

STATEMENT OF BASIS

for the issuance of **Draft** Air Permit No. 1779-AOP-R0

This is the statement of basis for the draft permit and does not necessarily reflect the contents of the final permit.

1. PERMITTING AUTHORITY:

Arkansas Department of Pollution Control and Ecology
8001 National Drive
Post Office Box 8913
Little Rock, Arkansas 72219-8913.

2. APPLICANT:

American Railcar Industries
901 Jones Road
Paragould, Arkansas 72450-8850

3. PERMIT WRITER:

Loretta Reiber

4. PROCESS DESCRIPTION AND SIC CODE:

Railcar Fabrication, Paint, and Lining Facility
SIC Code: 3743

5. REVIEWER'S NOTES:

This is the first permit for this facility. Prior to the installation of the painting operations, emissions were less than ten tons per year.

6. EMISSION CHANGES:

As this is the first permit for this facility, the permitted emissions are the "changes" for this facility.

7. CALCULATIONS:

At source locations for which no comments appear below, the emission calculations received the reviewer's concurrence as submitted by the facility in the permit application.

KEY: Abbreviations used in the following tables: SN = Source Number, SC = Specific Condition.
For all sources deemed insignificant, the permit writer has reviewed submitted calculations, and concurs with the emission estimates.

SN	Basis for emission calculation of final permit limits.		Comment.
	lb/hr	ton/yr	
01	Grain Loading Factor	Capacity	Grain Loading Factor of 0.002gr/dscf
02	Grain Loading Factor	Capacity	Grain Loading Factor of 0.002gr/dscf
03	Grain Loading Factor	Capacity	Grain Loading Factor of 0.002gr/dscf
04	Grain Loading Factor	Capacity	Grain Loading Factor of 0.002gr/dscf
05	Grain Loading Factor	Capacity	Grain Loading Factor of 0.002gr/dscf
06	Maximum Paint Usage	Limiting Paint Usage	VOC and HAP contents are limited
07	Maximum Paint Usage	Limiting Paint Usage	VOC and HAP contents are limited
08	N/A	Limiting Paint Usage	VOC and HAP contents are limited
09	AP-42 natural gas factors	Capacity	

8. MODELING:

A. Criteria Pollutants

Total criteria pollutant emissions were not modeled, because the rates of all criteria pollutants with the exception of VOC as estimated in the calculations were below the major source thresholds and did not indicate a potential threat to the National Ambient Air Quality Standards (NAAQS). The VOC emissions were not modeled because the ratio of VOC to NO_x was too high to be able to accurately use the appropriate tables. Also, if the VOC rates were to be modeled as though all VOCs were one HAP with a high TLV, no adverse impacts would be predicted.

B. 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 PAER was deemed by the Department to be the product, in lb/hr, of 0.11 and the Threshold Limit Value (mg/m³), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

SN(s)	Pollutant	TLV (mg/m ³)	PAER (lb/hr) = 0.11*TLV	Proposed lb/hr	Pass?
6, 7, and 8	HDI	0.034	0.0034	0.06	No

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.

SN(s)	Pollutant	(PAIL, µg/m ³) = 1/100 of Threshold Limit Value	Modeled Concentration (µg/m ³)	Pass?
6, 7, and 8	HDI	0.34	0.0557	Yes

A modeling analysis was performed for general HAP emissions. ISCST3 air dispersion modeling was performed at the emission rate of 1 g/sec. A concentration of 7.374 µg/m³ was predicted. This concentration was then used in combination with the requested emission rate of 276.4 pounds per hour from this facility. A concentration of 260 µg/m³ was calculated. This concentration would allow a minimum TLV of 26.0mg/m³. The facility will then be allowed to use any HAP with a TLV of 26.0 mg/m³ or greater.

9. TESTING AND OPERATIONAL PARAMETERS:

This permit requires no stack testing or operational parameters because the main source of emissions is a paint shop where the emissions can be determined by the amount and the type of paints and solvents being used.

10. RECORD KEEPING, REPORTING:

The following specific conditions were included in Air Permit 1779-AOP-R0 to require record keeping and reporting of throughput, emissions, or operational parameters:

SC	SN	Recorded Item
3	1, 2, 3, 4, and 5	If visible emissions are present from these sources. If visible emissions are present, the permittee is required to take immediate corrective action and make another observation after the corrective action has taken place.
9	6, 7, and 8	To record the TLV of all HAPs used and to record the VOC content and the HAP content of all paints, solvents, etc. used in the painting operations. This will help to show compliance with the hourly emission rates from the paint shop.
11	6, 7, and 8	VOC usage to show compliance with the annual rates.
12	6, 7, and 8	HAP usage records to show compliance with the annual rates.
17	9	Natural gas usage records even though these sources are all permitted at capacity. The permit engineer was directed to put a requirement for showing compliance with the emission limits for the natural gas fired sources because of the number of sources grouped together under one source number.

11. OPACITY:

The following opacity limits are required by this permit.

SC	SN	Opacity	Justification
2	1, 2, 3, 4, and 5	5	The Department has conducted a study which showed that baghouses should not have an opacity above 5% when operated properly.
14	9	5	The Department has conducted a study which showed that natural gas fired sources should not have an opacity greater than 5% when operated properly.

12. OTHER REQUIREMENTS:

The following conditions were included in Air Permit 1779-AOP-R0 for the purposes described below.

SC	Justification	Citation
10	To allow the facility to use a limited amount of experimental coatings.	ACA

13. DELETED CONDITIONS:

As this is the first permit for this facility, there were not any conditions deleted from the last permit.

14. REFERENCES:

- a. Air Permit Application, received September 19, 1997, and amended December 3, 1997.
- b. Regulation No. 18, as amended July 1, 1997
- c. Regulation No. 19, as amended July 1, 1997
- d. Regulation No. 26, effective March 19, 1995

15. CONCURRENCE BY:

The following supervisor concurs with the permitting decision:

Steve Patrick, P.E.