

## STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0511-AR-9 AFIN: 70-00103

1. PERMITTING AUTHORITY:

Arkansas Department of Environmental Quality  
5301 Northshore Drive  
North Little Rock, Arkansas 72118-5317

2. APPLICANT:

AmerCable, Inc.  
350 Bailey Road  
El Dorado, Arkansas 71730

3. PERMIT WRITER:

Ann Sudmeyer

4. PROCESS DESCRIPTION AND NAICS CODE:

NAICS Description: Copper Rolling, Drawing, Extruding, and Alloying  
NAICS Code: 33142

5. SUBMITTALS:

5/19/2008

6. REVIEWER'S NOTES:

AmerCable, Inc. is a manufacturer of industrial cable. This facility is located in El Dorado, Union County, Arkansas. This permitting action is necessary to:

1. Install an additional 40 ton lead kettle (SN-09);
2. Install an additional tuber line (SN-07) with two extruders capable of 1,500 lb/hr each; and
3. Install an additional resin line (SN-05) capable of 1,500 lb/hr.

The total annual permitted emission rate limit increases associated with this modification include: 0.3 tons per year (tpy) PM/PM<sub>10</sub>, 3.0 tpy VOC, and 0.3 tpy lead.

The facility requested a daily limit of 99,000 pounds of acetophenone-producing thermoset compounds instead of being limited to using only 4 lines at SN-07. Extensive modeling was conducted to find the amount that would pass the PAIL.

7. COMPLIANCE STATUS:

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

An inspection conducted on April 17, 2007 showed the facility to be out of compliance for exceeding the Chemlok ethyl benzene and xylene content limits. These limits were increased with the last modification.

8. PSD APPLICABILITY:

a. Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? N

b. Is the facility categorized as a major source for PSD? N  
*Single pollutant  $\geq 100$  tpy and on the list of 28 or single pollutant  $\geq 250$  tpy and not on list?*

If yes, explain why this permit modification not PSD? N/A

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
N/A		

10. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

11. MODELING:

Criteria Pollutants

Examination of the source type, location, plot plan, land use, emission parameters, and other available information indicate that modeling is not warranted at this time. All criteria pollutants are less than 100 tpy.

Pollutant	Emission Rate (lb/hr)	NAAQS Standard ( $\mu\text{g}/\text{m}^3$ )	Averaging Time	Highest Concentration ( $\mu\text{g}/\text{m}^3$ )	% of NAAQS
Lead	0.6	1.5	Quarterly	1.4 <sup>a</sup>	93.3%

a. Monthly average used in lieu of quarterly average.

Non-Criteria Pollutants:

1<sup>st</sup> Tier Screening (PAER)

Estimated hourly emissions from the following sources were compared to the Presumptively Acceptable Emission Rate (PAER) for each compound. The Department has deemed the PAER to be the product, in lb/hr, of 0.11 and the Threshold Limit Value ( $\text{mg}/\text{m}^3$ ), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

Pollutant	TLV ( $\text{mg}/\text{m}^3$ )	PAER (lb/hr) = $0.11 \times \text{TLV}$	Proposed lb/hr	Pass?
Acetone	1187.11	130.58	15.5	Y
Acetophenone	49.14	5.40	176.4	N
Di(2-ethylhexyl)phthalate	5	0.55	0.94	N
Ethyl Benzene	434.19	47.76	0.24	Y
Ethylene Glycol	100	11	2.63	Y
Formaldehyde	0.3684	0.04	0.05	N
Methanol	262.08	28.82	3.0	Y
Methylene Chloride	173.68	19.10	5.5	Y
Methyl Isobutyl Ketone	204.82	22.53	5.9	Y
Toluene	188.40	20.72	9.4	Y
Xylene	434.19	47.76	0.86	Y

2<sup>nd</sup> Tier Screening (PAIL)

AERMOD 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 has been deemed by the Department to be one one-hundredth of the Threshold Limit Value as listed by the ACGIH.

Pollutant	PAIL ( $\mu\text{g}/\text{m}^3$ ) = 1/100 of Threshold Limit Value	Modeled Concentration ( $\mu\text{g}/\text{m}^3$ )	Pass?
Acetophenone	491.4	459.4 <sup>1,2</sup>	Y
Di(2-ethylhexyl)phthalate	50	15.6	Y
Formaldehyde	3.6	0.05	Y

1. This is the only pollutant that was modeled with AERMOD. All other non-criteria pollutants did not increase the lb/hr emission rates with this modification.
2. Numerous scenarios were modeled. This concentration is assuming that the Tuber lines emit at capacity for 11 hours (the worst case of the scenarios modeled). The 99,000 lb/day limit was determined based on this worst case scenario. Any adjustment to the daily limit will have to be evaluated against the PAIL.

Other Modeling: N/A

Odor: N/A

Odor modeling for sources emitting styrene.

Pollutant	Threshold value 1-hour average	Modeled Concentration ( $\mu\text{g}/\text{m}^3$ )	Pass?
Styrene	1361 $\mu\text{g}/\text{m}^3$	N/A	N/A

H<sub>2</sub>S Modeling: N/A

A.C.A. §8-3-103 requires hydrogen sulfide emissions to meet specific ambient standards. Many sources are exempt from this regulation, refer to the Arkansas Code for details.

Is the facility exempt from the H<sub>2</sub>S Standards

N/A

If exempt, explain: \_\_\_\_\_

Pollutant	Threshold value	Modeled Concentration (ppb)	Pass?
H <sub>2</sub> S	20 parts per million (5-minute average*)	N/A	N/A
	80 parts per billion (8-hour average) residential area	N/A	N/A
	100 parts per billion (8-hour average) nonresidential area	N/A	N/A

\*To determine the 5-minute average use the following equation

$$C_p = C_m (t_m/t_p)^{0.2} \text{ where}$$

C<sub>p</sub> = 5-minute average concentration

C<sub>m</sub> = 1-hour average concentration

t<sub>m</sub> = 60 minutes

t<sub>p</sub> = 5 minutes

12. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
SN-01	AP-42, Natural Gas Combustion Factors	PM/PM <sub>10</sub> : 7.6 lb/MMft <sup>3</sup> SO <sub>2</sub> : 0.6 lb/MMft <sup>3</sup> VOC: 5.5 lb/MMft <sup>3</sup> CO: 84 lb/MMft <sup>3</sup> NO <sub>x</sub> : 100 lb/MMft <sup>3</sup>	N/A	N/A	6.5 MMBTU/hr
SN-02	AP-42, Natural Gas Combustion Factors	PM/PM <sub>10</sub> : 7.6 lb/MMft <sup>3</sup> SO <sub>2</sub> : 0.6 lb/MMft <sup>3</sup> VOC: 5.5 lb/MMft <sup>3</sup> CO: 84 lb/MMft <sup>3</sup> NO <sub>x</sub> : 100 lb/MMft <sup>3</sup>	N/A	N/A	6.5 MMBTU/hr
SN-03	AP-42, Natural Gas Combustion Factors	PM/PM <sub>10</sub> : 7.6 lb/MMft <sup>3</sup> SO <sub>2</sub> : 0.6 lb/MMft <sup>3</sup> VOC: 5.5 lb/MMft <sup>3</sup> CO: 84 lb/MMft <sup>3</sup> NO <sub>x</sub> : 100 lb/MMft <sup>3</sup>	N/A	N/A	4.2 MMBTU/hr

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
SN-04	AP-42, Natural Gas Combustion Factors	PM/PM <sub>10</sub> : 7.6 lb/MMft <sup>3</sup> SO <sub>2</sub> : 0.6 lb/MMft <sup>3</sup> VOC: 5.5 lb/MMft <sup>3</sup> CO: 84 lb/MMft <sup>3</sup> NO <sub>x</sub> : 100 lb/MMft <sup>3</sup>	N/A	N/A	4.2 MMBTU/hr
SN-05	Thermoplastic extrusion factor from similar facility	0.191 lb VOC/ton	N/A	N/A	Hourly emission rates based on 1800 lb compound/hr. Annual emission rates based on 3,000,000 lb/yr.
SN-06	Material Balance, MSDS	VOC: Chemlok 6.93 lb/gal Toluene Extender 7.18 lb/gal HAPs: Ethyl Benzene 1.54 lb/gal Toluene 7.18 lb/gal Xylene 5.39 lb/gal	N/A	N/A	Annual emission rates based on 600 gal/yr Chemlock and 2220 gal/yr toluene extender. Hourly emission rates based on 0.1 gal/hr Chemlock and 0.5 gal/hr toluene extender.
SN-07	MSDS, Rubber Tire Manufacturing Industry	1.0 wt% acetophenone (from the decomposition of cumene peroxide) 67% of acetophenone emitted based on testing  0.002 lb VOC/25.3 lb  Adhesive (DOP): 8.2 lb/gal VOC 8.2 lb/gal di(2-ethylhexyl)phthalate	N/A	N/A	Hourly emission rates based on 24,350 lb/hr of acetophenone-producing compounds. Total maximum extrusion rate of 24,350 lb compound/hr. Hourly emission rate based on 0.94 lb/hr

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
					Adhesive (DOP). Annual emission rates based on 9.9 tpy of acetophenone emissions and 30.0 MM lb/yr of total thermoset compounds. Annual emission rate based on 360 gal/yr Adhesive (DOP).
SN-08	Material Balance, MSDS	VOC M-1055: 7.5 lb/gal Lacquer (Telecom Cable): 25 wt% Varsol: 6.34 lb/gal Ink/Extender: 9.84 lb/gal HAPs Methylene Chloride Solvent: Methylene Chloride 11.0 lb/gal M-1055: MIBK 3.75 lb/gal Lacquer (Telecom Cable): Methanol 20 wt% Toluene 5 wt% Varsol: Ethyl benzene 0.04 lb/gal Xylene 0.32 lb/gal Acetone Acetone: 6.7 lb/gal Lacquer (Telecom Cable): 25 wt% Ink/Extender:	N/A	N/A	Hourly emission rates based on: 0.5 gal/hr Methylene Chloride, 0.5 gal/hr M-1055, 1 gal/hr acetone, 15 lb/hr Lacquer (Telecom Cable), 1 gal/hr Varsol, and 1.0 gal/hr ink/extender. Annual emission rates based on: 360 gal/yr Methylene Chloride, 360 gal/yr M-1055, 3000 gal/yr Acetone, 60000 lb/yr Lacquer (Telecom

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
		Acetone 4.02 lb/gal MIBK 3.75 lb/gal Toluene 4.97 lb/gal			Cable), 2000 gal/yr Varsol, and 1,300 gal/yr ink/extender.
SN-09	MSDS	Quickkote: 15 wt% VOC	Baghouse	97%	Hourly VOC emission rate based on 11.6666 lb/hr Quickkote. Hourly lead emission rate based on a worst case of 2000 hr/yr. Annual emission rates based on 58333.33 lb/yr Quickkote and 35,000 lb/yr lead dust produced.
SN-10	Material Balance, MSDS	Tape: VOC 4% by weight Formaldehyde 0.0061% by weight  Release Agent: VOC 18% by weight Ethylene Glycol 3.5% by weight Formaldehyde 0.04% by weight	N/A	N/A	Hourly emission rates based on 250 lb/hr tape and 75 lb/hr release agent. Annual emission rates based 42,000 lb/yr tape and 12,000 lb/yr release agent.
SN-11	AP-42, Natural Gas Combustion Factors	PM/PM <sub>10</sub> : 7.6 lb/MMft <sup>3</sup> SO <sub>2</sub> : 0.6 lb/MMft <sup>3</sup> VOC: 5.5 lb/MMft <sup>3</sup> CO: 84 lb/MMft <sup>3</sup> NO <sub>x</sub> : 100 lb/MMft <sup>3</sup>	N/A	N/A	4.2 MMBTU/hr
SN-12	Rubber Tire Manufacturing Industry	Thermoset compounds: 0.002 lb VOC/25.3 lb	N/A	N/A	Hourly emission rates based on 1,200 lb/hr each



SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
		Thermoplastic compounds: 0.191 lb VOC/ton  1.0 wt% acetophenone (from the decomposition of cumene peroxide) 67% of acetophenone emitted based on testing			of thermoset, acetophenone producing compounds, and thermoplastic compounds. Annual emission rates based on 8760 hr/yr. Cap of 9.9 tpy acetophenone (VOC).
SN-13	AP-42, Natural Gas Combustion Factors	PM/PM <sub>10</sub> : 7.6 lb/MMft <sup>3</sup> SO <sub>2</sub> : 0.6 lb/MMft <sup>3</sup> VOC: 5.5 lb/MMft <sup>3</sup> CO: 84 lb/MMft <sup>3</sup> NO <sub>x</sub> : 100 lb/MMft <sup>3</sup>	N/A	N/A	4.2 MMBTU/hr
SN-14	Rubber Tire Manufacturing Industry	Thermoset compounds: 0.002 lb VOC/25.3 lb  Thermoplastic compounds and resin line emissions: 0.191 lb VOC/ton  1.0 wt% acetophenone (from the decomposition of cumene peroxide) 67% of acetophenone emitted based on testing	N/A	N/A	Hourly emission rates based on 750 lb/hr of thermoset/acetophenone producing compounds or thermoplastic compounds. Annual emission rates based on 8760 hr/yr. Cap of 9.9 tpy acetophenone (VOC).

13. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
N/A				

14. MONITORING OR CEMS

The permittee must monitor the following parameters with CEMS or other monitoring equipment (temperature, pressure differential, etc.)

SN	Parameter or Pollutant to be Monitored	Method (CEM, Pressure Gauge, etc.)	Frequency	Report (Y/N)
N/A				

15. RECORDKEEPING REQUIREMENTS:

The following are items (such as throughput, fuel usage, VOC content, etc.) that must be tracked and recorded.

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
SN-05	Thermoplastics usage	3,000,000 lb/yr	Monthly	N
SN-06 and SN-08	VOC Emissions	34.2 tons/year	Monthly	N
SN-06	MSDS (or equivalent) for VOC Content	Chemlok: 6.93 lb/gal Toluene Extender: 7.18 lb/gal	As Needed	N
SN-06	MSDS (or equivalent) for Pollutant Content	Chemlok: Ethyl Benzene 1.54 lb/gal Xylene 5.39 lb/gal Toluene Extender: Toluene 7.18 lb/gal	As Needed	N

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
SN-07	Thermoset Compound Usage	30,000,000 pounds/year	Monthly	N
SN-07, SN-12, and SN-14	Acetophenone Emissions	9.9 tpy	Monthly	N
SN-07	Adhesive (DOP) Usage	360 gallons/year	Monthly	N
SN-07, SN-12, and SN-14	MSDS (or equivalent)	1.0 wt% acetophenone (from the decomposition of cumene peroxide)	As Needed	N
SN-07, SN-12, and SN-14	Acetophenone-producing thermoset compounds usage	99,000 lb/day	Daily	N
SN-07	MSDS (or equivalent)	Adhesive (DOP): 8.2 lb VOC/gal 8.2 lb di(2-ethylhexyl)phthalate/gal	As Needed	N
SN-08	Material Throughput	Acetone 3,000 gal/yr Lacquer (Telecom Cable) 60,000 lb/yr Ink/Extender 1,300 gal/yr	Monthly	N
SN-08	MSDS (or equivalent) for VOC Content	M-1055: 7.5 lb/gal Lacquer (Telecom Cable): 25% by weight Varsol: 6.34 lb/gal Ink/Extender: 9.84 lb/gal	As Needed	N
SN-08	MSDS (or equivalent) for Pollutant Content	Methylene Chloride Solvent: Methylene Chloride 11.0 lb/gal M-1055 Solvent: MIBK 3.75 lb/gal Lacquer (Telecom Cable): Acetone 25 wt% Methanol 20 wt% Toluene 5 wt% Varsol: Ethyl benzene: 0.04	As Needed	N

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
		lb/gal Xylene 0.32 lb/gal Ink/Extender: Acetone 4.02 lb/gal MIBK 3.75 lb/gal Toluene 4.97 lb/gal		
SN-09	VOC Emissions	4.4 tons/year	Monthly	N
SN-09	MSDS (or equivalent) for VOC Content	Quickkote Lead Release Agent: 15% by wt	As Needed	N
SN-09	Material Throughput	Lead Dust Produced 35,000 pounds/year	Monthly	N
SN-09	Baghouse Maintenance Inspection Log	N/A	Weekly	N
SN-10	Material Throughput	Tape: 42,000 pounds/year Release Agent: 12,000 pounds/year	Monthly	N
SN-10	MSDS (or equivalent) for VOC Content	Tape: 4% by weight Release Agent: 18% by weight	As Needed	N
SN-10	MSDS (or equivalent) for Pollutant Content	Tape: Formaldehyde 0.0061% by weight  Release Agent: Ethylene Glycol 3.5% by weight Formaldehydye 0.04% by weight	As Needed	N
Plantwide	HAP Emissions	9.5 tons/year single HAP (except acetophenone) 23.75 tons/year total HAPs (include acetophenone)	Monthly	N

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16. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
SN-01 through SN-04, SN-11, SN-13	5%	Department Guidance	Natural Gas Combustion
SN-05	5%	Department Guidance	---
SN-09	5%	Department Guidance	Baghouse Operation

17. DELETED CONDITIONS:

Former SC	Justification for removal
	N/A

18. GROUP A INSIGNIFICANT ACTIVITIES

Source Name	Group A Category	Emissions (tpy)						
		PM/PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs	
							Single	Total
None requested with this permit modification.								

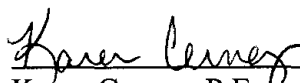
19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

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

Permit #
0511-AR-8

20. CONCURRENCE BY:

The following supervisor concurs with the permitting decision.

  
\_\_\_\_\_  
Karen Cerney, P.E.



APPENDIX A -- EMISSION CHANGES AND FEE CALCULATION





## Fee Calculation for Minor Source

AmerCable, Inc.  
 Permit #: 0511-AR-9  
 AFIN: 70-00103

\$/ton factor 20.96  
 Minimum Fee \$ 400  
 Minimum Initial Fee \$ 500

Check if Administrative Amendment

Permit Predominant Air Contaminant  
 Net Chargeable Emission Increase  
 Permit Modification Fee \$ 400  
 Initial Permit Fee \$ 0  
 Annual TPY Chargeable Emissions 56.5

	Old Permit	New Permit
Permit Modification Fee \$	400	
Initial Permit Fee \$	0	
Annual TPY Chargeable Emissions	56.5	

Pollutant (tpy)	Old Permit	New Permit	Change
PM	1.8	2.1	0.3
PM <sub>10</sub>	1.8	2.1	0.3
SO <sub>2</sub>	0.6	0.6	0
VOC	53.5	56.5	3
CO	11.2	11.2	0
NO <sub>x</sub>	13.4	13.4	0
Lead*	0.3	0.6	0.3
Acetophenone*	9.9	9.9	0
Di (2-ethylhexyl) phthalate*	1.48	1.48	0
Ethyl Benzene*	0.86	0.86	0
Ethylene Glycol*	0.21	0.21	0
Formaldehyde*	0.01	0.01	0
Methanol*	6	6	0
Methylene Chloride*	9.5	9.5	0
Methyl Isobutyl Ketone*	9.5	9.5	0
Toluene*	9.5	9.5	0
Xylene*	3.78	3.78	0
Total HAP	23.75	23.75	0
Acetone	20.2	20.2	0
*HAP			0

