

# ADEQ MINOR SOURCE AIR PERMIT

Permit No. : 299-AR-12

IS ISSUED TO:

Bekaert Corporation  
1881 Bekaert Drive  
Van Buren, AR 72956  
Crawford County  
AFIN: 17-00043

THIS PERMIT IS THE ABOVE REFERENCED PERMITTEE'S AUTHORITY TO CONSTRUCT, MODIFY, OPERATE, AND/OR MAINTAIN THE EQUIPMENT AND/OR FACILITY IN THE MANNER AS SET FORTH IN THE DEPARTMENT'S MINOR SOURCE AIR PERMIT AND THE APPLICATION. THIS PERMIT IS ISSUED PURSUANT TO THE PROVISIONS OF THE ARKANSAS WATER AND AIR POLLUTION CONTROL ACT (ARK. CODE ANN. SEC. 8-4-101 *ET SEQ.*) AND THE REGULATIONS PROMULGATED THEREUNDER, AND IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.

Signed:

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Mike Bates  
Chief, Air Division

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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
No.	Number
NO <sub>x</sub>	Nitrogen Oxide
PM	Particulate Matter
PM <sub>10</sub>	Particulate Matter Smaller Than Ten Microns
SO <sub>2</sub>	Sulfur Dioxide
Tpy	Tons Per Year
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound

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**Section I: FACILITY INFORMATION**

PERMITTEE: Bekaert Corporation

AFIN: 17-00043

PERMIT NUMBER: 299-AR-12

FACILITY ADDRESS: 1881 Bekaert Drive  
Van Buren, AR 72956

MAILING ADDRESS: 1881 Bekaert Drive  
Van Buren, AR 72956

COUNTY: Crawford

CONTACT POSITION: Dale King, Quality/Env. Manager

TELEPHONE NUMBER: (479) 474-5211

REVIEWING ENGINEER: Ann Sudmeyer

UTM North South (Y): Zone 15: 3975.9

UTM East West (X): Zone 15: 350.0

## **Section II: INTRODUCTION**

### **Summary of Permit Activity**

Bekaert Corporation manufactures drawn wire products at its facility in Van Buren, Arkansas. This permitting action is necessary to:

1. Remove the dust collector for SN-40;
2. Remove dust collectors at SN-61, SN-63, and SN-65 and route these emissions to SN-66 and the dust collector removed from SN-40 (new SN-78);
3. Add two roof ventilation fans (SN-76 and SN-77) for previous non-stack emissions from SN-61, SN-63, SN-65, and SN-66 in the Re-Draw Department; and
4. Since aluminum, zinc, and zinc oxide are not HAPs; these limits were removed or renamed PM/PM<sub>10</sub> as appropriate.

The total permitted annual emission rates increases due to this modification include: 0.9 tpy PM/PM<sub>10</sub>.

### **Process Description**

Steel wire rod is prepared for wire drawing by chemical pickling in an HCl acid solution (SN-01), water rinsed (SN-02), coated with one of two wire protectorants (SN-03), and dried (SN-04 and SN-05). The wire rod is then drawn on one of several wire drawing machines (combined dust emissions from SN-06, 53, 62) to become "bright" wire. Some wire also is further processed through redraw where the bright wire is put through the drawing process a second time in order to further reduce the diameter of the wire (SN-64, SN-66, and SN-78). The Re-Draw Department also has two roof ventilation fans (SN-76 and SN-77).

The bright wire is processed further on one of three lines utilizing two types of hot dip galvanizing processes. The lines differ mainly in the heat treating and galvanizing process. The first type of hot dip galvanizing line is identified as the IPV 40 line. Bright wire is heat treated in a patenting furnace, quenched in molten lead baths, and cooled in a water bath (SN-25, 26, 27, 28, 29). The wire receives further cleaning in an HCl pickling bath (SN-30, 31). A flux coating is then applied (SN-32) and dried (SN-33, 34). A zinc coating is then applied to the wire via dipping in a bath of molten zinc and/or a bath containing a mixture of molten zinc and aluminum (SN-35, 36). Final steps involve cooling and application of surface protectorants (SN-37, 38, 39, 55, 56, 57, 58, 60, 75).

The second type of galvanizing process is used on the IVD 40 and IVD 60 lines. Bright wire is heat treated in molten lead baths and water quenched (SN-08, 9, 17, 18). The wire receives further cleaning in an HCl pickling bath (SN-10, 19) and water rinse bath (SN-45, 48). A flux coating is then applied (SN-11, 20) and dried (SN-12, 21). A zinc coating is then applied to the wire via dipping in a bath of molten zinc or a bath containing a mixture of molten zinc and

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aluminum (IVD 40) (SN-13, 14, 22, 23, 44). Final steps involve cooling and application of surface protectorants (SN-15, 24, 46, 47, 49, 50).

Several mechanical finishing operations are performed on a portion of the galvanized and/or bright wire delivered from the lines described above. Of these operations, only the Welded Wire Field Fence spot welding machine (SN-40), the Wire Concrete Additive drying oven (SN-41), the Galvanized Redrawing dust collectors (SN-64, SN-66, and SN-78), the Strand Coating Applicator (SN-57), and six (SN-59, SN-70 through SN-74) welded wire machines have air emission sources.

Two 28 MMBtu/hr water tube boilers are located within the plant and are used to provide process steam, steam heat, and hot water. These natural gas fired boilers are designated "service" and "standby" and are operated at 33% of rated capacity. Only one system is required to be fired for plant steam demand. Products of natural gas combustion are exhausted through two stacks (SN-42 and SN-43) serving each boiler, respectively.

The emission of hydrochloric acid originates from the pickling and electro-chemical baths. These emissions are controlled by either packed column or sieve tray scrubbers (98% efficiency) which have a combined emission rate of 8.74 tons per year.

### **Regulations**

The following table contains the regulations applicable to this permit. Service Boilers #1 and #2 (SN-42 and SN-43) are not subject to NSPS Subpart Dc – *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, since they were constructed before June 9, 1989.

<b>Regulations</b>
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 May 28, 2006

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

**Total Allowable Emissions**

<b>TOTAL ALLOWABLE EMISSIONS</b>		
<b>Pollutant</b>	<b>Emission Rates</b>	
	<b>lb/hr</b>	<b>tpy</b>
PM	11.2	31.5
PM <sub>10</sub>	11.2	31.5
SO <sub>2</sub>	4.4	11.8
VOC	2.4	4.6
CO	5.1	11.9
NO <sub>x</sub>	14.9	44.4
Pb	0.3	0.3
Chlorine	0.9	2.2
Hydrogen Chloride	2.13	8.74
Ammonia	2.7	11.0
Total HAP	3.03	10.94

### Section III: PERMIT HISTORY

- 299-A Initial air permit for Bekaert Corporation. It established process and emission limits for the facility.
- 299-AR-1 Issued 11/28/89 and addressed emission changes within the facility.
- 299-AR-2 Issued 1/20/93 and 3/17/94 which established emission limits following process changes at the facility.
- 299-AR-3
- 299-AR-4 Issued 7/25/95 and updated all sources into one application due to past permit modifications and future production increases. Emissions data for the facility were modified slightly due to emission test results. Two additional sources were added which included a wire drawing department exhaust (SN-53) and a wax bath vacuum wipe (SN-54).
- 299-AR-5 Issued 1/29/96 and included the addition of a new pickling inhibitor chemical in the rod pickling HCl tanks and required the facility to measure the pressure drop across the sieve trays on SN-10 and SN-19 instead of measuring across the scrubbers.
- 299-AR-6 Issued 8/13/96 as a minor modification which involved the replacement of the EG 32 (electro-galvanizing) line with another Hot Dip line similar to the previously permitted IVD 40 and 60 lines. The IPV 40 sources, from the heat treating steps through the pickling steps, are the same type as the currently permitted EG 32 line. This replacement eliminated sulfuric acid from Bekaert's galvanizing process lines. The IPV 40 and the IVD 40 lines also have an additional hot dip step involving a mixture of zinc and aluminum. The operation of the IPV 40 line resulted in a total plant operational capacity increase of approximately 16%. From this modification, emissions of zinc sulfate, sulfuric acid, and sulfate were eliminated. The most significant increases in emissions were due mainly to more natural gas combustion and a larger pickling bath.
- 299-AR-7 Issued 4/25/97 and with the following modifications: modified SN-29 to include fugitive and the vacuum wipe emissions on the East side of the IPV 40 line; deleted SN-31 and ducted to SN-30 inlet; added a point source to include fugitive and the vacuum wipe emissions on the West side of the IPV 40 line as SN-31; combined sources 38, 39, and 57 into one source renumbered as SN-38; combined sources 55, 59, and 61 into one source renumbered as SN-39; added source emissions for IPV 40 air knife exhaust as SN-55; added a source number for the Wire drawing Dept. Hand vacuum system (SN-62); added the redraw dept. Dust Collector and Hand vacuum system (SN-63 and 64); added source emissions for the strand coating applicator as SN-57.
- 299-AR-8 Issued 10/27/97 and involved adding Dust Collector No. 2 (SN-61) to the Redraw Dept.
- 229-AR-9 Issued 6/30/99 and authorized the removal of collectors on the lead annealing



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process (SN-7 and SN-16) and added SN-65 and SN-66 (dust collectors). This permit also authorized the installation of the welded wire machines (SN-59).

- 299-AR-10 Issued 3/8/01 and covered the addition of three new ventilation fan stacks (SN-67, SN-68, and SN-69) for the wire drawing building. In addition, emissions for several permitted sources (06, 28, 40, 50, 51, 53, 55, 59, 61-66) were changed due to updated calculation methodologies.
- 299-AR-11 Issued 7/14/03 and included the addition of SN-70 through SN-74 to quantify emissions from each separate wire welding machine stack; installation of a new air knife system (SN-75), similar to currently permitted SN-55; installation of new vacuum wipe systems on the galvanizing line HCl baths which will discharge into the current scrubber system, causing a slight increase in HCl emissions for SN-01, SN-10, SN-19, and SN-30; and increase inhibitor usage (SN-01) to 1650 gallons per year. Emission increases were 1.1 ton/yr VOC, 0.5 ton/yr zinc oxide, and 0.24 ton/yr HCl.

**Section IV: EMISSION UNIT INFORMATION**

**Specific Conditions**

1. The permittee shall not exceed the emission rates set forth in the following table. [Regulation 19, §19.501 et seq., effective May 28, 2006 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

<b>SN</b>	<b>Description</b>	<b>Pollutant</b>	<b>lb/hr</b>	<b>tpy</b>
01	HCl Pickling Baths/Rod Pickling with Scrubber	VOC	0.5	1.9
02	Borax Coating Bath/Pickling	PM <sub>10</sub>	0.1	0.1
03	Lime Coating Bath/Pickling	PM <sub>10</sub>	0.1	0.1
04	Drying Furnace #1/Pickling (2.5 MMBtu/hr)	PM <sub>10</sub>	0.1	0.1
		SO <sub>2</sub>	0.1	0.1
		VOC	0.1	0.1
		CO	0.1	0.3
		NO <sub>x</sub>	0.3	1.1
05	Drying Furnace #1/Pickling (2.5 MMBtu/hr)	PM <sub>10</sub>	0.1	0.1
		SO <sub>2</sub>	0.1	0.1
		VOC	0.1	0.1
		CO	0.1	0.3
		NO <sub>x</sub>	0.3	1.1
06	Wire Drawing Dept. Exhaust - System #1	PM <sub>10</sub>	1.1	4.5
07	Heat Treatment Lead Bath	PM <sub>10</sub>	0.1	0.1
		SO <sub>2</sub>	0.3	1.4
		NO <sub>x</sub>	0.2	1.0
		CO	0.1	0.2
		Pb	0.1	0.1
08	Heat Treatment Lead Bath Furnace (7.6 MMBtu/hr)	PM <sub>10</sub>	0.1	0.4
		SO <sub>2</sub>	0.1	0.1
		VOC	0.1	0.2
		CO	0.2	0.7
		NO <sub>x</sub>	0.8	3.4
09	Quench Bath	PM <sub>10</sub>	0.1	0.1
11	Fluxing Bath	PM <sub>10</sub>	0.1	0.1
12	Drying Furnace	PM <sub>10</sub>	0.1	0.1
		SO <sub>2</sub>	0.1	0.1
		VOC	0.1	0.1

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<b>SN</b>	<b>Description</b>	<b>Pollutant</b>	<b>lb/hr</b>	<b>tpy</b>
		CO	0.1	0.1
		NO <sub>x</sub>	0.1	0.4
13	Hot Dip Galvanizing Kettle	PM <sub>10</sub>	0.1	0.5
		SO <sub>2</sub>	0.5	2.2
		CO	0.1	0.1
		NO <sub>x</sub>	0.1	0.2
14	Hot Dip Galvanizing Bath (3.7 MMBtu/hr)	PM <sub>10</sub>	0.1	0.2
		SO <sub>2</sub>	0.1	0.1
		VOC	0.1	0.2
		CO	0.1	0.4
		NO <sub>x</sub>	0.4	1.7
15	Wax Bath	SO <sub>2</sub>	0.1	0.1
		CO	0.1	0.1
16	Heat Treatment Lead Bath	PM <sub>10</sub>	0.1	0.1
		SO <sub>2</sub>	0.2	0.6
		CO	0.1	0.2
		NO <sub>x</sub>	0.2	0.6
		Pb	0.1	0.1
17	Heat Treatment Lead Bath (8.6 MMBtu/hr)	PM <sub>10</sub>	0.1	0.5
		SO <sub>2</sub>	0.1	0.1
		VOC	0.1	0.2
		CO	0.2	0.8
		NO <sub>x</sub>	0.9	3.8
18	Quench Bath	PM <sub>10</sub>	0.1	0.1
20	Fluxing Bath	PM <sub>10</sub>	0.1	0.1
21	Drying Furnace (0.56 MMBtu/hr)	PM <sub>10</sub>	0.1	0.1
		SO <sub>2</sub>	0.1	0.1
		VOC	0.1	0.1
		CO	0.1	0.1
		NO <sub>x</sub>	0.1	0.3
22	Hot Dip Galvanizing Kettle	PM <sub>10</sub>	0.1	0.5
		SO <sub>2</sub>	0.5	2.2
		CO	0.1	0.1
		NO <sub>x</sub>	0.1	0.2
23	Hot Dip Galvanizing Bath Furnace (3.4 MMBtu/hr)	PM <sub>10</sub>	0.1	0.2
		SO <sub>2</sub>	0.1	0.1
		VOC	0.1	0.1
		CO	0.1	0.4
		NO <sub>x</sub>	0.4	1.5
24	Wax Bath	SO <sub>2</sub>	0.1	0.1
		CO	0.1	0.1

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<b>SN</b>	<b>Description</b>	<b>Pollutant</b>	<b>lb/hr</b>	<b>tpy</b>
25	Patenting Furnace (11 MMBtu/hr)	PM <sub>10</sub>	0.2	0.7
		SO <sub>2</sub>	0.1	0.1
		VOC	0.1	0.2
		CO	0.4	1.7
		NO <sub>x</sub>	1.6	6.8
26	Heat Treatment Lead Bath	PM <sub>10</sub>	0.1	0.1
		SO <sub>2</sub>	0.2	1.0
		CO	0.1	0.2
		NO <sub>x</sub>	0.2	0.7
		Pb	0.1	0.1
27	Heat Treatment Lead Bath Furnace (1.5 MMBtu/hr)	PM <sub>10</sub>	0.1	0.1
		SO <sub>2</sub>	0.1	0.1
		VOC	0.1	0.1
		CO	0.1	0.2
		NO <sub>x</sub>	0.2	0.7
28	Heat Treatment Lead Bath	PM <sub>10</sub>	0.1	0.1
29	Quench Bath and Vacuum Wipe East	PM <sub>10</sub>	0.1	0.1
31	Quench Bath and Vacuum Wipe West	PM <sub>10</sub>	0.1	0.1
32	Fluxing Bath	PM <sub>10</sub>	0.1	0.2
33	West Drying Oven	PM <sub>10</sub>	0.1	0.2
		SO <sub>2</sub>	0.1	0.1
		VOC	0.1	0.1
		CO	0.1	0.3
		NO <sub>x</sub>	0.3	1.0
34	East Drying Oven	PM <sub>10</sub>	0.1	0.2
		SO <sub>2</sub>	0.1	0.1
		VOC	0.1	0.1
		CO	0.1	0.3
		NO <sub>x</sub>	0.3	1.0
35	Hot Dip Galvanizing Kettles	PM <sub>10</sub>	0.4	1.7
		SO <sub>2</sub>	0.5	2.2
		CO	0.1	0.1
		NO <sub>x</sub>	0.1	0.2
36	BEZINAL Bath Furnace	PM <sub>10</sub>	0.1	0.1
		SO <sub>2</sub>	0.1	0.1
		VOC	0.1	0.1
		CO	0.1	0.2
		NO <sub>x</sub>	0.2	0.5
37	West Light Wax Bath	SO <sub>2</sub>	0.1	0.1

<b>SN</b>	<b>Description</b>	<b>Pollutant</b>	<b>lb/hr</b>	<b>tpy</b>
		CO	0.1	0.1
38	West Cooling & Wax Baths Vacuum Wipe Systems	PM <sub>10</sub>	0.3	1.0
39	East Cooling & Wax Baths Vacuum Wipe Systems	PM <sub>10</sub>	0.3	1.0
40	Welded Field Fence/Finished Products	PM <sub>10</sub>	0.1	0.1
41	Dramix Electric Drying Oven Finished Products	PM <sub>10</sub> VOC	0.1 0.1	0.1 0.1
42	Service Boiler #1 (28 MMBtu/hr)	PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	0.4 0.1 0.2 1.0 4.0	0.9 0.1 0.4 2.2 8.9
43	Service Boiler #2 (28 MMBtu/hr)	PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	0.4 0.1 0.2 1.0 4.0	0.9 0.1 0.4 2.2 8.9
44	BEZINAL Bath Furnace	PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	0.1 0.1 0.1 0.1 0.1	0.1 0.1 0.1 0.2 0.4
46	Zinc Quench Bath Vacuum Wipe	PM <sub>10</sub>	0.1	0.1
47	Wax Bath Vacuum Wipe	PM <sub>10</sub>	0.3	1.3
49	Zinc Quench Bath Vacuum Pipe	PM <sub>10</sub>	0.1	0.1
50	Zinc Quench Bath Area Ventilation	PM <sub>10</sub>	0.1	0.1
51	Zinc Quench Bath Area Ventilation	PM <sub>10</sub>	0.1	0.1
53	Wire Drawing Department Exhaust System #2	PM <sub>10</sub>	1.1	4.5
54	Wax Bath Vacuum	PM <sub>10</sub>	0.3	1.3

<b>SN</b>	<b>Description</b>	<b>Pollutant</b>	<b>lb/hr</b>	<b>tpy</b>
	Pipe			
55	Zinc Quench Air Knife Exhaust System	PM <sub>10</sub>	0.1	0.1
56	West Standard Wax Bath	SO <sub>2</sub> CO	0.1 0.1	0.1 0.1
57	Strand Coating Applicator	PM <sub>10</sub>	0.1	0.4
58	East Standard Wax Bath	SO <sub>2</sub> CO	0.1 0.1	0.1 0.1
59	Welded Wire Machine #1 Stack	PM <sub>10</sub>	0.1	0.1
60	East Light Wax Bath	SO <sub>2</sub> CO	0.1 0.1	0.1 0.1
61	Redraw Department Soapdust Collector #2	Collector Removed From Service (Emissions Routed to SN-66 and SN-78)		
62	Wire Drawing Dept. Hand Vacuum System	PM <sub>10</sub>	0.3	1.3
63	Redraw Dept. Soapdust Collector #1	Collector Removed From Service (Emissions Routed to SN-66 and SN-78)		
64	Redraw Dept. Hand Vacuum System	PM <sub>10</sub>	0.2	0.4
65	Redraw Dept. Dust Collector System #3	Collector Removed From Service (Emissions Routed to SN-66 and SN-78)		
66	Redraw Dept. Dust Collector System #4	PM <sub>10</sub>	0.4	1.4
67	Wire Drawing Department VF#1	PM <sub>10</sub>	0.2	0.6
68	Wire Drawing Department VF#2	PM <sub>10</sub>	0.2	0.6
69	Wire Drawing Department VF#3	PM <sub>10</sub>	0.2	0.6
70	Welded Wire Machine #2 Stack	PM <sub>10</sub>	0.1	0.1
71	Welded Wire Machine #3 Stack	PM <sub>10</sub>	0.1	0.1
72	Welded Wire Machine #4 Stack	PM <sub>10</sub>	0.1	0.1
73	Welded Wire Machine #5 Stack	PM <sub>10</sub>	0.1	0.1
74	Welded Wire Machine #6 Stack	PM <sub>10</sub>	0.1	0.1

<b>SN</b>	<b>Description</b>	<b>Pollutant</b>	<b>lb/hr</b>	<b>tpy</b>
75	Zinc Quench Air Knife Exhaust System #2	PM <sub>10</sub>	0.1	0.1
76	Vent Fan #1 Redraw Dept. Roof	PM <sub>10</sub>	0.1	0.4
77	Vent Fan #2 Redraw Dept. Roof	PM <sub>10</sub>	0.1	0.4
78	Redraw Dept. Soapdust Collector #5	PM <sub>10</sub>	0.4	1.4

2. The permittee shall not exceed the emission rates set forth in the following table. [Regulation 18, §18.801, effective February 15, 1999, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

<b>SN</b>	<b>Description</b>	<b>Pollutant</b>	<b>lb/hr</b>	<b>tpy</b>
01	HCl Pickling Baths/Rod Pickling with Scrubber	HCl	0.45	1.90
02	Borax Coating Bath/Pickling	PM	0.1	0.1
03	Lime Coating Bath/Pickling	PM	0.1	0.1
04	Drying Furnace #1/Pickling (2.5 MMBtu/hr)	PM	0.1	0.1
05	Drying Furnace #1/Pickling (2.5 MMBtu/hr)	PM	0.1	0.1
06	Wire Drawing Dept. Exhaust - System #1	PM	1.1	4.5
07	Heat Treatment Lead Bath	PM	0.1	0.1
08	Heat Treatment Lead Bath Furnace (7.6 MMBtu/hr)	PM	0.1	0.4
09	Quench Bath	PM	0.1	0.1
10	Chemical/Electro-Chemical Pickling with Scrubber	HCl	0.52	2.18
11	Fluxing Bath	PM Chlorine	0.1 0.10	0.1 0.10

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<b>SN</b>	<b>Description</b>	<b>Pollutant</b>	<b>lb/hr</b>	<b>tpy</b>
		Ammonia	0.1	0.2
12	Drying Furnace	PM	0.1	0.1
13	Hot Dip Galvanizing Kettle	PM Chlorine Ammonia	0.1 0.20 0.8	0.5 0.60 3.4
14	Hot Dip Galvanizing Bath (3.7 MMBtu/hr)	PM	0.1	0.2
16	Heat Treatment Lead Bath	PM	0.1	0.1
17	Heat Treatment Lead Bath (8.6 MMBtu/hr)	PM	0.1	0.5
18	Quench Bath	PM	0.1	0.1
19	Chemical/Electro-Chemical Pickling with Scrubber	HCl	0.43	1.81
20	Fluxing Bath	PM Chlorine Ammonia	0.1 0.10 0.1	0.1 0.10 0.2
21	Drying Furnace (0.56 MMBtu/hr)	PM	0.1	0.1
22	Hot Dip Galvanizing Kettle	PM Chlorine Ammonia	0.1 0.20 0.8	0.5 0.60 3.4
23	Hot Dip Galvanizing Bath Furnace (3.4 MMBtu/hr)	PM	0.1	0.2
25	Patenting Furnace (11 MMBtu/hr)	PM	0.2	0.7
26	Heat Treatment Lead Bath	PM	0.1	0.1
27	Heat Treatment Lead Bath Furnace (1.5 MMBtu/hr)	PM	0.1	0.1
28	Heat Treatment Lead Bath	PM	0.1	0.1
29	Quench Bath and Vacuum Wipe East	PM	0.1	0.1



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<b>SN</b>	<b>Description</b>	<b>Pollutant</b>	<b>lb/hr</b>	<b>tpy</b>
30	Chemical/Electro-Chemical Pickling with Scrubber	HCl	0.63	2.65
31	Quench Bath and Vacuum Wipe West	PM	0.1	0.1
32	Fluxing Bath	PM Chlorine Ammonia	0.1 0.10 0.1	0.2 0.20 0.4
33	West Drying Oven	PM	0.1	0.2
34	East Drying Oven	PM	0.1	0.2
35	Hot Dip Galvanizing Kettles	PM Chlorine Ammonia	0.4 0.20 0.8	1.7 0.60 3.4
36	BEZINAL Bath Furnace	PM	0.1	0.1
38	West Cooling & Wax Baths Vacuum Wipe Systems	PM	0.3	1.0
39	East Cooling & Wax Baths Vacuum Wipe Systems	PM	0.3	1.0
40	Welded Field Fence/Finished Products	PM	0.1	0.1
41	Dramix Electric Drying Oven Finished Products	PM	0.1	0.1
42	Service Boiler #1 (28 MMBtu/hr)	PM	0.4	0.9
43	Service Boiler #2 (28 MMBtu/hr)	PM	0.4	0.9
44	BEZINAL Bath Furnace	PM	0.1	0.1
45	Pickling Final Rinse Vacuum Wipe	HCl	0.10	0.10
46	Zinc Quench Bath Vacuum Wipe	PM	0.1	0.1
47	Wax Bath Vacuum Wipe	PM	0.3	1.3
48	Pickling Final Rinse Vacuum Wipe	HCl	0.10	0.10

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<b>SN</b>	<b>Description</b>	<b>Pollutant</b>	<b>lb/hr</b>	<b>tpy</b>
49	Zinc Quench Bath Vacuum Pipe	PM	0.1	0.1
50	Zinc Quench Bath Area Ventilation	PM	0.1	0.1
51	Zinc Quench Bath Area Ventilation	PM	0.1	0.1
53	Wire Drawing Department Exhaust System #2	PM	1.1	4.5
54	Wax Bath Vacuum Pipe	PM	0.3	1.3
55	Zinc Quench Air Knife Exhaust System #1	PM	0.1	0.1
57	Strand Coating Applicator	PM	0.1	0.4
59	Welded Wire Machine #1 Stack	PM	0.1	0.1
61	Redraw Department Soapdust Collector #2	Collector Removed From Service (Emissions Routed to SN-66 and SN-78)		
62	Wire Drawing Dept. Hand Vacuum System	PM	0.3	1.3
63	Redraw Dept. Soapdust Collector #1	Collector Removed From Service (Emissions Routed to SN-66 and SN-78)		
64	Redraw Dept. Hand Vacuum System	PM	0.2	0.4
65	Redraw Dept. Dust Collector System #3	Collector Removed From Service (Emissions Routed to SN-66 and SN-78)		
66	Redraw Dept. Dust Collector System #4	PM	0.4	1.4
67	Wire Drawing Department VF#1	PM	0.2	0.6
68	Wire Drawing Department VF#2	PM	0.2	0.6
69	Wire Drawing Department VF#3	PM	0.2	0.6
70	Welded Wire Machine #2 Stack	PM	0.1	0.1
71	Welded Wire Machine #3 Stack	PM	0.1	0.1
72	Welded Wire Machine #4 Stack	PM	0.1	0.1

SN	Description	Pollutant	lb/hr	tpy
73	Welded Wire Machine #5 Stack	PM	0.1	0.1
74	Welded Wire Machine #6 Stack	PM	0.1	0.1
75	Zinc Quench Air Knife Exhaust System #2	PM	0.1	0.1
76	Vent Fan #1 Redraw Dept. Roof	PM	0.1	0.4
77	Vent Fan #2 Redraw Dept. Roof	PM	0.1	0.4
78	Redraw Dept. Soapdust Collector #5	PM	0.4	1.4

3. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Limit	Regulatory Citation
08, 12, 14, 17, 21, 23, 25, 27, 33, 34, 36, 44	5%	§19.503 and A.C.A.
42, 43	5%	§19.503 and A.C.A.
06, 07, 11, 13, 16, 20, 22, 28, 29, 31, 32, 35, 36, 38, 39, 40, 41, 47, 50, 51, 53, 54, 55, 62, 64, 66, 75, 76, 77, 78	20%	§19.503 and A.C.A.

4. The permittee shall not cause or permit the emission of air contaminants, including odors or water vapor and including an air contaminant whose emission is not otherwise prohibited by Regulation #18, if the emission of the air contaminant constitutes air pollution within the meaning of A.C.A. §8-4-303. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
5. The permittee shall not conduct operations in such a manner as to unnecessarily cause air contaminants and other pollutants to become airborne. [Regulation 18, §18.901 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
6. The permittee shall use only pipeline quality natural gas as fuel at this facility. Propane gas shall be used only as a standby source of energy during natural gas curtailments. During times of natural gas curtailment, the permittee shall maintain records of propane gas usage. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

7. Total natural gas usage at the plant shall not exceed 684.42 million cubic feet per consecutive twelve (12) month period based on a rolling 12 month total. [§19.705 of Regulation 19, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
8. The permittee shall maintain monthly records which demonstrate compliance with Specific Condition #7. Records shall be updated by the fifteenth day of the month following the month to which the records pertain. These records shall be kept on site, and shall be made available to Department personnel upon request. [§19.705 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
9. The permittee shall limit throughput of pickled steel rod to 144,870 tons per consecutive twelve (12) month period based on a rolling 12 month total. [§18.1004 of Regulation 18, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
10. The permittee shall maintain monthly records which demonstrate compliance with Specific Condition #9. Records shall be updated by the fifteenth day of the month following the month to which the records pertain. These records shall be kept on site, and shall be made available to Department personnel upon request. [§18.1004 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
11. The permittee shall limit usage of pickling inhibitor to 1650 gallons per consecutive twelve (12) month period based on a rolling 12 month total. [§19.705 of Regulation 19, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
12. The permittee shall maintain monthly records which demonstrate compliance with Specific Condition #11. Records shall be updated by the fifteenth day of the month following the month to which the records pertain. These records shall be kept on site, and shall be made available to Department personnel upon request. A twelve month rolling average and each individual month's data shall be submitted in accordance with General Condition 6. [§19.705 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
13. The permittee shall maintain all control equipment in proper working order according to the manufacturer's specifications submitted in the permit application. Compliance with this condition shall be demonstrated by maintaining daily records of the pressure drop across the HCl scrubber (SN-01) and the total sieve tray differential pressure on SN-10, SN-19, and SN-30. Acceptable pressure differentials are as follows: [§18.1003 of Regulation 18, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

**Control Equipment Parameters**

<b>Scrubber Designation</b>	<b>Acceptable Pressure Drop (Inches of Water)</b>
Rod Pickling (SN-01)	2.5 to 5.0
Pickling / IVD 60 (SN-10)	5 to 8
Pickling / IVD 40 (SN-19)	5 to 8

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<b>Scrubber Designation</b>	<b>Acceptable Pressure Drop (Inches of Water)</b>
Pickling / IPV 40 (SN-30)	5 to 8

If the pressure drop falls out of the acceptable range then this shall be noted on the daily record keeping and the corrective action shall also be noted. Corrective action for the problem shall be taken within 24 hours. If the pressure drop cannot be corrected to an acceptable level within 24 hours, then this process shall be shut down until the problem is resolved. These records shall be kept on-site and shall be made available to Department personnel upon request.

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**Section V: INSIGNIFICANT ACTIVITIES**

The Department deems the following types of activities or emissions as insignificant on the basis of size, emission rate, production rate, or activity in accordance with Group A of the Insignificant Activities list found in Regulation 18 and 19 Appendix A. Insignificant activity emission determinations rely upon the information submitted by the permittee in an application dated April 2, 2003.

<b>Description</b>	<b>Category</b>
NONE	

## Section VI: GENERAL CONDITIONS

1. Any terms or conditions included in this permit that 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 that 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. This permit does not relieve the owner or operator of the equipment and/or the facility from compliance with all applicable provisions of the Arkansas Water and Air Pollution Control Act and the regulations promulgated under the Act. [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
3. The permittee will notify the Department in writing within thirty (30) days after commencement of construction, completion of construction, first operation of equipment and/or facility, and first attainment of the equipment and/or facility target production rate. [Regulation 19, §19.704 and/or A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
4. Construction or modification must commence within eighteen (18) months from the date of permit issuance. [Regulation 19, §19.410(B) and/or Regulation 18, §18.309(B) and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
5. The permittee must keep records for five years to enable the Department to determine compliance with the terms of this permit such as hours of operation, throughput, upset conditions, and continuous monitoring data. The Department may use the records, at the discretion of the Department, to determine compliance with the conditions of the permit. [Regulation 19, §19.705 and/or Regulation 18, §18.1004 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
6. A responsible official must certify any reports required by any condition contained in this permit and submit any reports to the Department at the address below. [Regulation 19, §19.705 and/or Regulation 18, §18.1004 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Arkansas Department of Environmental Quality  
Air Division  
ATTN: Compliance Inspector Supervisor  
Post Office Box 8913

Little Rock, AR 72219

7. The permittee will 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) newly constructed or 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) existing equipment already operating according to the time frames set forth by the Department. 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 must submit compliance test results to the Department within thirty (30) days after the completion of 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]
8. The permittee will 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
  - d. Utilities for sampling and testing equipment
9. The permittee will operate equipment, control apparatus and emission monitoring equipment within their design limitations. The permittee will maintain in good condition at all times equipment, control apparatus and emission monitoring equipment. [Regulation 19, §19.303 and/or Regulation 18, §18.1104 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
10. If the permittee exceeds an emission limit established by this permit, the permittee will be deemed in violation of said permit and will be subject to enforcement action. The Department may forego enforcement action for emissions exceeding any limits established by this permit provided the following requirements are met: [Regulation 19, §19.601 and/or Regulation 18, §18.1101 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
  - a. The permittee demonstrates to the satisfaction of the Department that the emissions resulted from an equipment malfunction or upset and are not the result of negligence or improper maintenance, and the permittee took all reasonable measures to immediately minimize or eliminate the excess emissions.
  - b. The permittee reports the occurrence or upset or breakdown of equipment (by telephone, facsimile, or overnight delivery) to the Department by the end of the next business day after the occurrence or the discovery of the occurrence.
  - c. The permittee must submit to the Department, within five business days after the occurrence or the discovery of the occurrence, a full, written report of such occurrence, including a statement of all known causes and of the scheduling and nature of the actions to be taken to minimize or eliminate future occurrences,



including, but not limited to, action to reduce the frequency of occurrence of such conditions, to minimize the amount by which said limits are exceeded, and to reduce the length of time for which said limits are exceeded. If the information is included in the initial report, the information need not be submitted again.

11. The permittee shall allow representatives of the Department upon the presentation of credentials: [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
  - a. To enter upon the permittee's premises, or other premises under the control of the permittee, where an air pollutant source is located or in which any records are required to be kept under the terms and conditions of this permit;
  - b. To have access to and copy any records required to be kept under the terms and conditions of this permit, or the Act;
  - c. To inspect any monitoring equipment or monitoring method required in this permit;
  - d. To sample any emission of pollutants; and
  - e. To perform an operation and maintenance inspection of the permitted source.
12. The Department issued this permit in reliance upon the statements and presentations made in the permit application. The Department has no responsibility for the adequacy or proper functioning of the equipment or control apparatus. [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
13. The Department may revoke or modify this permit when, in the judgment of the Department, such revocation or modification is necessary to comply with the applicable provisions of the Arkansas Water and Air Pollution Control Act and the regulations promulgated the Arkansas Water and Air Pollution Control Act. [Regulation 19, §19.410(A) and/or Regulation 18, §18.309(A) and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
14. This permit may be transferred. An applicant for a transfer must submit a written request for transfer of the permit on a form provided by the Department and submit the disclosure statement required by Arkansas Code Annotated '8 1 106 at least thirty (30) days in advance of the proposed transfer date. The permit will be automatically transferred to the new permittee unless the Department denies the request to transfer within thirty (30) days of the receipt of the disclosure statement. The Department may deny a transfer on the basis of the information revealed in the disclosure statement or other investigation or, deliberate falsification or omission of relevant information. [Regulation 19, §19.407(B) and/or Regulation 18, §18.307(B) and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
15. This permit shall be available for inspection on the premises where the control apparatus is located. [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

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16. This permit authorizes only those pollutant emitting activities addressed herein. [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
17. This permit supersedes and voids all previously issued air permits for this facility. [Regulation 18 and 19 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
18. The permittee must pay all permit fees in accordance with the procedures established in Regulation No. 9. [A.C.A §8-1-105(c)]