STATEMENT OF BASIS

for the issuance of Draft Air Permit # 299-AR-11

1. PERMITTING AUTHORITY:

Arkansas Department of Environmental Quality
8001 National Drive
Post Office Box 8913
Little Rock, Arkansas 72219-8913

2. APPLICANT:

Bekaert Corporation
1881 Bekaert Drive
Van Buren , Arkansas 72956

3. PERMIT WRITER: Paula Parker

4. SIC DESCRIPTION AND SIC CODE:

SIC Description:	Wire/Galvanized Wire Manufacturing
SIC Code:	3315
NAICS:	331222

5. SUBMITTALS: 4-2-03; 4-17-03

6. REVIEWER'S NOTES:

Bekaert Corporation manufactures drawn wire products at its facility in Van Buren, Arkansas. This modification includes several changes to the air permit sources. SN-70 through SN-74 are being added to quantify emissions from each separate wire welding machine stack. A new air knife system is being installed (SN-75), similar to currently permitted SN-55. New vacuum wipe systems on the galvanizing line HCl baths are being installed which will discharge into the current scrubber system, which will cause a slight increase in HCl emissions for SN-01, SN-10, SN-19, and SN-30. Finally, inhibitor usage is increasing to 1650 gallons per year. Emission increases are 1.1 ton/yr VOC, 0.5 ton/yr zinc oxide, and 0.24 ton/yr HCl.

Opacity limits in the previous permits were either 20/40% for all sources. Limits have been reassigned since all sources are post-1972. Additionally, SN-52 has been removed from the permit. This source ceased operation in 1999. The emission rate table was updated for SN-06, 53, 61, 63, 64, 65, and 66. While the net changes in emissions from these sources were taken into account in the last permit revision, the individual emission rates were not.

7. COMPLIANCE STATUS:

The following summarizes the current compliance status of the facility including active/pending enforcement actions and recent compliance activities and issues:

The facility is currently under no enforcement action.

8. APPLICABLE REGULATIONS:

PSD Applicability

Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, et cetera?	N	
Has this facility undergone PSD review in the past?	N	Permit#
Is this facility categorized as a major source for PSD?	N	
$ 100 tpy and on the list of 28 (100 tpy)?	N	
$ 250 tpy all other	N	

PSD Netting

Was netting performed to avoid PSD review in this permit? N

Source and Pollutant Specific Regulatory Applicability

Source	Pollutant	Regulation [NSPS, NESHAP (Part 61 & Part 63), or PSD only]
NONE		

9. EMISSION CHANGES:

The following table summarizes plant wide emission changes associated with this permitting action.

Plant Wide Permitted Emissions (ton/yr)			
Pollutant	Air Permit 299-AR-10	Air Permit 299-AR-11	Change
PM/PM_{10}	31.3	30.6	*-0.7
SO_2	12.1	11.8	*-0.3
VOC	3.5	4.6	+1.1
CO	12.0	11.9	*-0.1
NO_X	44.9	44.4	*-0.5
Pb	0.1	0.3	*+0.2
HCl	8.50	8.74	+0.24
Cl_2	2.30	2.20	-0.10
Al	0.2	0.2	0
NH_3/NH_4	11.0	11.0	0
Zn	1.0	1.0	0
ZnO_2	0.1	0.6	+0.5

*Mathematical errors have persisted in previous revisions. Actual emission changes for this permit are 0.1 ton/yr particulates and 1.1 ton/yr VOC.

10. MODELING:

Criteria Pollutants

All criteria pollutants are below 100 tons/yr.

11. Non-Criteria Pollutants

1st Tier Screening (PAER)

Estimated hourly emissions from the following sources were compared to the Presumptively Acceptable Emission Rate (PAER) for each compound. The Department deemed PAER to

be the product, in lb/hr, of 0.11 and the Threshold Limit Value (mg/m^3), as listed by the American Conference of Governmental Industrial Hygienists **(ACGIH).**

Pollutant	SN-#s	TLV (mg/m^3)	PAER (lb/hr) = 0.11*TLV	Proposed lb/hr	Pass?
HCl	1,10,19,30, 45,48	7.50	0.825	2.13	N
Cl_2	11,13,20 22,32,35	1.45	0.16	0.90	N
NH_3/NH_4	11,13,20 22,32,35	17.41	1.92	2.70	N
Zn	11,13,20 22,32,35,38,39 ,46,49,59	10.0	1.10	1.10	N
Al	11,13 22,35	5 (pyro powder)	0.55	0.20	Y
ZnO_2	40	10.0	1.1	0.60	Y

2nd Tier Screening (PAIL)

ISCST3 air dispersion modeling was performed on the estimated hourly emissions from the following sources, in order to predict ambient concentrations beyond the property boundary. The Presumptively Acceptable Impact Level (PAIL) for each compound was deemed by the Department to be one one-hundredth of the Threshold Limit Value, as listed by the ACGIH.

Pollutant	(PAIL, $\mu g/m^3$) = 1/100 of Threshold Limit Value	Modeled Concentration ($\mu g/m^3$)	Pass?
HCl	75.0	10.26	Y
Cl_2	14.5	1.37	Y
NH_3/NH_4	174.1	5.10	Y
Zn	100	0.42	Y

12. CALCULATIONS:

SN	Emission Factor Source (AP-42, Testing, etc)	Emission Factor and units (lbs/ton, lbs/hr, etc)	Control Equipment Type (if any)	Control Equipment Efficiency	Comments (Emission factor controlled/uncontrolled, etc)
01	Mass Balance	2.19 lb VOC/gal 1650 gal per yr	Scrubber	N/A	Assumes all VOC emitted
10,19 30	Testing	100 ppm HCl conc going to the scrubber	Scrubber	98%	100% safety factor
59 70 – 74	Estimate based on depth of the weld	12.86 x 10^{-5} g Zn/weld	N/A	N/A	Assumes 50% is airborn
75	Engineering assumption	Assumed factor of 0.1 lb/hr	N/A	N/A	

13. TESTING REQUIREMENTS:

This permit requires stack testing of the following sources.

SN(s)	Pollutant	Test Method	Test Interval	Justification For Test Requirement
NONE				

14. MONITORING OR CEMS

The permittee must monitor the following parameters with CEMs or other monitoring equipment (temperature, pressure differential, etc), frequency of recording and the need for records included in any annual, semiannual or other reports.

SN	Parameter or Pollutant to be Monitored	Method of Monitoring (CEM, Pressure Gauge, etc)	Frequency*	Report (Y/N)**
01	Pressure Drop (inches H2O)	Pressure gauge on HCl Scrubber	Daily	N
10, 19, 30	Pressure Drop (inches H2O)	Sieve tray differential pressure	Daily	N

* Indicate frequency of recording required for the parameter (Continuously, hourly, daily, etc.)
** Indicates whether the parameter needs to be included in reports.

15. RECORD KEEPING REQUIREMENTS

The following are items (such as throughput, fuel usage, VOC content of coating, etc) that must be tracked and recorded, frequency of recording and whether records are needed to be included in any annual, semiannual or other reports.

SN	Recorded Item	Annual Limit (as established in permit)	Frequency*	Report (Y/N)**
Facility	Natural Gas	684,420,000 ft^3	Monthly	Y
Facility	Pickled Steel Rod	144,870 tons	Monthly	Y
Facility	Pickling Inhibitor	1650 gallons	Monthly	Y

* Indicate frequency of recording required for the item (Continuously, hourly, daily, etc.)
** Indicates whether the item needs to be included in reports

16. OPACITY

SN	Opacity %	Justification (NSPS limit, Dept. Guidance, etc)	Compliance Mechanism (daily observation, weekly, control equipment operation, etc)
08,12,14,17,21,23,25,27, 33,34,36,44	5%	Natural Gas Fired Boilers	Inspector's Observation
42,43	5%	Natural Gas Fired Equipment	Inspector's Observation

SN	Opacity %	Justification (NSPS limit, Dept. Guidance, etc)	Compliance Mechanism (daily observation, weekly, control equipment operation, etc)
06,07,11,13,16,20,22, 28,29,31,32,35,36,38,39 41 47,50,51,53,54,55 61,62,63,64,65,66,75	20%	Manufacturing Equipment	Inspector's Observation

17. DELETED CONDITIONS:

The previous permit contained the following deleted Specific Conditions.

Former SC	Justification for removal
NONE	

18. VOIDED, SUPERSEDED OR SUBSUMED PERMITS

List all active permits voided/superseded/subsumed by issuance of this permit for this facility.

Permit #
299-AR-10

19. CONCURRENCE BY:

The following supervisor concurs with the permitting decision:

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Lyndon Poole, P.E.