

ADEQ OPERATING AIR PERMIT

Pursuant to the Regulations of the Arkansas Operating Air Permit Program, Regulation #26:
Renewal #1
Permit #: 693-AOP-R5

IS ISSUED TO:

Quanex Corporation - MacSteel Division
5225 Planters Road
Fort Smith, AR 72916
Sebastian County
AFIN: 66-00274

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

AND IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.

Signed:

Keith A. Michaels

Date

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

SECTION I: FACILITY INFORMATION

PERMITTEE:	Quanex Corporation - MacSteel Division
AFIN:	66-00274
PERMIT NUMBER:	693-AOP-R5
FACILITY ADDRESS:	5225 Planters Road Fort Smith, AR 72916
COUNTY:	Sebastian
CONTACT POSITION:	Warren Taff, Jr.
TELEPHONE NUMBER:	(479) 648-5544
REVIEWING ENGINEER:	Bryan Leamons
UTM North-South (Y):	3907.765
UTM East-West (X):	374.963
Zone:	15

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

SECTION II: INTRODUCTION

Summary of Permit Activity

MacSteel, a division of Quanex Corporation, operates a scrap steel recycling mill near Fort Smith, in Sebastian County, Arkansas. MacSteel produces approximately 250 grades of steel including alloy, carbon, and resulfurized steels primarily from steel scrap using the electric arc furnace (EAF) process. The two electric arc furnaces (EAFs) at this facility are subject to all applicable regulations under the New Source Performance Standards (NSPS), Subpart AAa.

In this permitting action MacSteel is issued its first renewal of the original Title V Operating Permit. With all Title V renewal applications, facilities are required to submit a Compliance Assurance Monitoring (CAM) Plan for any emission units with potential pre-control emissions greater than 100 tons per year. It was determined that the only affected sources at this facility were the Melt Shop Baghouses (SN-01 and SN-12). MacSteel submitted the plan for these sources which has been approved and incorporated into the conditions of this permit.

Other permit actions included are two minor modifications approved on November 12, 2002, and January 31, 2003. The first of these minor modifications allows the installation and operation of a 53 MM Btu/hr natural gas-fired boiler (SN-30). Limited operation at SN-30 was required as not to exceed Title V minor modification criteria. The second minor modification allowed the use of landfill gas at the Heat Treat Furnace (SN-04). Both of these permit changes cause increased emissions in the form of the typical products of combustion.

A modification is also included in this permit action. This modification allows the unlimited use of the boiler allowed by the minor modification approved on November 12, 2002 (installation of SN-30 mentioned above). Unlimited operation of SN-30 does not trigger PSD review.

Process Description

In general, raw materials, including scrap, fluxes, iron carbide, direct reduced iron, hot briquetted iron, pig iron, and other materials, are brought to the facility by rail or truck. Scrap and flux are charged to EAFs and melted by application of electric current through the mixture. Molten metal is poured into a ladle and transferred by an overhead crane to a ladle refining station. Once the molten steel is transferred to the ladle refining station, additional alloys and reagents are added to adjust the chemistry.

From the ladle refining station, the steel is transferred to the stir station and vacuum arc degasser. At the stir station, the steel is stirred by the introduction of argon gas into the bottom of the ladle. Additional alloys also may be added to adjust the chemistry. The steel is then transferred to the vacuum arc degasser. At the degasser, dissolved gases are removed by subjecting the steel to a

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

vacuum. Heat also may be added to the steel with the use of electric arcs.

After leaving the degasser, the steel is transferred to a caster where it is drained from the ladle into a tundish and then into the molds. At the caster, the steel solidifies to a round bar. The bars are cut to length and transferred to either the “as cast” cooling bed or directly to the reheat furnace. Bars transferred to the “as cast” cooling bed are sold or stored for future processing.

In the reheat furnace, the steel bars are heated to the temperature required for rolling. The bars are then rolled to a smaller diameter. Bars exiting the rolling mill are cut to length and transferred to the “rolled product” cooling bed. The bars are then deburred and bundled for shipment, for further processing in the heat treat furnaces and/or bar turner.

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

Regulations

This facility is subject to the following regulations: Regulation 18, *Arkansas Air Pollution Control Code*; Regulation 19, *Regulations of the Arkansas Plan of Implementation for Air Pollution Control*; Regulation 26, *Regulations of the Arkansas Operating Air Permit Program*; 40 CFR 52.21, *Prevention of Significant Deterioration*; and New Source Performance Standards (NSPS), 40 CFR Part 60, Subpart AAa - *Standards of Performance for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983* (See Appendix A). With the addition of SN-30 the facility becomes subject to NSPS, 40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial - Commercial - Institutional Steam Generating Units* (See Appendix B). At the time of application for Title V renewal, this facility is subject to 40 CFR Part 64, *Compliance Assurance Monitoring (CAM)*.

The following table is a summary of emissions from the facility. Specific conditions and emissions for each source can be found starting on the page cross referenced in the table. This table, in itself, is not an enforceable condition of the permit.

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

EMISSION SUMMARY					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
Total Allowable Emissions		PM/PM ₁₀	33.7	129.2	NA
		SO ₂	91.6	335.3	
		VOC	22.4	87.2	
		CO	454.7	1691.7	
		NO _x	84.5	338.5	
		Pb	0.3	1.0	
		Manganese	0.93	3.41	
		Cadmium	0.01	0.03	
		Arsenic	0.01	0.01	
		Methyl Ethyl Ketone	0.41	1.80	
SN-01	Melt Shop Baghouse 1	PM/PM ₁₀	27.4	100.3	12
		SO ₂	90.3	331.6	
		VOC	12.0	43.9	
		CO	421.4	1547.4	
SN-12	Melt Shop Baghouse 2	NO _x	43.9	161.1	
		Pb	0.3	1.0	
		Manganese	0.93	3.41	
		Cadmium	0.01	0.03	
SN-02	Reheat Furnace	Arsenic	0.01	0.01	
		PM/PM ₁₀	0.7	2.7	20
		SO ₂	0.1	0.2	
		VOC	0.2	0.6	
		CO	1.6	6.9	
SN-03	Boiler	NO _x	6.3	27.6	
		PM/PM10	0.7	2.7	22
		SO2	0.1	0.2	
		VOC	0.2	0.6	
		CO	1.6	6.9	
SN-04	Heat Treat Furnace 1	NOx	6.3	27.6	
		PM/PM ₁₀	0.6	2.3	24
		SO ₂	0.5	2.0	
		VOC	0.5	2.0	
		CO	1.3	5.7	
		NO _x	9.6	41.8	

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

EMISSION SUMMARY					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
SN-05	Heat Treat Furnace 2	PM/PM ₁₀	0.6	2.3	24
		SO ₂	0.1	0.2	
		VOC	0.2	0.5	
		CO	1.4	5.9	
		NO _x	5.4	23.6	
SN-06	Caster	Vented to SN-01/SN-12			12
SN-07	Ladle Metallurgy Furnace	Vented to SN-01/SN-12			12
SN-08	Tundish Preheaters (4)	Vented to SN-01/SN-12			12
SN-09	Ladle Dryout, Refractory Dryers (6), Ladle Preheaters (4)	Vented to SN-01/SN-12			12
SN-10	Deburring Line	PM/PM ₁₀	0.2	0.8	26
SN-11	Heat Treat Furnace 3	PM/PM ₁₀	0.9	3.9	24
		SO ₂	0.1	0.2	
		VOC	0.2	0.8	
		CO	6.0	26.2	
		NO _x	5.0	21.7	
SN-13	Vacuum Arc Degasser (during degassing mode only, all other times vented to SN-01 and SN-12)	PM/PM ₁₀	0.5	1.9	28
		SO ₂	0.1	0.5	
		CO	16.1	70.3	
		NO _x	0.1	0.5	
SN-14	Caster Steam Exhaust No. 1	PM/PM ₁₀	0.2	0.7	39
SN-15	Bar Turner Building	VOC	1.3	5.6	30
SN-21	Scrap Bar Cutting	PM/PM ₁₀	0.2	0.8	31
		SO ₂	0.1	0.1	
		VOC	0.1	0.3	
		CO	0.3	1.0	
		NO _x	1.1	4.8	
SN-22	Slag Processing	PM/PM ₁₀	n/a	3.8	33

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

EMISSION SUMMARY					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
SN-23	Hydraulic Fluid Usage	VOC	3.4	14.8	35
SN-24	Painting/Labeling of Steel Bars	VOC Methyl Ethyl Ketone	1.3 0.41	5.4 1.8	36
SN-25	Bar Turner Building #2	VOC	1.3	5.6	30
SN-26	Car Bottom Furnace	PM/PM ₁₀ SO ₂ VOC CO NO _x	0.1 0.1 0.1 0.5 1.5	0.2 0.1 0.2 1.9 6.6	38
SN-27	Bar Turner Building #3	VOC	1.3	5.6	30
SN-29	Caster Steam Exhaust No. 2	PM/PM ₁₀	1.2	5.0	39
SN-30	53 MM Btu/hr Natural Gas Fired Boiler	PM/PM ₁₀ SO ₂ VOC CO NO _x	0.4 0.1 0.3 4.5 5.3	1.8 0.2 1.3 19.5 23.2	40

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

SECTION III: PERMIT HISTORY

Minor Source Permit 693-A was issued on October 1, 1982, with emissions of each criteria pollutant permitted at less than 100 tons per year.

Permit 693-AR-1 was issued on January 3, 1990, allowing the installation of a new ladle furnace.

PSD permit 693-AR-2 was issued on October 28, 1993. This permit was a result of testing on the baghouse exhaust which showed emissions greater than 100 tons per year for NO_x, PM/PM₁₀, CO, and SO₂. The minor source baseline date was triggered by the submittal of that PSD application. The minor source baseline date is January 8, 1993 for Sebastian County.

On April 5, 1994, permit 693-AR-3 was issued so that automated steel bar deburring equipment could be installed. This permit was a minor modification. A collection system, consisting of both a cyclone and a fabric filter, was installed to control emissions from this source. This is an 8,500 cfm system. The manufacturer's estimated emission rate is 0.0025 gr/scfm or 0.18 lb/hr.

On January 27, 1995, permit 693-AR-4 was issued for the installation of a spark arrestor in the Ladle Metallurgical Furnace duct. An investigation in the cause of failing a recent particulate test of the baghouse revealed that an increased amount of spark carry over from the LMF was damaging the filter media in the baghouse. None of the emission rates were affected by that modification.

Permit 693-AOP-R0 was issued on February 18, 1998, and allowed the installation and operation of a second baghouse to control emissions from the melt shop, increasing steel production from 74 to 86 tons per hour, incorporating minor emission sources previously not permitted (heat treat #3 and bar turner #2), and revising emission factors based on continuous emission monitoring data and changes to AP-42 for natural gas combustion. This permit was the second PSD permit and the first Title V permit for this facility. A summary of the PSD review for permit 693-AOP-R0 is presented below.

Summary of PSD review for air permit 693-AOP-R0

The following describes the PSD review required for issuance of Permit 693-AOP-R0. These issues are presented here for information purposes only, and are not part of this modification.

MacSteel is considered a major stationary source under the PSD regulations. Permit 693-AOP-R0 included sulfur dioxide (SO₂), carbon monoxide (CO), nitrogen dioxide (NO₂), particulate matter (PM/PM₁₀), and lead (Pb) emission increases of 185.3 tpy, 308.7 tpy, 47.6 tpy, 75.7 tpy, 0.68 tpy, respectively. These increases exceeded the PSD significance levels and were subject to PSD review. Emission increases of 23.3 tpy volatile organic compounds (VOC) were below the

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

significance level, therefore, VOC emissions were not subject to PSD review.

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 enhancing the mill's steel production and heat treat furnace #3. The BACT determination is summarized below.

Summary of BACT Determination			
Source	Description	Pollutant	Control Technology
SN-01 SN-12	Electric Arc Furnaces (2 baghouses)	PM/PM ₁₀	Fabric Filter
		SO ₂	Use of high quality scrap
		CO	Side draft hood system
		NO _x	Oxyfuel natural gas burners
		Pb	Fabric Filter
SN-06	Caster	PM/PM ₁₀	Routed to baghouse
SN-11	Heat Treat Furnace #3	PM/PM ₁₀	Combustion of natural gas
		SO ₂	Combustion of natural gas
		CO	Good combustion practices
		NO _x	Ultra low-NO _x burners
SN-22	Slag processing and storage piles	PM/PM ₁₀	Water spray on transfer points and slag dumping area
SN-07	Ladle Metallurgy Furnace (LMF)	PM/PM ₁₀	Routed to Fabric Filters (SN-01 and SN-12)

Permit 693-AOP-R1 was issued on December 11, 1998. It consisted of adding a car bottom furnace (heat input of 5 MMBtu/hr), changing the hydraulic fluid used from ethylene glycol to diethylene glycol, including an alternative status inspection procedure for the melt shop baghouses, and adding sources to the insignificant source list.

Permit 693-AOP-R2 issued on December 4, 2000. It included removal of the hourly steel production limit of 86 tons per hour which was justified by the requirement to operate continuous emission monitors on the two EAF baghouses. The permit also included newly calculated emission limits for affected sources using an hourly production rate of 92 tph. The annual steel production limit remained unchanged. The increase of steel production to 92 tph resulted in a facility wide increase of 0.1 tpy of PM/PM₁₀, 0.3 tpy of SO₂, 0.3 tpy of NO_x, 4.6 tpy of CO, 4.5 tpy of VOC, and 0.3 tpy of HAPs.

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

Permit 693-AOP-R3 was issued on March 9, 2001. It included the addition of two new buildings to be located on the property immediately south of the existing facility. These buildings include one new source, Bar Turner Building #3, and one insignificant source, bar straighteners. The potential to emit for the new source was 5.6 tons per year of VOC.

Permit 693-AOP-R4 was issued on March 27, 2002. In this modification MacSteel was permitted to construct a second steam exhaust (SN-29) for the caster area to remove excess steam within the building. The current steam exhaust (SN-14), which is currently listed as an insignificant activity, must also be included in the permit as a source. The annual emission for SN-14 was 0.66 tpy, and the annual emission for SN-29 was 5 tpy. The permittee maintained all limits and recordkeeping requirements as stated in the past permit.

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

SECTION IV: EMISSION UNIT INFORMATION

SN-01 and SN-12 Melt Shop Baghouses

Process Description

Scrap iron and steel and scrap substitutes are received by rail and truck. After unloading, the scrap is either stored in stockpiles or loaded into furnace charging buckets. The scrap, lime, alloys, and coke/coal are charged into one of two electric arc furnaces (EAFs). Lime and carbon (fluxes) are handled and stored in bulk form. Charging and melting cycles are staggered between the furnaces. There are no limitations which would preclude tapping both furnaces at the same time or charging one furnace while tapping the other. The combined capacity of the two EAFs is 92 tons of steel per hour and the operating hours are limited to 7,344 hours per year per furnace. The two EAFs are subject to NSPS-AAa (See Appendix A).

The two EAFs operate in a batch mode. During normal operation, cold scrap metal, scrap substitutes, coke/coal, and lime are charged into the brick-lined EAFs (15 feet in diameter) powered by transformers and auxiliary natural gas-fired oxy fuel burners. The charging and melting cycles are staggered between the furnaces. After charging the furnace(s), the lid or roof of the EAF(s) is swung into position and a large electrical potential is applied to the carbon electrodes. The combination of the heat from the arcing process, chemical energy from oxygen lances, and the heat from the auxiliary burners melt the scrap into molten steel. As the scrap begins to melt, the temperature of the exhaust gas from the EAF(s) increases appreciably. When the melting is complete and oxygen lancing is performed, the temperature of the molten steel can approach 3,000EF. This operational cycle is repeated approximately every 90 minutes.

The capture system for exhaust gases from the EAFs is comprised of furnace side draft hoods and an overhead roof exhaust system via a canopy hood. The side draft hood on each furnace encompasses the electrodes and other furnace roof penetrations. Side draft hoods were installed as original equipment in 1984 to allow the furnaces to operate under positive pressure which prevents reoxidation of the steel during the refining process. These hoods are the primary emission capture mechanism during furnace roof-on operations. During roof-off operations (charging and tapping) and cooling of the captured gases from the side-draft hoods, emission control is accomplished by regulating the gas flow rate through the roof canopies which enables the system to control the exit gas temperature to the baghouse inlets.

After the steel is melted, it is refined at the ladle refining station through the addition of alloys and reagents, along with heat. Emissions from the refining process are collected by a side-draft hood and ducted through a spark arrestor and into the melt shop baghouse (SN-01). Fugitive emissions from the refining process are collected by melt shop baghouses (SN-01 and SN-12). Refined steel is conveyed to a stir station where argon gas is added to the bottom of the ladle. At

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

this stage, additional alloys can be added. The steel is then conveyed to a vacuum arc degasser (SN-13) where dissolved gases are removed through application of a vacuum. Emissions from the stir station and vacuum arc degasser (door open) are collected with hoods and ducted to the baghouses. Emissions from the vacuum arc degasser are collected by the steam injector when the door is closed.

After the temperature and composition of the molten steel is adjusted at the vacuum degasser, the molten steel is transferred to the continuous caster. The molten steel is poured from the ladle into a tundish, which funnels the molten steel into a mold. The steel solidifies as it passes through the water-cooled mold, providing immediate cooling of the outer skin. At this point, the center of the steel is still molten. The caster produces round bars. Emissions from the continuous caster are captured by the canopy hood and ducted to the melt shop baghouses (SN-01, SN-12). This hood is estimated to capture 100% of emissions generated at the caster. Exhausts from the caster cooling zones and caster hot saws are released to the atmosphere through a vent. To estimate PM emissions from this vent, a stack test was conducted. The results of the test indicated a maximum emission rate, adjusted for 92 ton/hr production, of 0.16 lb/hr. Thus, the caster cooling zone and hot saw exhaust vent are considered insignificant sources.

Molten metal is tapped from the EAFs into a ladle and transported to the ladle metallurgy furnace (LMF). The LMF station is used primarily to adjust the composition and temperature of the steel. The processes conducted at the LMF station include the injection/addition of alloys, fluxes, and non-ferrous metals. Emissions from the LMF station can be either gaseous or in particulate form. Particulate emissions are generally attributed to dust associated with fluxes, slag, and various additives. Gaseous emissions are generally associated with the oxidation of metals. Emissions from the LMF are captured by the side-draft hood and ducted to the EAF baghouse (SN-01). Fugitive emissions from the LMF are collected by melt shop baghouses (SN-01 and SN-12).

MacSteel utilizes four natural gas-fired tundish preheaters, each with a maximum heat input capacity of 1.2 MMBtu/hr. These units are used to raise the temperature of the tundishes prior to transfer of molten steel from the ladles. Low-NO_x burners are used in the preheaters to minimize emissions of nitrogen oxides. The tundish preheaters emit natural gas combustion by-products which are captured by the roof canopy system and ducted to the EAF baghouses (SN-01 and SN-12).

Ladle preheaters. MacSteel incorporates three natural gas-fired ladle preheaters, two with a maximum heat input of 9 MMBtu/hr and one with a maximum heat input capacity of 5.5 MMBtu/hr. These units are used to raise the temperature of the ladles prior to transfer of molten steel from the ladles. Low-NO_x burners are used in the preheaters to minimize emissions

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

of nitrogen oxides. Emissions from these preheaters are vented to the melt shop baghouses and are addressed in the section discussing emission points SN-01 and SN-12.

Ladle Dryout, Refractory Dryers. MacSteel utilizes numerous ladles and tundishes. Each ladle or tundish requires a certain amount of refractory brick. After time, the refractory lining in the ladles and tundishes needs to be replaced. The removal of the refractory lining is accomplished using jack hammers. This operation is associated with the emission of small amounts of particulate in the building. As such refractory removal is considered an insignificant activity. After removal of the old refractory lining, new refractory is applied and cured. The mill incorporates one (1) natural gas-fired ladle dryout with a maximum heat input capacity of 1.2 MMBtu/hr and six (6) natural gas-fired refractory dryers each with maximum heat input capacity of 1.2 MMBtu/hr.

Emissions from the Caster, Ladle Metallurgy Furnace (LMF), Tundish Preheaters, Ladle Dryout, Refractory Dryers, and Ladle Preheaters, are vented to the EAF baghouses (SN-01 and SN-12).

The dust collection equipment for the two EAFs, LMF, caster, stir station, vacuum arc degasser, and other melt shop emission sources consists of two multi-compartment, positive pressure baghouses (SN-01 and SN-12). Each module contains multiple filter bags, with all necessary reverse-air bag cleaning mechanisms, flow control, and material transfer and removal equipment. The design of the baghouses allows for on-line maintenance and cleaning. The air-moving mechanism for the systems consists of multiple blowers. SN-01 has a single exhaust stack, while SN-12 has a roof monitor vent along the length of the roof.

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

Specific Conditions

SN-01 and SN-12 - Melt Shop Baghouses

1. Pursuant to §19.501 and §19.901 of the Regulations 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 emission rates set forth in the following table.

SN	Pollutant	lb/hr	tpy
SN-01	PM ₁₀	27.4	100.3
	SO ₂	90.3	331.6
SN-12	CO	421.4	1547.4
	NO _x	43.9	161.1
	Pb	0.3	1.0

2. Pursuant to §18.801 and A.C.A §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed emission rates set forth in the following table.

SN	Pollutant	lb/hr	tpy
SN-01	Manganese	0.93	3.41
SN-12	Cadmium	0.01	0.03
	Arsenic	0.01	0.01

3. Pursuant to §19.901 and 40 CFR Part 52, Subpart E the permittee shall not exceed the emission rates set forth in the following table.

SN	Pollutant	lb/hr	tpy
SN-01	PM	27.4	100.3
SN-02			

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

4. Pursuant to §19.501 and 40 CFR Part 52, Subpart E, the combined emissions from SN-01 and SN-12 shall not exceed the values in the following table as measured by EPA Reference Method 25A.

SN	Pollutant	lb/hr	tpy
SN-01	VOC	12.0	43.9
SN-12			

5. Pursuant to §19.901, §19.304, 40 CFR Part 64, 40 CFR Part 52, Subpart E, and 40 CFR 60.275a(e), the permittee shall measure the particulate emissions from the melt shop baghouse SN-01 using method 5, and the melt shop baghouse SN-12 using method 5D, on or before April 26, 1998, and every six months thereafter. 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 test runs on both baghouses shall be conducted simultaneously, unless inclement weather interferes. To demonstrate compliance with the particulate limit (0.0018 gr/dscf and 27.4 lb/hr), the concentration of particulate matter shall be determined using the following equation:

$$CST = \frac{C_1 * Q_1 + C_2 * Q_2}{Q_1 + Q_2}$$

where: CST= average concentration of particulate matter
 C_1 = concentration of PM from SN-01 (gr/dscf)
 C_2 = concentration of PM from SN-12 (gr/dscf)
 Q_1 = flow rate of stack gas from SN-01 (dscf/hr)
 Q_2 = flow rate of stack gas from SN-12 (dscf/hr)

The permittee shall notify the Department, in writing, at least 15 days prior to performing the tests. If the permittee has demonstrated consistent compliance with the PM/PM₁₀ emission limits, the permittee shall be required to measure the particulate emissions from SN-01 and SN-12 on an annual basis. Consistent compliance shall be demonstrated if the last three successive stack tests are within emission limits.

6. Pursuant to §19.501, §19.901, and 40 CFR Part 52, Subpart E, the average concentration of particulate matter from SN-01 and SN-12 calculated using the equation in Specific Condition 5 (CST) shall not exceed 0.0018 gr/dscf.
7. Pursuant to §19.702, 40 CFR Part 64, and 40 CFR Part 52, Subpart E, the permittee shall measure the VOC emissions from the melt shop baghouse SN-01 using method 25A, and the melt shop baghouse SN-12 using method 25A, on or before April 26, 1998, and every six months thereafter. The test runs on both baghouses shall be done simultaneously. The permittee shall notify the Department, in writing, at least 15 days prior to performing

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

the tests. If the permittee has demonstrated consistent compliance with the VOC emission limit, the permittee may measure the VOC emissions from SN-01 and SN-12 on an annual basis. Consistent compliance is maintained when the last three successive stack tests are within emission limits.

8. Pursuant to 40 CFR 60.272a(a)(2), §19.901, §19.304, 40 CFR Part 64, and 40 CFR Part 52, Subpart E, the permittee shall not emit any gases from SN-01 or SN-12 with an average opacity of 3% or greater, as measured by method 9. Visible emission observations shall be conducted on SN-12 at least once-per-day by a certified visible emission observer when at least one of the furnaces is operating in the melting and refining period, unless inclement weather prevents. 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.
9. Pursuant to 40 CFR 60.272a(a)(3), §19.901, §19.304, 40 CFR Part 64, and 40 CFR Part 52, Subpart E, the permittee shall not emit any gases from the melt shop due solely to the operations of the EAFs with an opacity of 6% or greater, as measured by method 9 during the particulate testing. The permittee shall be responsible for these observations and shall keep records showing compliance with this condition. These observations shall be performed for at least three 6-minute periods.
10. Pursuant to 40 CFR 60.272a(b), §19.304, 40 CFR Part 64, and 40 CFR Part 52, Subpart E, the permittee shall not emit any gases from the dust handling systems servicing the EAF baghouses with an opacity of 10% or greater. The permittee shall conduct weekly observations of the opacity from the dust handling system, and keep a record of these observations. If visible emissions are detected, then the permittee shall conduct three 6-minute opacity readings on the equipment where visible emissions were observed in accordance with EPA Reference Method 9. The results of these observations shall be kept on site and made available for inspection upon request. For the purposes of this condition, the dust handling system consists of the baghouse dust hoppers, the dust-conveying equipment, any central dust storage equipment, the dust-treating equipment (e.g., pug mill, pelletizer), dust transfer equipment (from storage to truck), and any secondary control devices used with the dust transfer equipment.
11. Pursuant to 40 CFR 60.273a(a), 40 CFR Part 64, and §19.304, the permittee shall install, calibrate, maintain, and operate a continuous monitoring system for the measurement of the opacity of emissions discharged into the atmosphere from SN-01. The opacity shall not exceed 3% based on a 6-minute average.

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

12. Pursuant to 40 CFR 60.274a(d), 40 CFR 60.276a(c), 40 CFR Part 64, and §19.304, the permittee shall perform monthly operational status inspections of the equipment that is important to the total capture system. This inspection shall include observations of the physical appearance of the exterior of the capture system for the presence of holes or leaks, on a monthly basis. The permittee shall also continuously monitor the flow rates to the two EAF baghouses using existing flow monitors which were installed on the baghouses. The permittee shall use these flow rates to continuously determine if fan erosion, dust accumulation on the interior of the ducts, or damper positions is unacceptable. For the purposes of this condition, unacceptable operation shall be defined as flow rates less than the baseline flow rate determined during the semiannual particulate testing. Operation at flow rates during any period less than the most recently determined baseline flow rate may be considered unacceptable operation and maintenance of the capture system. Operation at such values shall be reported to the Department semiannually.
13. Pursuant to 40 CFR 60.274a(h), 40 CFR Part 64, and §19.304, the permittee shall, during any emission testing on the baghouses, monitor and record the following information for all heats covered by the tests:
 - a. Charge weights and materials, and tap weights and materials.
 - b. Heat times, including start and stop times, and a log of process operation, including periods of no operation during testing.
 - c. Control device operation log.
 - d. Continuous monitor and Reference Method 9 data.
14. Pursuant to 40 CFR 60.274a(b) §19.304, the permittee shall install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate through both baghouses (SN-01 and SN-12). The flow monitors may be installed in any appropriate location such that reproducible flow rate monitoring will result. The flow rate monitoring devices shall have an accuracy of $\pm 10\%$ over its normal operating range and shall be calibrated according to the manufacturer's instructions.
15. Pursuant to §19.703, 40 CFR Part 64, 40 CFR Part 52, Subpart E, and A.C.A §8-4-203 as referenced by §8-4-203 and §8-4-311, the permittee shall install, calibrate, and maintain a continuous emission monitoring system (CEMS) for each baghouse (SN-01 and SN-12). The CEMS shall measure and record the concentrations of CO, NO_x, and SO₂ leaving each baghouse, simultaneously. Both systems shall be operated in accordance with the *Arkansas Continuous Emission Monitoring Systems Conditions*.

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

16. Pursuant to §19.501 and §19.901 and 40 CFR Part 52, Subpart E, the combined CO, NO_x, and SO₂ emissions from SN-01 and SN-12 shall not exceed the values listed in Specific Condition 1. The averaging time for compliance purposes shall be 3-hour rolling averages, such that a new 3-hour average is computed every hour. Compliance with the tons/year emission rates shall be determined on a monthly basis based on a rolling 12-month total of the CEMS data. The permittee shall submit reports in accordance with General Provision 7.
17. Pursuant to §19.702 and 40 CFR Part 52, Subpart E, the permittee shall demonstrate compliance with the lead emission limits by either 1) measuring the lead concentration in the baghouse dust and calculating lead emissions by multiplying the measured particulate emissions by the lead concentration percentage in the baghouse dust, or 2) performing stack testing using Reference Method 12, simultaneously on both baghouses. These demonstrations shall be conducted on an annual basis.
18. Pursuant to A.C.A §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall control volatile organic compound emissions through the use of an extensive scrap management program to eliminate steel scrap with high residual oil content. The permittee shall not use heavily oiled scrap such as used engine blocks and machine shop borings. The permittee may use in-house turnings and turnings from regional customers provided the turnings are from operations using water based soluble oils.
19. Pursuant to §19.901, §18.1004, 40 CFR Part 52, Subpart E, 40 CFR Part 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed 631,584 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.
20. Pursuant to §19.705, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E, the permittee shall maintain records on site of the tonnage of steel produced during each month to verify compliance with Specific Condition 19. The permittee shall submit reports in accordance with General Provision 7.
21. Pursuant to §19.901, 40 CFR 70.6, 40 CFR Part 52, Subpart E, and A.C.A §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall combust only pipeline quality natural gas in the tundish preheaters, ladle dryout, ladle preheaters, and refractory dryers.

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

SN-02
Reheat Furnace

Source Description

The rolling process is initiated at the reheat furnace and proceeds into the rolling mill. The reheat furnace has a maximum heat input capacity of 45 MMBtu/hr which is supplied by natural gas combustion. Waste gas is pulled through a recuperator and exhausted to a stack. In the furnace, the steel bars are heated to a uniform rolling temperature. The furnace incorporates low-NO_x burners to minimize emissions of NO_x. Good combustion practices are utilized to minimize emissions of CO. The furnace has one exhaust stack, identified as SN-02. This source is not subject to NSPS-Dc because the reheat furnace does not fit the definition of a steam generating unit as defined in the subpart.

Specific Conditions

22. Pursuant to §19.501 and §19.901 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-02. Compliance with this condition shall be demonstrated by complying with Specific Condition 26.

Pollutant	lb/hr	tpy
PM ₁₀	0.7	2.7
SO ₂	0.1	0.2
CO	1.6	6.9
NO _x	6.3	27.6

23. Pursuant to §19.901 and 40 CFR Part 52, Subpart E the permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition shall be demonstrated by complying with Specific Condition 26.

Pollutant	lb/hr	tpy
PM	0.7	2.7

24. Pursuant to §19.501 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-02. Compliance with this condition shall be demonstrated by complying with Specific Condition 26.

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

Pollutant	lb/hr	tpy
VOC	0.2	0.6

25. Pursuant to §18.501, §19.901, and 40 CFR Part 52, Subpart E, the opacity from SN-02 shall not exceed 5% as measured by Reference Method 9. Compliance with this condition shall be demonstrated by complying with Specific Condition 26.
26. Pursuant to §19.901, 40 CFR Part 52, Subpart E, A.C.A §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall combust only pipeline quality natural gas at SN-02.

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

SN-03
Boiler

Source Description

MacSteel utilizes a boiler to provide process steam and heat to the mill. The boiler has a maximum heat input capacity of 45 MMBtu/hr which is supplied by natural gas combustion. The boiler has one exhaust stack, identified as SN-03. This source is not subject to NSPS-Dc since it was constructed before June 9, 1989.

Specific Conditions

27. Pursuant to §19.501 and §19.901 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-03. Compliance with this condition shall be demonstrated by complying with Specific Condition 31.

Pollutant	lb/hr	tpy
PM/PM ₁₀	0.7	2.7
SO ₂	0.1	0.2
CO	1.6	6.9
NO _x	6.3	27.6

28. Pursuant to §19.901 and 40 CFR Part 52, Subpart E the permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition shall be demonstrated by complying with Specific Condition 31.

Pollutant	lb/hr	tpy
PM	0.7	2.7

29. Pursuant to §19.501 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-03. Compliance with this condition shall be demonstrated by complying with Specific Condition 31.

Pollutant	lb/hr	tpy
VOC	0.2	0.6

30. Pursuant to §18.501, §19.901, and 40 CFR Part 52, Subpart E, the opacity at SN-03 shall not exceed 5% as measured by Reference Method 9. Compliance with this condition shall

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

be demonstrated by complying with Specific Condition 31.

31. Pursuant to §19.901, 40 CFR 70.6, 40 CFR Part 52, Subpart E, and A.C.A §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall combust only pipeline quality natural gas at SN-03.

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

SN-04, SN-05, SN-11
Heat Treat Furnaces

Source Description

MacSteel incorporates three natural gas fired heat treat furnaces with maximum heat input capacities of 36.6, 38.4, and 65 MMBtu/hr, respectively, to relieve structural tension from the steel bars and for chemistry adjustments. Each heat treat furnace has an individual stack; identified as SN-04, SN-05, and SN-11. SN-04 is allowed combustion of up to 50% by volume landfill gas. Heat treat furnaces 1-3 are not subject to NSPS-Dc because these furnaces do not meet the definition of a steam generating unit as defined in this subpart.

Specific Conditions

32. Pursuant to §19.501 and §19.901 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition shall be demonstrated by complying with Specific Condition 36.

SN	Pollutant	lb/hr	tpy
SN-04	PM ₁₀	0.6	2.3
	SO ₂	0.5	2.0
	CO	1.3	5.7
	NO _x	9.6	41.8
SN-05	PM ₁₀	0.6	2.3
	SO ₂	0.1	0.2
	CO	1.4	5.9
	NO _x	5.4	23.6
SN-11	PM ₁₀	0.9	3.9
	SO ₂	0.1	0.2
	CO	6.0	26.2
	NO _x	5.0	21.7

33. Pursuant to §19.901 and 40 CFR Part 52, Subpart E the permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition shall be demonstrated by complying with Specific Condition 36.

SN	Pollutant	lb/hr	tpy
SN-04	PM	0.6	2.3

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

SN	Pollutant	lb/hr	tpy
SN-05	PM	0.6	2.3
SN-11	PM	0.9	3.9

34. Pursuant to §19.501 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition shall be demonstrated by complying with Specific Condition 36.

SN	Pollutant	lb/hr	tpy
SN-04	VOC	0.5	2.0
SN-05	VOC	0.2	0.5
SN-11	VOC	0.2	0.8

35. Pursuant to §18.501 of the Regulations of the Arkansas Air Pollution Control Code (Regulation 18), and §19.901 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control, (Regulation 19) and 40 CFR Part 52, Subpart E, the opacity at SN-04, SN-05, and SN-11 shall not exceed 5% as measured by Reference Method 9. Compliance with this condition shall be demonstrated by complying with Specific Condition 36.
36. Pursuant to §19.901, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall combust only pipeline quality natural gas at SN-05 and SN-11. The permittee shall only combust pipeline natural gas or a mixture of up to 50% by volume landfill gas at SN-04.
37. Pursuant to §19.705 and 40 CFR Part 52, the permittee shall maintain monthly records demonstrating compliance with the fuel content limits set at SN-04 by Specific Condition 36. Records shall contain total monthly amounts of both types of fuel consumed at SN-04 and a calculation of the monthly average percent of landfill gas used. Records shall be updated by the fifteenth day of the month following the month to which the records pertain. Records shall be kept on-site and made available to Department personnel upon request. Records shall be submitted to the Department in accordance with General Provision 7.

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

SN-10
Automated Deburring Line

Source Description

After the bars are cut, an automated deburring line is used to remove burrs from the end of bars and to blunt sharp edges. PM emissions associated with this operation are vented to a cyclone and then to a negative-pressure baghouse.

Specific Conditions

38. Pursuant to §19.501 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-10. Compliance with this condition shall be demonstrated by complying with Specific Condition 41.

Pollutant	lb/hr	tpy
PM ₁₀	0.2	0.8

39. Pursuant to §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition shall be demonstrated by complying with Specific Condition 41.

Pollutant	lb/hr	tpy
PM	0.2	0.8

40. Pursuant to §18.501 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the opacity at SN-10 shall not exceed 5%, as measured by Reference Method 9. Compliance with this condition shall be demonstrated by complying with Specific Condition 41.
41. Pursuant to §19.303, §19.705, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall either, observe the pressure drop across the baghouse at SN-10 on a weekly basis, and maintain the pressure drop between 4 and 14 inches of water at all times during operation; or conduct weekly observations of the opacity from SN-10 and keep a record of these observations. 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.

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

42. Pursuant to §19.705, 40 CFR Part 52, Subpart E, the permittee shall keep records of the pressure drop reading recorded each week for the baghouse at SN-10. These records shall be kept on site and be made available to Department personnel upon request.

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

SN-13
Vacuum Arc Degasser-Steam Injector Condenser

Source Description

After steel is refined in the LMF, it is transferred to a stir station and then to a vacuum arc degasser. At the degasser, dissolved gases are removed from the steel through the application of a vacuum. In the degasser, heat may also be added with electric arcs. Emissions from the degasser are collected by a hood and ducted to the EAF baghouses when the door is open (arcing mode). Exhaust from a steam injector condenser (SN-13) occurs when the door is closed (degassing and arcing under partial pressure modes). Emissions from the steam injector condenser were estimated using stack tests. The emission rates, based upon the tests, and adjusted for maximum operation, are presented in the table below.

Specific Conditions

43. Pursuant to §19.501, §19.901, and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-13. These emission rates are based on past stack test results and scaled up for current production limits. Compliance with these emission limits will be shown by compliance with Specific Condition 19.

Pollutant	lb/hr	tpy
PM ₁₀	0.5	1.9
SO ₂	0.1	0.5
CO	16.1	70.3
NO _x	0.1	0.5

44. Pursuant to §19.901 and 40 CFR Part 52, Subpart E the permittee shall not exceed the emission rates set forth in the following table.

Pollutant	lb/hr	tpy
PM	0.5	1.9

45. Pursuant to §18.501, §19.901, and 40 CFR Part 52, Subpart E, the opacity at SN-13 shall not exceed 20%, as measured by Reference Method 9. Compliance with this condition shall be demonstrated by compliance with Specific Condition 46.

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

46. Pursuant to §19.705 and 40 CFR Part 52 Subpart E, the permittee shall conduct weekly observations of the opacity from SN-13, and keep a record of these observations. 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.

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

SN-15, SN-25, and SN-27
Bar Turner Buildings

Source Description

Operations including bar turning, bar polishing, and bar buffing are conducted in the bar turning buildings. These operations require the use of soluble oils and mineral oils. VOC emissions associated with Bar Turning Buildings #1 and #2, SN-15 and SN-25, exhaust through a fan into the heat treat building and then through a roof exhaust fan which exhausts to the atmosphere. VOC from Building #3, SN-27, will exhaust from the roof monitor.

Specific Conditions

47. Pursuant to §19.501 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-15 and SN-25. Compliance with this condition has already been shown through stack testing. Additionally, the emission rates measured during stack testing were scaled up for maximum production; therefore these rates are reasonably conservative. Compliance with these emission limits will be shown by compliance with Specific Condition 19.

Source	Pollutant	lb/hr	tpy
SN-15	VOC	1.3	5.6
SN-25	VOC	1.3	5.6
SN-27	VOC	1.3	5.6

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

SN-21
Scrap Bar Cutting

Source Description

Scrap steel bars from the caster, rolling mill, finishing line, straighteners, and bar turner are torch-cut into smaller pieces (approximately 3 foot lengths) for recharging in the EAFs. The steel bars are transported to the cutting area via rail cars. The bars will be loaded onto a roller table. The cutting is accomplished using two hand-held natural gas/oxygen torches.

Emissions of criteria pollutants (primarily PM) occur due to the torch cutting. A 30,000 CFM baghouse will be used to control particulate emissions. To estimate emissions of pollutants attributable to the natural gas combustion, the maximum combustion of 60 cubic feet per minute per torch was used in conjunction with AP-42 factors for natural gas combustion. The particulate emissions were calculated using the grain loading capacity of the baghouse in conjunction with the maximum rated flow rate.

Specific Conditions

48. Pursuant to §19.501 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-21. These emission rates were calculated using the maximum heat input capacity of the torches and assuming continuous operation. The particulate emissions were calculated using an uncontrolled emission factor. However, this source is controlled by a baghouse; therefore the particulate emission rate is conservative and requires no records to demonstrate compliance with the particulate emission limit. Compliance with this condition shall be demonstrated by complying with Specific Condition 52.

Pollutant	lb/hr	tpy
PM ₁₀	0.2	0.8
SO ₂	0.1	0.1
VOC	0.1	0.3
CO	0.3	1.0
NO _x	1.1	4.8

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

49. Pursuant to §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition shall be demonstrated by complying with Specific Condition 52.

Pollutant	lb/hr	tpy
PM	0.2	0.8

50. Pursuant to §18.501 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the opacity from SN-21 shall not exceed 5%, as measured by Reference Method 9. Compliance with this condition shall be demonstrated by complying with Specific Condition 52.
51. Pursuant to §19.303, 40 CFR 70.6, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall operate the baghouse according to manufacturer's specifications at all times bar cutting is taking place.
52. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall not exceed a total heat input capacity at SN-21 of 10.8 MMBtu/hr. The permittee shall fire only pipeline quality natural gas at SN-21.

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

SN-22
Slag Processing

Source Description

Slag generated during the melting and casting operations is poured on the ground in contained areas within the steelworks building under the dust collecting roof canopies. The hot slag is dug out of these areas and deposited in large dump trucks for transportation to the slag processing area. Emissions from the dump truck loading area are controlled by overhead water sprays. Approximately 75 percent of the slag is returned to the scrap storage area as reclaimed steel. The remaining 25 percent is crushed and passed by a magnet to remove steel fines. The remaining material is conveyed to a screening station and sorted by size. At the slag processing area, the slag is first dumped and allowed to cool. During this time, water is continuously sprayed on the slag. When sufficiently cooled, the wet slag is loaded out of the slag pit/cooling area and is placed into a feeder. Next, the slag is screened to remove various metallics and additionally screened for size separation. This screening process is associated with a number of belt-type conveyors. Water sprays are used to minimize PM emissions from all open-air slag processing operations. The sprays have an estimated efficiency of 95 percent. Fugitive dust generated during the "dig out" is contained and collected via building and roof canopies.

To estimate emissions associated with the dumping of slag at the on-site slag processing area, the AP-42 emission factor (Section 12.5, Table 12.5-4) of 0.026 lbs/ton was used in conjunction with the maximum annual slag throughput of 68,350 tpy. To calculate emissions associated with the wind erosion on both slag pits and processed slag piles, the equation presented in "*Control of Open Fugitive Dust Sources*" was used. The silt content represented the default value of 5.3 for the iron and steel industry. To calculate PM emissions associated with the load out of slag from the slag pits to the slag processing feeder, the AP-42 emission factor for material handling was used. In this case, a climatological average wind speed of 8.2 mph was used in conjunction with the maximum annual slag throughput of 68,350 tpy. Finally, to estimate PM emissions associated with the various slag processing activities (i.e., various conveyors and screens), AP-42 factors (Section 12.5.4 for feeder and conveyors and Section 11.19.1 for screening operations) were used. Further, because a water spray is used on each of these unit operations, a 70 percent particulate control efficiency was assumed.

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

Specific Conditions

53. Pursuant to §19.501, §19.901, and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-22. Compliance with this condition shall be demonstrated by complying with Specific Condition 57.

Pollutant	lb/hr	tpy
PM ₁₀	N/A	3.8

54. Pursuant to §19.901 and 40 CFR Part 52, Subpart E the permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition shall be demonstrated by complying with Specific Condition 57.

Pollutant	lb/hr	tpy
PM	N/A	3.8

55. Pursuant to §19.901, and 40 CFR Part 52, Subpart E, the opacity from this source shall not exceed 20%, as measured by Reference Method 9. This source (SN-22) shall include slag dumping, wind erosion of slag pits and processed slag piles, slag loadout to feeder for subsequent processing, slag processing including various conveying and sizing operations, and vehicle/equipment traffic on unpaved roads. Compliance with this condition shall be demonstrated by complying with Specific Condition 56.
56. Pursuant to §19.901 and 40 CFR Part 52, Subpart E, the permittee shall use water sprays at this source at all times that slag is being processed.
57. Pursuant to §19.901 and 40 CFR Part 52, Subpart E, the permittee shall not process more than 68,350 tons of slag per year based on a rolling 12 month total.
58. Pursuant to §19.705 and 40 CFR Part 52, Subpart E, 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.

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

SN-23
Hydraulic Fluid Usage

Source Description

The mill utilizes various hydraulic fluids. One such fluid contains diethylene glycol which is not an air toxic, is used in equipment in the melt shop. The diethylene glycol additive serves to minimize the risk of fires or explosions in this equipment.

Based on the estimated maximum usage of the hydraulic fluid, it is estimated that maximum annual emissions of VOC from hydraulic fluid usage is approximately 14.8 tons per year.

Specific Conditions

59. Pursuant to §19.501 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-23. Compliance with this condition shall be shown by Specific Condition 60.

Pollutant	lb/hr	tpy
VOC	3.4	14.8

60. Pursuant to §19.705 and CFR Part 52, Subpart E, the permittee shall, on a 4 quarter rolling sum basis, calculate the VOC emissions by taking the amount and VOC content of the fluid used and subtracting the amount and VOC content of the fluid sent for disposal during that same time frame. The amount not accounted for shall be considered emissions. These records shall be kept on site and made available to Department personnel upon request.

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

SN-24
Miscellaneous Process-Related Painting/Labeling

Source Description

A color coding is painted on each steel bar using aerosol spray paint. The maximum annual paint use at the mill is estimated to be approximately 12,000 lbs. The volatile portions of the paints and carrier solvents can be released to the atmosphere during their application. To estimate these emissions, the VOC and HAP content of the paint and solvents was used in conjunction with the maximum annual throughput of paint and solvent. The paint MSDSs showed that the paint contains a maximum of 89 percent by weight VOC. This, in conjunction with the maximum throughput of 6.0 tons per year, yields an emission rate of 5.4 tons VOC.

The MSDS also indicate that the paints collectively have the potential to contain the following HAPs:

Methyl ethyl ketone	30% by weight
Methyl isobutyl ketone	5% by weight
Toluene	5% by weight
Xylene	15% by weight

Thus, assuming a maximum paint usage of 12,000 lbs, total HAP emissions are 3.3 tons per year.

Specific Conditions

61. Pursuant to §19.501 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-24. Compliance with this condition shall be demonstrated by compliance with Specific Condition 62 and 65.

Pollutant	lb/hr	tpy
VOC	N/A	5.4

62. Pursuant to §19.705, A.C.A §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall not use any paint with a VOC content greater than 89% by weight. Compliance with this condition shall be demonstrated by keeping the MSDS sheet for the paint being used on site and available for inspection by Department personnel upon request.

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

63. Pursuant to §18.801 and A.C.A §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table at SN-23. Compliance with this condition shall be demonstrated by compliance with Specific Condition 64 and 65.

Pollutant	lb/hr	tpy
Methyl Ethyl Ketone	0.41	1.8

64. Pursuant to §18.1004 and A.C.A §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not use any paint or solvent with a MEK content greater than 30 percent by weight. Compliance with this condition shall be demonstrated by keeping the MSDS sheet for the paint and solvent being used on site and available for inspection by Department personnel upon request. Other HAPs listed in the Source Description above are emitted at lower than deMinimis levels. No record keeping is required for these HAPs unless there is a material content change which may trigger a permit modification.
65. Pursuant to §19.705, §18.1004, 40 CFR 70.6, A.C.A §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not use more than 12,000 pounds of paint/solvent per year based on a rolling 12 month total. Compliance shall be demonstrated by Specific Condition 66.
66. Pursuant to §19.705, §18.1004, 40 CFR Part 52, Subpart E, and A.C.A §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall keep records of the amount of paint and solvent used each month. These records shall be kept on site and made available to Department personnel upon request.

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

SN-26
Car Bottom Furnace

Source Description

MacSteel operates a car bottom furnace. The furnace is needed for specialized heat treating of steel bars. The furnace is fired with natural gas and has a maximum heat input rate of 5 MMBtu/hr. The car bottom furnace will emit natural gas combustion by-products to the air. To estimate emissions of sulfur dioxide, VOC, CO, and PM, the maximum hourly heat input capacity was multiplied by AP-42 factors (March, 1998). An estimate of nitrogen oxides was provided by the vendor. All emission rates are based on maximum capacity and continuous operation.

Specific Conditions

67. Pursuant to §19.501 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table at SN-26. These emission rates are based on maximum physical capacity of the furnace.

Pollutant	lb/hr	tpy
PM ₁₀	0.1	0.2
SO ₂	0.1	0.1
VOC	0.1	0.2
CO	0.5	1.9
NO _x	1.5	6.6

68. Pursuant to §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table.

Pollutant	lb/hr	tpy
PM	0.1	0.2

69. 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 exceed 5% opacity at SN-30 as measured by EPA reference Method 9.
70. Pursuant to §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall only fire pipeline quality natural gas at SN-26.

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

SN-14 & SN-29
Caster Steam Exhaust No. 2

Source Description

After the temperature and composition of the molten steel is adjusted to the vacuum degasser, the molten steel is transferred to the continuous caster (SN-06). The molten steel is poured from the ladle into a tundish, which funnels the molten steel into a mold. The steel solidifies as it passes through the water-cooled mold, providing immediate cooling of the outer skin. At this point, the center of the steel is still molten. The continuous caster produces round bars. Emissions from the caster are captured by the canopy hood and ducted to the melt shop baghouses (SN-01, SN-12). Exhausts from the caster cooling zones and caster hot saws are released to the atmosphere through a vent (SN-14) and (SN-29).

Specific Conditions

71. Pursuant to §19.501 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table.

SN	Pollutant	lb/hr	tpy
14	PM ₁₀	0.2	0.7
29	PM ₁₀	1.2	5.0

72. Pursuant to §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table.

SN	Pollutant	lb/hr	tpy
14	PM	0.2	0.7
29	PM	1.2	5.0

73. Pursuant to §19.503 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 20% opacity as measured by EPA Reference Method 9.

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

SN-30
Natural Gas Fired Boiler

Source Description

MacSteel utilizes a boiler to provide process steam and heat to the mill. The boiler has a maximum heat input capacity of 53 MMBtu/hr which is supplied by natural gas combustion. The boiler has one exhaust stack, identified as SN-30. This source is subject to 40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial - Commercial - Institutional Steam Generating Units* (See Appendix B).

Specific Conditions

74. Pursuant to §19.501 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table. Compliance shall be demonstrated by compliance with Specific Condition 77.

SN	Pollutant	lb/hr	tpy
30	PM ₁₀	0.4	1.8
	SO ₂	0.1	0.2
	VOC	0.3	1.3
	CO	4.5	19.5
	NO _x	5.3	23.2

75. Pursuant to §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table. Compliance shall be demonstrated by compliance with Specific Condition 77.

SN	Pollutant	lb/hr	tpy
30	PM	0.4	1.8

76. 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 exceed 5% opacity at SN-30 as measured by EPA reference Method 9. Compliance shall be demonstrated by compliance with Specific Condition 77.
77. Pursuant to §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall only fire pipeline quality natural gas at SN-30.

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

78. Pursuant to §19.304 and 40 CFR 60, Subpart Dc, at SN-30 the permittee shall comply with all applicable provisions of 40 CFR Part 60, Subpart A - General Provisions and Subpart Dc - *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*. Applicable provisions of Subpart Dc include, but are not limited to, the following:
- A. Pursuant to §60.48(c)(a), the owner or operator shall submit notification of the date of construction or reconstruction, anticipated startup, and actual startup.
This notification shall include the design heat input capacity of the boiler and identification of fuels (natural gas only) to be combusted in the affected facility.
 - B. Pursuant to §60.48(c)(g) and (i), records of the amounts of fuel combusted each day must be kept for SN-30. These records shall be kept on site for two years following the date of such records.

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

SECTION V: COMPLIANCE PLAN AND SCHEDULE

As of the date of issuance of this revision of this permit, Quanex Corporation - MacSteel Division has no compliance issues pending in relation to the applicable regulations cited in the permit application. It is the intention of Quanex Corporation - MacSteel Division to 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.

SECTION VI: PLANTWIDE CONDITIONS

1. Pursuant to §19.704 of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the Director shall be notified in writing within thirty (30) days after construction has commenced, construction is complete, the equipment and/or facility is first placed in operation, and the equipment and/or facility first reaches the target production rate.
2. Pursuant to §19.410(B) of Regulation 19, 40 CFR Part 52, Subpart E, the Director may cancel all or part of this permit if the construction or modification authorized herein is not begun within 18 months from the date of the permit issuance or if the work involved in the construction or modification is suspended for a total of 18 months or more.
3. Pursuant to §19.702 of Regulation 19 and/or §18.1002 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, any equipment that is to be tested, unless stated in the Specific Conditions of this permit or by any federally regulated requirements, shall be tested with the following time frames: (1) Equipment to be constructed or modified shall be tested within sixty (60) days of achieving the maximum production rate, but in no event later than 180 days after initial start-up of the permitted source or (2) equipment already operating shall be tested according to the time frames set forth by the Department or within 180 days of permit issuance if no date is specified. The permittee shall notify the Department of the scheduled date of compliance testing at least fifteen (15) days in advance of such test. Compliance test results shall be submitted to the Department within thirty (30) days after the completed testing.
4. Pursuant to §19.702 of Regulation 19 and/or §18.1002 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, the permittee shall provide:
 - a. Sampling ports adequate for applicable test methods
 - b. Safe sampling platforms
 - c. Safe access to sampling platforms
 - d. Utilities for sampling and testing equipment
5. Pursuant to §19.303 of Regulation 19 and A.C.A. §8-4-203 as referenced by A.C. A. §8-4-304 and §8-4-311, the equipment, control apparatus and emission monitoring equipment shall be operated within their design limitations and maintained in good condition at all times.

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

6. Pursuant to Regulation 26 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, this permit subsumes and incorporates all previously issued air permits for this facility.

Acid Rain (Title IV)

7. Pursuant to §26.701 of Regulation #26 and 40 CFR 70.6(a)(4), the permittee is prohibited from causing any emissions which exceed any allowances that the source lawfully holds under Title IV of the Act or the regulations promulgated thereunder. No permit revision is required for increases in emissions that are authorized by allowances acquired pursuant to the acid rain program, provided that such increases do not require a permit revision under any other applicable requirement. This permit establishes no limit on the number of allowances held by the permittee. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement of this permit or the Act. Any such allowance shall be accounted for according to the procedures established in regulations promulgated under Title IV of the Act.

Title VI Provisions

8. The permittee shall comply with the standards for labeling of products using ozone depleting substances pursuant to 40 CFR Part 82, Subpart E:
 - a. All containers containing a class I or class II substance stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced to interstate commerce pursuant to §82.106.
 - b. The placement of the required warning statement must comply with the requirements pursuant to §82.108.
 - c. The form of the label bearing the required warning must comply with the requirements pursuant to §82.110.
 - d. No person may modify, remove, or interfere with the required warning statement except as described in §82.112.
9. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for MVACs in Subpart B:
 - a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
 - b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

- c. Persons performing maintenance, service repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
 - d. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with record keeping requirements pursuant to §82.166. ("MVAC-like appliance" as defined at §82.152.)
 - e. Persons owning commercial or industrial process refrigeration equipment must comply with leak repair requirements pursuant to §82.156.
 - f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.
10. If the permittee manufactures, transforms, destroys, imports, or exports a class I or class II substance, the permittee is subject to all requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.
11. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.
- The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or the system used on passenger buses using HCFC-22 refrigerant.
12. The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program.

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

SECTION VII: INSIGNIFICANT ACTIVITIES

Pursuant to §26.304 of Regulation 26, the following sources are insignificant activities. Any activity for which a state or federal applicable requirement applies is not insignificant even if this activity meets the criteria of §304 of Regulation 26 or is listed below. Insignificant activity determinations rely upon the information submitted by the permittee in an application dated June 7, 1996, and in amendments dated April 21, 1998, and October 11, 2000.

Description	Category
Lab etch room (0.075 tpy HCl maximum emission rate) Scale water cooling tower (water vapor emissions only) Clean water cooling tower #1 (water vapor emissions only) Clean water cooling tower #2 (water vapor emissions only) Caster water cooling tower (water vapor emissions only) EMS cooling tower (water vapor emissions only) Lime silos (2) (0.4 tpy maximum PM emission rate) Gasoline storage tanks (2 @500 gal) Kerosene storage tank (1 @500 gal) Waste oil tank (1 @ 1,500 gal) Waste oil tank (2 @ 5,000 gal) Bleach 15% storage tank (1,500 gal) Diesel tank (1 @1,500 gal) Diesel tank (1 @10,000 gal) Hydrogen peroxide storage tank (1,500 gal) Poly-aluminum chloride tank (1 @1,500 gal) Phosphate treatment tanks (2 @1,500 gal) Propane tank (1 @1,000 gal) Rolling mill operations including descaler, pinch roll, ten-stand reducing mill, nose-shear, three-stand sizing blocks, and hot saws (minimal emissions of PM due to water spray) Ladle/tundish refractory removal/application (insignificant emissions) Scale pits (insignificant emissions) Settling ponds (insignificant emissions) Ladle/tundish dumping (performed in melt shop routed to baghouses) Bar straighteners (minimal emissions due to water application) Paved roads/parking areas (minimal emissions) Scrap handling (4.35 tpy) Lime transfer system (0.1 tpy) Raw material handling/storage Baghouse dust transfer/unloading operations (1.4 lb/yr) Shot Blasters (2) with fabric filters, rated at 600 CFM each (vents inside building) Safety Kleen Parts Washers (4 total)	A-13

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

Description	Category
Small Abrasive Saw with cyclone, rated at 1800 CFM. (vents inside building)	
Miscellaneous fuel combustion units including space heaters, process water heaters, air makeup heaters, tundish nozzle preheaters (all less than 1 MMBtu/hr)	A-1
Emergency Lighting Diesel Generator Emergency Water System Diesel Generator Emergency Diesel Pumps (3)	A-12
Lab Hood	A-5

Pursuant to §26.304 of Regulation 26, the emission units, operations, or activities contained in Regulation 19, Appendix A, Group B, have been determined by the Department to be insignificant activities. Activities included in this list are allowable under this permit and need not be specifically identified.

SECTION VIII: GENERAL PROVISIONS

1. Pursuant to 40 CFR 70.6(b) (2), 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.
2. Pursuant to 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, 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.
3. Pursuant to §26.406 of Regulation #26, it is the duty of the permittee to submit a complete application for permit renewal at least six (6) months prior to the date of permit expiration. Permit expiration terminates the permittee's right to operate unless a complete renewal application was submitted at least six (6) months prior to permit expiration, in which case the existing permit shall 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.
4. Pursuant to 40 CFR 70.6(a)(1)(ii) and §26.701(A)(2) of Regulation #26, 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, both provisions are incorporated into the permit and shall be enforceable by the Director or Administrator.
5. Pursuant to 40 CFR 70.6(a)(3)(ii)(A) and §26.701(C)(2) of Regulation #26, records of monitoring information required by this permit shall include the following:
 - a. The date, place as defined in this permit, and time of sampling or measurements;
 - b. The date(s) analyses were performed;

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

- c. The company or entity that performed 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. Pursuant to 40 CFR 70.6(a)(3)(ii)(B) and §26.701(C)(2)(b) of Regulation #26, records of all required monitoring data and support information shall be retained for a period of at least 5 years from the date of the monitoring sample, 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.
7. Pursuant to 40 CFR 70.6(a)(3)(iii)(A) and §26.701(C)(3)(a) of Regulation #26, the permittee must submit reports of all required monitoring every 6 months. If no other reporting period has been established, the reporting period shall end on the last day of the anniversary month of the initial Title V permit. The report is due within 30 days of the end of the reporting period. Even though 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 #26 §26.2 must certify all required reports. The permittee will send the reports to the address below:
- Arkansas Department of Environmental Quality
Air Division
ATTN: Compliance Inspector Supervisor
Post Office Box 8913
Little Rock, AR 72219
8. Pursuant to 40 CFR 70.6(a)(3)(iii)(B), §26.701(C)(3)(b) of Regulation #26, and §19.601 and 19.602 of Regulation #19, all deviations from permit requirements, including those attributable to upset conditions as defined in the permit shall be reported to the Department. An initial report shall be made to the Department by the next business day after the discovery of the occurrence. The initial report may be made by telephone and shall include:
- a. The facility name and location,
 - b. The process unit or emission source which is deviating from the permit limit,
 - c. The permit limit, including the identification of pollutants, from which deviation occurs,

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

- d. The date and time the deviation started,
- e. The duration of the deviation,
- f. The average emissions during the deviation,
- g. The probable cause of such deviations,
- h. Any corrective actions or preventive measures taken or being taken to prevent such deviations in the future, and
- i. The name of the person submitting the report.

A full report shall be made in writing to the Department within five (5) business days of discovery of the occurrence and shall include in addition to the information required by initial report a schedule of actions to be taken to eliminate future occurrences and/or to minimize the amount by which the permits limits are exceeded and to reduce the length of time for which said limits are exceeded. If the permittee wishes, they 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 such report will serve as both the initial report and full report.

- 9. Pursuant to 40 CFR 70.6(a)(5) and §26.701(E) of Regulation #26, and A.C.A. §8-4-203, as referenced by §8-4-304 and §8-4-311, if any provision of the permit or the application thereof to any person or circumstance is held invalid, such invalidity shall 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.
- 10. Pursuant to 40 CFR 70.6(a)(6)(i) and §26.701(F)(1) of Regulation #26, 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, or modification; or for denial of a permit renewal application. Any permit noncompliance with a state requirement constitutes a violation of the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq.*) and is also grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
- 11. Pursuant to 40 CFR 70.6(a)(6)(ii) and §26.701(F)(2) of Regulation #26, it shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- 12. Pursuant to 40 CFR 70.6(a)(6)(iii) and §26.701(F)(3) of Regulation #26, this permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

13. Pursuant to 40 CFR 70.6(a)(6)(iv) and §26.701(F)(4) of Regulation #26, this permit does not convey any property rights of any sort, or any exclusive privilege.
14. Pursuant to 40 CFR 70.6(a)(6)(v) and §26.701(F)(5) of Regulation #26, the permittee shall 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 shall also furnish to the Director copies of records required to be kept by the permit. For information claimed to be confidential, the permittee may be required to furnish such records directly to the Administrator along with a claim of confidentiality.
15. Pursuant to 40 CFR 70.6(a)(7) and §26.701(G) of Regulation #26, the permittee shall pay all permit fees in accordance with the procedures established in Regulation #9.
16. Pursuant to 40 CFR 70.6(a)(8) and §26.701(H) of Regulation #26, no permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for elsewhere in this permit.
17. Pursuant to 40 CFR 70.6(a)(9)(i) and §26.701(I)(1) of Regulation #26, if the permittee is allowed to operate under 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 scenario under which the facility or source is operating.
18. Pursuant to 40 CFR 70.6(b) and §26.702(A) and (B) of Regulation #26, all terms and conditions in this permit, including any provisions designed to limit a source's potential to emit, are enforceable by the Administrator and citizens under the Act unless the Department has specifically designated as not being federally enforceable under the Act any terms and conditions included in the permit that are not required under the Act or under any of its applicable requirements.

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

19. Pursuant to 40 CFR 70.6(c)(1) and §26.703(A) of Regulation #26, any document (including reports) required by this permit shall contain a certification by a responsible official as defined in §26.2 of Regulation #26.
20. Pursuant to 40 CFR 70.6(c)(2) and §26.703(B) of Regulation #26, the permittee shall allow an authorized representative of the Department, upon presentation of credentials, to perform the following:
 - 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 that must be kept 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 the purpose of assuring compliance with this permit or applicable requirements.
21. Pursuant to 40 CFR 70.6(c)(5) and §26.703(E)(3) of Regulation #26, the permittee will 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 submit the compliance certification to the Administrator as well as to the Department. All compliance certifications required by this permit must include the following:
 - 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; and
 - e. Such other facts as the Department may require elsewhere in this permit or by §114(a)(3) and 504(b) of the Act.
22. Pursuant to §26.704(C) of Regulation #26, nothing in this permit shall alter or affect the following:

Quanex Corporation - MacSteel Division
Permit #: 693-AOP-R5
AFIN: 66-00274

- 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. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, this permit authorizes only those pollutant emitting activities addressed herein.