. It shall be noted on the observation form that the readings were taken during the melting and refining period. These observations shall be performed for at least three 6-minute periods. These observations are only required on one of the seventeen baghouse stacks provided the observations are made for the stack of highest opacity that directly relates to the cause (or locations) of visible emissions observed during a single incident. These observations shall not be required when ASA personnel are receiving training. [Regulation 19, §19.304 and 40 CFR Part 60.272(a)(2)]
- 7. Pursuant to §19.705 of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52 Subpart E, the permittee shall submit a written report of exceedances of the EAF baghouse opacity to the Department semi-annually. All reports shall be postmarked by the 30th day following the end of each calendar half (July 30 and January 30). For the purposes of these reports, exceedances are defined as all 6-minute periods during which the average baghouse opacity is equal to 3% or greater during melting and refining periods. The permittee shall also comply with the reporting requirements in General Provision 7 of this permit. [Regulation 19, §19.705 and 40 CFR Part 52, Subpart E]

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- 8. The opacity limit specified in Specific Condition 6 shall not apply during periods of startup, shutdown, and malfunction. [Regulation 19, §19.304 and 40 CFR Part 60.8(c)]
- 9. The permittee shall perform monthly operational status inspections of the equipment that is important to the total capture system (i.e., pressure sensors, dampers, and damper switches). This inspection shall include observations of the physical appearance of the equipment (e.g., presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion). [Regulation 19, §19.304 and 40 CFR Part 60.274(e)]
- 10. Pursuant to 40 CFR 60.274(i), the permittee shall, during any emission or opacity testing on SN-01, monitor and record the following information for all heats covered by the tests:
 - 1. Charge weights and materials, and tap weights and materials.
 - 2. Heat times, including start and stop times, and a log of process operation, including periods of no operation during testing.
 - 3. Control device operation log.
 - 4. Continuous monitor or Reference Method 9 data.

[Regulation 19, §19.304 and 40 CFR Part 60.274(i)]

- 11. The permittee shall check and record on a once-per-shift basis the baghouse fan motor amperes and either damper positions or magnehelic pressure gauge readings. The permittee may check and record magnehelic pressure gauge readings on the baghouse ductwork instead of damper positions as an indicator of correct damper positions. For the new baghouse, a single magnehelic pressure gauge reading that provides the pressure drop across the entire baghouse shall suffice. For the old baghouse, either 16 magnehelic pressure gauge readings (one for each compartment) or a computer generated average of those 16 readings shall suffice. Operation of baghouse fan motor amperes values exceeding "15 percent of the value established during the last Method 5 test may be considered unacceptable operation and maintenance of the total capture system. Operation at such values shall be reported to the Department semiannually. All reports shall be postmarked by the 30th day following the end of each calendar half (July 30 and January 30). The permittee shall also comply with the reporting requirements in General Provision 7 of this permit. [Regulation 19, §19.304 and 40 CFR Part 60.274(b) and 60.274(a)]
- 12. The permittee shall demonstrate compliance with the lead emission limits by either 1) measure the lead concentration in the baghouse dust and calculate lead emissions by

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multiplying the measured particulate emissions by the lead concentration percentage in the baghouse dust, or 2) perform stack testing using Reference Method 12. These demonstrations shall be conducted on an annual basis. The testing of the new baghouse shall be conducted with the testing of the existing baghouse on the annual schedule already established [Regulation 19, §19.702 and 40 CFR Part 52, Subpart E]

- 13. The permittee shall not exceed 70 tons per hour of steel production. Compliance with this condition shall be determined by calculating the tonnage of steel tapped from the furnace over each day, then dividing the daily total amount of tapped steel by the number of operating hours. The permittee may use the density of steel (490 lb/ft³) in conjunction with the volume of steel produced to calculate the tonnage of steel produced each day. [Regulation 19, §19.901 et seq., effective February 15, 1999 and 40 CFR Part 52, Subpart E]
- 14. The permittee shall not exceed 526,000 tons per year of steel production based on a rolling 12-month total. Compliance with this condition shall be demonstrated on a monthly basis by totaling the steel production for the previous 12 months. [Regulation 19, §19.901 et seq., effective February 15, 1999 and 40 CFR Part 52, Subpart E]
- 15. The permittee shall maintain daily records of the tonnage of steel produced. The permittee shall also maintain monthly records of the tonnage of steel produced each month and the consecutive 12 month total of steel produced. These records should be updated by the 20th day of the month following the month the records represent and shall be submitted in accordance with General Condition 7. [Regulation 19, §19.901 et seq., effective February 15, 1999 and 40 CFR Part 52, Subpart E]

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SN-02 Meltshop Fugitive Emissions

Source Description

On November 15, 1993, Arkansas Steel measured and tabulated ventilation patterns from the melt shop. The roof monitor is a horizontal vent on top of the melt shop. The roof monitor is 175 feet long. It was determined at this testing that the volume of air exiting the roof monitor was approximately 10% of the total CFM. This flow rate was used in determining the fugitive particulate, CO, and VOC emissions from the roof monitor. The meltshop is subject to the opacity standards under NSPS-AA. An alternative monitoring plan has been approved by EPA for this facility, which allows daily opacity readings on the meltshop during melting and refining as an alternative to monitoring the pressure in the free space inside the electric arc furnace.

Specific Conditions

16. The permittee shall not exceed the following emission rates at SN-02. Compliance with this condition shall be demonstrated by complying with the steel production limits set forth in this permit. [Regulation 19, §19.901 et seq., effective February 15, 1999 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM	7.0	25.5
PM ₁₀	4.1	14.8
SO ₂	4.1	15.2
VOC	2.5	9.2
CO	44.0	168.0
NO _x	5.0	18.2
Pb	0.3	0.8

17. The permittee shall not emit any gases from the melt shop during melting and refining phases which have an opacity of 6% or greater. At least once per day when the furnace is operating in the melting and refining period, an observer certified in accordance with EPA Method 9 shall conduct visible emissions observations to determine the shop opacity. These observations shall be taken in accordance with EPA Method 9 for at least three 6-minute periods. Melting and refining phases shall mean the time period commencing at the termination of the initial charging period and ending at the initiation of the tapping period, excluding any intermediate charging periods. The opacity shall be recorded for any point(s) where visible emissions are observed. Where it is possible to

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determine that a number of visible emission sites relate to only one incident of the visible emissions, only one set of three 6-minute observations will be required. In this case, EPA Method 9 observations must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident. These opacity observations shall be recorded on a visible emission observations form. The information presented in Figures 9-1 and 9-2 to EPA Method 9 shall be recorded. Compliance with this condition shall be demonstrated by Specific Condition 20. These observations shall not be required when ASA personnel are receiving training. [Regulation 19, §19.304 and 40 CFR Part 60 Subpart AA]

- 18. The permittee shall not emit any gases from the melt shop during charging periods which have an opacity of 20% or greater. At least once per week when the furnace is in the charging period, an observer certified in accordance with EPA Method 9 shall conduct visible emissions observations to determine the shop opacity. These observations shall be taken in accordance with EPA Method 9 for at least one 6-minute period. Charging period shall mean the time period commencing at the moment the EAF starts to open and ending either three minutes after the EAF roof is returned to its closed position or six minutes after commencement of opening the roof, whichever is longer. Compliance with this condition shall be demonstrated by Specific Condition 20. These observations shall not be required when ASA personnel are receiving training. [Regulation 19, §19.304 and 40 CFR Part 60 Subpart AA]
- 19. The permittee shall not emit any gases from the melt shop during tapping periods which have an opacity of 40% or greater. At least once per week when the furnace is in the tapping period, an observer certified in accordance with EPA Method 9 shall conduct visible emissions observations to determine the shop opacity. These observations shall be taken in accordance with EPA Method 9 for at least one 6-minute period. Tapping period shall mean the time period commencing at the moment the EAF begins to tilt to pour and ending either three minutes after the EAF returns to an upright position or six minutes after commencing to tilt, whichever is longer. Compliance with this condition shall be demonstrated by Specific Condition 20. These observations shall not be required when ASA personnel are receiving training. [Regulation 19, §19.304 and 40 CFR Part 60 Subpart AA]
- 20. The permittee shall keep records of all opacity readings taken on the meltshop. The period when the opacity readings are performed shall be clearly marked on the opacity form. The period shall be marked either melting and refining, charging, or tapping. [Regulation 19, §19.705, and 40 CFR Part 52, Subpart E]
- 21. The permittee shall submit a written report of exceedances of the shop opacity to the Department semi-annually. All reports shall be postmarked by the 30th day following the

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end of each calendar half (July 30 and January 30). For the purposes of these reports, exceedances are defined as all 6-minute periods during which the average shop opacity is equal to 6% or greater during melting and refining periods, 20% or greater during charging periods, and 40% or greater during tapping periods. These reports shall clearly indicate which period the exceedance occurred in. The permittee shall also comply with the reporting requirements in General Provision 7 of this permit. [Regulation 19, §19.705, and 40 CFR Part 52, Subpart E]

22. Pursuant to 40 CFR 60.8(c), the opacity limits specified in Specific Conditions 17, 18, and 19 shall not apply during periods of startup, shutdown, and malfunction. [Regulation 19, §19.304 and 40 CFR Part 60.8(c)]

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SN-03 Ladle Metallurgy Station

Source Description

Before proceeding to the caster, the partially processed steel must typically undergo refining. This refining takes place in the Ladle Metallurgy Station (LMS), SN-03. At the LMS, the ladle is paused and another triad of carbon electrodes with a special roof for the ladle are set in place over the ladle and the partially processed molten steel. At this point, further alloying and refining of the steel to the desired metallurgical chemistry takes place. Emissions from this source are controlled by a baghouse.

In some instances, when further refining is not necessary, the molten steel may proceed directly to the caster without a pause at the LMS.

Specific Conditions

23. The permittee shall not exceed the following emission rates at SN-03. These rates were calculated based on continuous operation at rated capacity. Compliance with this condition shall be demonstrated by complying with the steel production limits set forth in this permit and Specific Condition 28. [Regulation 19, §19.901 et seq., effective February 15, 1999 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM	1.0	4.5
PM ₁₀	0.8	3.4
CO	42.0	160.0

- 24. Pursuant to §18.501 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not emit any gases from SN-03, the Ladle Metallurgy Station, which exhibit an opacity of 5% or greater. Compliance with this condition will be shown by Specific Condition 26. [Regulation 18, §18.501 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 25. The permittee shall not emit carbon monoxide emissions from SN-03 in excess of 0.6 pounds of CO per ton of steel produced nor shall the particulate concentration in the exhaust of SN-03 exceed 0.0052 gr/dscf. Compliance with this condition will be shown by Specific Condition 28. [Regulation 19, §19.901 et seq., effective February 15, 1999 and 40 CFR Part 52, Subpart E]

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- 26. The permittee shall conduct weekly observations of the opacity from SN-03. These weekly observations shall be conducted in accordance with EPA Reference Method 9. If visible emissions in excess of the permitted opacity are detected, the permittee shall immediately take action to identify the cause of the excess visible emissions, implement corrective action, and document that the visible emissions did not exceed the permitted opacity following the corrective action. These observations shall not be required when ASA personnel are receiving training. [Regulation 19, §19.705, and 40 CFR Part 52, Subpart E]
- 27. The permittee shall maintain records which demonstrate compliance with Specific Condition 29. These records shall contain the following items.
 - 1. The date and time of the observation;
 - 2. if visible emissions above the permitted limit were detected;
 - 3. if visible emissions above the permitted limits, list the cause of the exceedance of the opacity limits, the corrective action taken, and if the visible emissions are below the permitted limit after the corrective actions was taken; and
 - 4. the person conducting the opacity observations.

These records shall be updated weekly, kept on site, and made available to Department personnel upon request. [Regulation 19, §19.705, and 40 CFR Part 52, Subpart E]

28. The permittee shall measure the particulate and CO emissions from the LMS baghouse, SN-03, using EPA Reference Method 5 and 10 respectively. This test shall be conducted within sixty (60) days of achieving the maximum production rate, but in no event later than 180 days after initial start-up, and every 12 months thereafter. The permittee shall notify the Department, in writing, at least 15 days prior to performing the tests. [Regulation 19, §19.901 et seq., effective February 15, 1999 and 40 CFR Part 52, Subpart E]

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SN-04 Reheat Furnace

Source Description

After leaving the caster, the steel billets are processed through a natural gas fired reheat furnace. With the exception of startup, shutdown, and malfunction conditions, the rated heat input capacity of the reheat furnace is 67.97 MMBtu/hr. The reheat furnace is manufactured by Danieli Centro Combustion. Startup is expected in mid 1999. All combustion products are routed to a single stack. This source is not subject to NSPS-Dc because it is not used to heat steam, water, or any other heat transfer medium as defined in NSPS-Dc. The permitted NOx emissions from this new furnace is 43 tpy. The creditable NOx emissions decrease from retiring the old reheat furnace is 14 tpy. This resulted in a net emissions increase of 29 tpy, which is below the PSD significance level for NOx.

Specific Conditions

29. The permittee shall not exceed the following emission rates at SN-04. The hourly emission rates are based on the rated heat input capacity of the new Reheat Furnace 67.97 MMBtu/hr in conjunction with the vendor published emission factors. Compliance with this condition shall be demonstrated by Specific Conditions 32 and 33. [Regulation 19, §19.901 et seq., effective February 15, 1999 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM	1.0	4.2
PM_{10}	1.0	4.2
CO	4.3	18.0

30. The permittee shall not exceed the following emission rates at SN-04. The hourly emission rates are based on the rated heat input capacity of the new Reheat Furnace 67.97 MMBtu/hr in conjunction with the vendor published emission factors. Compliance with this condition shall be demonstrated by Specific Conditions 32 and 33. [Regulation 19, §19.501 et seq., and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpv
SO_2	0.1	0.2
VOC NO _x	0.4 14.0	1.7 43.0

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- 31. The permittee shall not exceed 5% opacity from SN-04. Compliance with this condition shall be demonstrated by Specific Conditions 32. [Regulation 18, §18.501 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 32. The permittee shall combust only pipeline quality natural gas at SN-04. [Regulation 19, §19.705, and 40 CFR Part 52, Subpart E]
- 33. The permittee shall not combust more than 596 million cubic feet of natural gas during any consecutive 12 month period at the reheat furnace. [Regulation 19, §19.901 et seq., effective February 15, 1999 and 40 CFR Part 52, Subpart E]
- 34. The permittee shall maintain records of the amount of natural gas combusted at the reheat furnace during each consecutive 12 month period. Each 12 month total shall be updated on a monthly basis. These records should be updated by the 20th day of the month following the month the records represent and shall be submitted in accordance with General Condition 7. [Regulation 19, §19.705, and 40 CFR Part 52, Subpart E]

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SN-05 Ladle Preheaters

Source Description

There are three ladle preheaters which are fired with natural gas. The rated heat input capacity is 5.4 MMBtu/hr each. These preheaters produce combustion emissions that vent inside the Melt Shop building.

Specific Conditions

The permittee shall not exceed the following emission rates at SN-05. These rates were calculated based on continuous operation at rated capacity. Compliance with this condition shall be demonstrated by firing only pipeline quality natural gas at SN-05. [Regulation 19, §19.901 et seq., effective February 15, 1999 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM	0.2	0.7
PM ₁₀	0.2	0.7
SO ₂	0.1	0.1
VOC	0.1	0.4
CO	1.4	5.9
NO _x	1.6	7.0

36. The permittee shall fire only pipeline quality natural gas at SN-05. [Regulation 19, §19.705, and 40 CFR Part 52, Subpart E]

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SN-06 Ladle Dryer

Source Description

Arkansas Steel operates a ladle dryer which is natural gas fired. The rated heat input capacity is 3.26 MMBtu/hr. The combustion emissions vent inside the melt shop.

Specific Conditions

The permittee shall not exceed the following emission rates at SN-06. These rates were calculated based on continuous operation at rated capacity. Compliance with this condition shall be demonstrated by firing only pipeline quality natural gas at SN-06. [Regulation 19, §19.901 et seq., effective February 15, 1999 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM	0.1	0.2
PM ₁₀	0.1	0.2
CO	0.1	0.3

38. Pursuant to §19.501 et seq of the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19) and 40 CFR Part 52 Subpart E, the permittee shall not exceed the following emission rates at SN-06. These rates were calculated based on continuous operation at rated capacity. Compliance with this condition shall be demonstrated by firing only pipeline quality natural gas at SN-06. [Regulation 19, §19.501 et seq., effective February 15, 1999 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
SO ₂	0.1	0.1
VOC	0.1	0.1
NO _x	0.3	1.3

39. The permittee shall fire only pipeline quality natural gas at SN-06. [Regulation 19, §19.705, and 40 CFR Part 52, Subpart E]

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SN-07 Tundish Preheaters

Source Description

Arkansas Steel operates two tundish preheaters which are natural gas fired. One has a rated heat input capacity of 4.47 MMBtu/hr; the other has a rated heat input capacity of 3.3 MMBtu/hr. These rated heat input capacities are based on information available from the manufactures of the burners used in the tundish preheaters. The combustion emissions are vented inside the meltshop.

Specific Conditions

40. The permittee shall not exceed the following emission rates at SN-07. These rates are based on continuous operation at rated capacity. Compliance with this condition shall be demonstrated by firing only pipeline quality natural gas at SN-07. [Regulation 19, §19.901 et seq., effective February 15, 1999 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM	0.1	0.3
PM ₁₀	0.1	0.3
SO ₂	0.1	0.1
VOC	0.1	0.2
CO	0.7	2.8
NO _x	0.8	3.4

41. The permittee shall fire only pipeline quality natural gas at SN-07. [Regulation 19, §19.705, and 40 CFR Part 52, Subpart E]

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SN-08 Unpaved Roads

Source Description

All calculations are based on AP-42, 5th Edition, Section 13.2, "Fugitive Dust Sources".

Specific Conditions

42. The permittee shall not exceed the following emission rates at SN-08. Compliance with this condition shall be demonstrated by complying with the annual steel production limit of this permit. [Regulation 19, §19.901 et seq., effective February 15, 1999 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM	n/a	14.0
PM_{10}	n/a	5.0

43. The permittee shall water all unpaved roads as necessary to prevent fugitive emissions from leaving the property boundary. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

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SN-09 Paved Roads

Source Description

All calculations are based on AP-42, 5th Edition, Section 13.2, "Fugitive Dust Sources".

Specific Conditions

44. The permittee shall not exceed the following emission rates at SN-09. Compliance with this condition shall be demonstrated by complying with the annual steel production limit of this permit. [Regulation 19, §19.901 et seq., effective February 15, 1999 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM	n/a	9.7
PM ₁₀	n/a	1.9

The permittee shall water all paved roads as necessary to prevent fugitive emissions from leaving the property boundary. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

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SN-10 Slag Processing

Source Description

Slag produced during the steel making process is handled at the mill and generates particulate emissions. Slag processing includes the loading and unloading of slag piles and also the crushing, conveying and screening of the material. Emissions are calculated based on AP-42 factors. Emissions from unpaved roads within the slag area are accounted for in SN-08. The slag represents approximately 11% of the total steel production. All the calculations are based on the tons per year of slag handled and the equations found in the above mentioned references.

46. The permittee shall not exceed the following emission rates at SN-10. The hourly limits are based on maximum rated capacity. Compliance with the ton per year limits shall be demonstrated by complying with the annual slag processing limit. [Regulation 19, §19.901 et seq., effective February 15, 1999 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM	5.7	8.3
PM ₁₀	2.9	4.1

- 47. Pursuant to §19.503 of the Arkansas State Plan of Implementation for Air Pollution Control (Regulation 19) and 40 CFR Part 52 Subpart E, the opacity from slag processing shall not exceed 20%, as measured by Reference Method 9. Slag processing shall include slag dumping (loading/unloading piles) and slag handling (conveying, screening). Compliance will be demonstrated by using water sprays as necessary. [Regulation 19, §19.503 and 40 CFR Part 52, Subpart E]
- 48. The permittee shall use water sprays as necessary to comply with the opacity limit for SN-10. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 49. The permittee shall not process more than 57,860 tons of slag per year based on a rolling 12 month total. [Regulation 19, §19.705, and 40 CFR Part 52, Subpart E]
- 50. The permittee shall keep records on the amount of slag processed each month and each 12 month period. These records shall be kept on site and be made available to Department personnel upon request. [Regulation 19, §19.705, and 40 CFR Part 52, Subpart E]

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SN-11 Baghouse Dust Handling

Source Description

Arkansas Steel collects baghouse dust in hoppers beneath each of the baghouse modules. Intermittently, the hoppers are emptied by screw conveyors that collect the dust and dump it deep into a stationary, covered, hopper-bottom railcar or other suitable container. The rotary air locks and screw conveyor are sealed to minimize emissions. The railcar is almost fully enclosed in a metal housing to minimize emissions from wind disturbing the transfer of dust. This source is subject to New Source Performance Standards-Subpart AA.

Specific Conditions

The permittee shall not exceed the emission rates set forth in the following table at SN-11. These emission rates are based on the dust collected in the baghouse which is dependent on the steel production rate. Compliance with this condition shall be demonstrated by complying with the annual steel production limit. [Regulation 19, §19.901 et seq., effective February 15, 1999 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM	0.2	0.5
PM ₁₀	0.1	0.4
Pb	0.1	0.1

- 52. The permittee shall not emit any gases from the dust handling equipment servicing the EAF baghouse which have an opacity of 10% or greater, as measured by Method 9. [Regulation 19, §19.304 and 40 CFR Part 60, Subpart AA]
- 53. The permittee shall conduct daily observations of the opacity from the dust handling equipment, and keep a record of these observations. For the purposes of this condition, the dust handling equipment shall include any equipment used to handle particulate matter collected by the baghouse and located at or near the baghouse. If visible emissions are detected, then the permittee shall conduct a 6-minute opacity reading in accordance with EPA Reference Method 9. The results of these observations shall be kept on site and made available for inspection upon request. These observations shall not be required when ASA personnel are receiving training on Method 9. [Regulation 19, §19.705, and 40 CFR Part 52, Subpart E]

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SN-12 and SN-12a Tundish Dryers

Source Description

Arkansas Steel operates two tundish dryers which are fired by natural gas. Each dryer has a rated heat input capacity of 2.8 MMBtu/hr. The combustion emissions are vented inside the Melt Shop.

Specific Conditions

54. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition shall be demonstrated by firing only pipeline quality natural gas at SN-12. [Regulation 19, §19.901 et seq., effective February 15, 1999 and 40 CFR Part 52, Subpart E]

Source	Pollutant	lb/hr	tpy
SN-12	PM	0.1	0.1
	PM ₁₀ CO	0.1	0.1 1.1

The permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition shall be demonstrated by firing only pipeline quality natural gas at SN-12 and 12a. [Regulation 19, §19.501 et seq., effective February 15, 1999 and 40 CFR Part 52, Subpart E]

Source	Pollutant	lb/hr	tpy
SN-12	SO_2 VOC NO_X	0.1 0.1 0.3	0.1 0.1 1.3
SN-12a	$\begin{array}{c} PM_{10} \\ SO_2 \\ VOC \\ CO \\ NO_X \end{array}$	0.1 0.1 0.1 0.3 0.3	0.1 0.1 0.1 1.1 1.3

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The permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition shall be demonstrated by firing only pipeline quality natural gas at SN-12a. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source	Pollutant	lb/hr	tpy
SN-12a	PM	0.1	0.1

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SN-13 Tie Plate Dipping Process

Source Description

Tie plates for certain customers of Arkansas Steel are dipped into a coating solution. The coating solution is applied to retard corrosion of the finished product, the tie plates, during overseas transport. The coating solution is an oil-based liquid. The Tie Plate Dipping Process typically is run no more often than once per year, 8 hours per day, over a 10 day period. The Tie Plate Dipping Process is carried out in a portion of the Rolling Mill south of the shipping offices.

Hourly emissions from this source assume all the allowable annual emissions are released in one day. Emissions also take into account the storage of the coatings since the emissions are based on the assumption that all VOC and HAPs in the purchased coatings are released to the atmosphere.

Specific Conditions

57. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition will be demonstrated by Specific Condition 59. [Regulation 19, §19.901 et seq., effective February 15, 1999 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	35.2	0.5

58. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition will be demonstrated by Specific Condition 61. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Xylene	0.76	0.0091

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- 59. The permittee shall not receive more than 250 gallons VOC containing material for use in the Tie Plate Dipping Process, SN-13, in any consecutive 12 month period. The permittee shall not use a material in the Tie Plate Dipping Process, SN-13, with a VOCe content greater than 3.37 pounds per gallon. Compliance with this condition will be demonstrated by Specific Condition 61. [Regulation 19, §19.705, and 40 CFR Part 52, Subpart E]
- 60. The permittee shall maintain monthly records of all VOC containing materials purchased for use in the Tie Plate Dipping Process, SN-13. These records shall show the VOC content in pounds per gallon as demonstrated by the manufactures MSDS sheet or equivalent, the total purchased each month and the 12 month rolling total. These records should be updated by the 15th day of the month following the month the records represent and shall be submitted in accordance with General Condition 7. [Regulation 19, §19.705, and 40 CFR Part 52, Subpart E]
- 61. The permittee shall not use a material in the Tie Plate Dipping Process, SN-13, with a xylene content greater than 0.068 pounds per gallon. The permittee may substitute another HAP for xylene provided that the TLV of the new HAP is greater than the TLV for xylene and the pound per gallon content is not greater than 0.068 pounds per gallon. The xylene content limit is the total of all xylene isomers including the o, m, and p isomers listed as contained in their current solvent. Compliance with this condition will be demonstrated by Specific Condition 62. [Regulation 18, §18.1004 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 62. The permittee shall maintain records of the xylene content of materials used in SN-13 as demonstrated by manufacturers MSDS or equivalent. These records shall include any calculation showing conversions from weight percent to pounds per gallon. If the permittee is substituting a HAP in the place of xylene the permittee must also maintain records showing the pound per gallon content for the new HAP and the TLV for both the new HAP and xylene. These records should be updated by the 15th day of the month following the month the records represent and shall be submitted in accordance with General Condition 7. [Regulation 18, §18.1004 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

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SECTION V: COMPLIANCE PLAN AND SCHEDULE

Arkansas Steel Associates, LLC will continue to operate in compliance with those identified regulatory provisions. The facility will examine and analyze future regulations that may apply and determine their applicability with any necessary action taken on a timely basis.

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SECTION VI: PLANTWIDE CONDITIONS

- 1. The permittee shall notify the Director in writing within thirty (30) days after commencing construction, completing construction, first placing the equipment and/or facility in operation, and reaching the equipment and/or facility target production rate. [Regulation 19, §19.704, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- 2. If the permittee fails to start construction within eighteen months or suspends construction for eighteen months or more, the Director may cancel all or part of this permit. [Regulation 19, §19.410(B) and 40 CFR Part 52, Subpart E]
- 3. The permittee must test any equipment scheduled for testing, unless stated in the Specific Conditions of this permit or by any federally regulated requirements, within the following time frames: (1) new equipment or newly modified equipment within sixty (60) days of achieving the maximum production rate, but no later than 180 days after initial start up of the permitted source or (2) operating equipment according to the time frames set forth by the Department or within 180 days of permit issuance if no date is specified. The permittee must notify the Department of the scheduled date of compliance testing at least fifteen (15) days in advance of such test. The permittee shall submit the compliance test results to the Department within thirty (30) days after completing the testing. [Regulation 19, §19.702 and/or Regulation 18 §18.1002 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- 4. The permittee must provide: [Regulation 19, §19.702 and/or Regulation 18, §18.1002 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
 - a. Sampling ports adequate for applicable test methods;
 - b. Safe sampling platforms;
 - c. Safe access to sampling platforms; and
 - d. Utilities for sampling and testing equipment.
- 5. The permittee must operate the equipment, control apparatus and emission monitoring equipment within the design limitations. The permittee shall maintain the equipment in good condition at all times. [Regulation 19, §19.303 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- 6. This permit subsumes and incorporates all previously issued air permits for this facility. [Regulation 26 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Permit Shield Provisions

7. Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements, as of the date of permit issuance, included in and specifically identified in the following table of this condition. The permit specifically identifies the

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following as applicable requirements based upon the information submitted by the permittee in an application dated March 20, 2003.

Applicable Regulations

Source No.	Regulation	Description
Facility	Arkansas Regulation 19	Regulations of the Arkansas State Implementation Plan for Air Pollution Control
Facility	Arkansas Regulation 26	Regulations of the Arkansas Operating Air Permit Program
1,2,11	40 CFR, Part 60, Subpart AA	Standards of Performance for Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974, and On or Before August 17, 1983
1,2,11	40 CFR, Part 60, Subpart A	New Source Performance Standards General Provisions
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 12a	40 CFR 52.21	Prevention of Significant Deterioration

The permit specifically identifies the following as inapplicable based upon information submitted by the permittee in an application dated March 30, 2003.

Inapplicable Regulations

Source No.	Regulation	Description	
SN-04 SN-05 SN-06 SN-07 SN-12	40 CFR, Part 60, Subpart Dc	New Source Performance Standards for Small Industrial Commercial-Institutional Steam Generating Units Because this source is not used to heat steam, water, or any other heat transfer medium as defined in NSPS-Dc. Therefore it does not meet the definition of "steam generating unit".	
SN-01 SN-02 SN-03 SN-04 SN-05 SN-06 SN-07 SN-11 SN-12	40 CFR, Part 60, Subpart AAa	Standards of Performance for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 17, 1983. Electric Arc Furnace Constructed before August 17, 1983	

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SECTION VII: INSIGNIFICANT ACTIVITIES

The following sources are insignificant activities. Any activity that has a state or federal applicable requirement shall be considered a significant activity even if this activity meets the criteria of §26.304 of Regulation 26 or listed in the table below. Insignificant activity determinations rely upon the information submitted by the permittee in an application dated March 30, 2003.

Description	Category
(8) Cooling Towers (8)	A-13
(2) 1100 gallon diesel storage tank	A-3
(1) 480 gallon above ground gasoline storage tank	A-13
(1) 120 gallon diesel storage tank	A-3
(1) 220 gallon used oil tank	A-3
(1) 580-gallon diesel storage tank	A-3
Parts washers that use a low vapor pressure organic solvent	A-13
15,000 gallon used oil tank that is above ground and surrounded by a berm.	A-13
Materials handling operations at the site including those associated with raw material, product moving and scrap handling.	A-13

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SECTION VIII: GENERAL PROVISIONS

- 1. Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.) as the sole origin of and authority for the terms or conditions are not required under the Clean Air Act or any of its applicable requirements, and are not federally enforceable under the Clean Air Act. Arkansas Pollution Control & Ecology Commission Regulation 18 was adopted pursuant to the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.). Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.) as the origin of and authority for the terms or conditions are enforceable under this Arkansas statute. [40 CFR 70.6(b)(2)]
- 2. This permit shall be valid for a period of five (5) years beginning on the date this permit becomes effective and ending five (5) years later. [40 CFR 70.6(a)(2) and §26.701(B) of the Regulations of the Arkansas Operating Air Permit Program (Regulation 26), effective August 10, 2000]
- 3. The permittee must submit a complete application for permit renewal at least six (6) months before permit expiration. Permit expiration terminates the permittee's right to operate unless the permittee submitted a complete renewal application at least six (6) months before permit expiration. If the permittee submits a complete application, the existing permit will remain in effect until the Department takes final action on the renewal application. The Department will not necessarily notify the permittee when the permit renewal application is due. [Regulation 26, §26.406]
- 4. Where an applicable requirement of the Clean Air Act, as amended, 42 U.S.C. 7401, et seq. (Act) is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, the permit incorporates both provisions into the permit, and the Director or the Administrator can enforce both provisions. [40 CFR 70.6(a)(1)(ii) and Regulation 26, §26.701(A)(2)]
- 5. The permittee must maintain the following records of monitoring information as required by this permit. [40 CFR 70.6(a)(3)(ii)(A) and Regulation 26, §26.701(C)(2)]
 - a. The date, place as defined in this permit, and time of sampling or measurements;
 - b. The date(s) analyses performed;
 - c. The company or entity performing the analyses:
 - d. The analytical techniques or methods used;
 - e. The results of such analyses; and
 - f. The operating conditions existing at the time of sampling or measurement.
- 6. The permittee must retain the records of all required monitoring data and support information for at least five (5) years from the date of the monitoring sample,

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measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. [40 CFR 70.6(a)(3)(ii)(B) and Regulation 26, §26.701(C)(2)(b)]

7. The permittee must submit reports of all required monitoring every six (6) months. If permit establishes no other reporting period, the reporting period shall end on the last day of the anniversary month of the initial Title V permit. The report is due within thirty (30) days of the end of the reporting period. Although the reports are due every six months, each report shall contain a full year of data. The report must clearly identify all instances of deviations from permit requirements. A responsible official as defined in Regulation No. 26, §26.2 must certify all required reports. The permittee will send the reports to the address below: [40 C.F.R. 70.6(a)(3)(iii)(A) and Regulation 26, §26.701(C)(3)(a)]

Arkansas Department of Environmental Quality Air Division ATTN: Compliance Inspector Supervisor Post Office Box 8913 Little Rock, AR 72219

- 8. The permittee shall report to the Department all deviations from permit requirements, including those attributable to upset conditions as defined in the permit.
 - a. For all upset conditions (as defined in Regulation19, § 19.601), the permittee will make an initial report to the Department by the next business day after the discovery of the occurrence. The initial report my be made by telephone and shall include:
 - i. The facility name and location
 - ii. The process unit or emission source deviating from the permit limit,
 - iii. The permit limit, including the identification of pollutants, from which deviation occurs,
 - iv. The date and time the deviation started,
 - v. The duration of the deviation,
 - vi. The average emissions during the deviation,
 - vii. The probable cause of such deviations,
 - viii. Any corrective actions or preventive measures taken or being taken to prevent such deviations in the future, and
 - ix. The name of the person submitting the report.

The permittee shall make a full report in writing to the Department within five (5) business days of discovery of the occurrence. The report must include, in addition to the information required by the initial report, a schedule of actions taken or planned to eliminate future occurrences and/or to minimize the amount the permit's limits were exceeded and to reduce the length of time the limits were exceeded. The

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permittee may submit a full report in writing (by facsimile, overnight courier, or other means) by the next business day after discovery of the occurrence, and the report will serve as both the initial report and full report.

b. For all deviations, the permittee shall report such events in semi-annual reporting and annual certifications required in this permit. This includes all upset conditions reported in 8a above. The semi-annual report must include all the information as required by the initial and full reports required in 8a.

[Regulation 19, §19.601 and §19.602, Regulation 26, §26.701(C)(3)(b), and 40 CFR 70.6(a)(3)(iii)(B)]

- 9. If any provision of the permit or the application thereof to any person or circumstance is held invalid, such invalidity will not affect other provisions or applications hereof which can be given effect without the invalid provision or application, and to this end, provisions of this Regulation are declared to be separable and severable. [40 CFR 70.6(a)(5), Regulation 26, §26.701(E), and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- 10. The permittee must comply with all conditions of this Part 70 permit. Any permit noncompliance with applicable requirements as defined in Regulation 26 constitutes a violation of the Clean Air Act, as amended, 42 U.S.C. §7401, et seq. and is grounds for enforcement action; for permit termination, revocation and reissuance, for permit modification; or for denial of a permit renewal application. [40 CFR 70.6(a)(6)(i) and Regulation 26, §26.701(F)(1)]
- 11. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit. [40 CFR 70.6(a)(6)(ii) and Regulation 26, §26.701(F)(2)]
- 12. The Department may modify, revoke, reopen and reissue the permit or terminate the permit for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. [40 CFR 70.6(a)(6)(iii) and Regulation 26, §26.701(F)(3)]
- 13. This permit does not convey any property rights of any sort, or any exclusive privilege. [40 CFR 70.6(a)(6)(iv) and Regulation 26, §26.701(F)(4)]
- 14. The permittee must furnish to the Director, within the time specified by the Director, any information that the Director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee must also furnish to the Director copies of records required by the permit. For information the permittee claims confidentiality, the Department may require the permittee to furnish such records directly to the Director

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along with a claim of confidentiality. [40 CFR 70.6(a)(6)(v) and Regulation 26, $\S26.701(F)(5)$]

- 15. The permittee must pay all permit fees in accordance with the procedures established in Regulation 9. [40 CFR 70.6(a)(7) and Regulation 26, §26.701(G)]
- 16. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes provided for elsewhere in this permit. [40 CFR 70.6(a)(8) and Regulation 26, §26.701(H)]
- 17. If the permit allows different operating scenarios, the permittee shall, contemporaneously with making a change from one operating scenario to another, record in a log at the permitted facility a record of the operational scenario. [40 CFR 70.6(a)(9)(i) and Regulation 26, §26.701(I)(1)]
- 18. The Administrator and citizens may enforce under the Act all terms and conditions in this permit, including any provisions designed to limit a source's potential to emit, unless the Department specifically designates terms and conditions of the permit as being federally unenforceable under the Act or under any of its applicable requirements. [40 CFR 70.6(b) and Regulation 26, §26.702(A) and (B)]
- 19. Any document (including reports) required by this permit must contain a certification by a responsible official as defined in Regulation 26, §26.2. [40 CFR 70.6(c)(1) and Regulation 26, §26.703(A)]
- 20. The permittee must allow an authorized representative of the Department, upon presentation of credentials, to perform the following: [40 CFR 70.6(c)(2) and Regulation 26, §26.703(B)]
 - a. Enter upon the permittee's premises where the permitted source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
 - b. Have access to and copy, at reasonable times, any records required under the conditions of this permit;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
 - d. As authorized by the Act, sample or monitor at reasonable times substances or parameters for assuring compliance with this permit or applicable requirements.
- 21. The permittee shall submit a compliance certification with the terms and conditions contained in the permit, including emission limitations, standards, or work practices. The permittee must submit the compliance certification annually within 30 days following the last day of the anniversary month of the initial Title V permit. The permittee must also

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submit the compliance certification to the Administrator as well as to the Department. All compliance certifications required by this permit must include the following: [40 CFR 70.6(c)(5) and Regulation 26, §26.703(E)(3)]

- a. The identification of each term or condition of the permit that is the basis of the certification:
- b. The compliance status;
- c. Whether compliance was continuous or intermittent;
- d. The method(s) used for determining the compliance status of the source, currently and over the reporting period established by the monitoring requirements of this permit;
- e. and Such other facts as the Department may require elsewhere in this permit or by §114(a)(3) and §504(b) of the Act.
- 22. Nothing in this permit will alter or affect the following: [Regulation 26, §26.704(C)]
 - a. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section;
 - b. The liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance;
 - c. The applicable requirements of the acid rain program, consistent with §408(a) of the Act or,
 - d. The ability of EPA to obtain information from a source pursuant to §114 of the Act.
- 23. This permit authorizes only those pollutant emitting activities addressed in this permit. [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]





