

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 1865-AOP-R6 AFIN: 07-00033

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Easterline Armtec Countermeasures Arkansas Operations
Highland Industrial Park, Building M-25
East Camden, Arkansas 71701

3. PERMIT WRITER:

Kimberly O'Guinn

4. PROCESS DESCRIPTION AND NAICS CODE:

NAICS Description: All Other Miscellaneous Chemical Product and Preparation
Manufacturing

NAICS Code: 325998

5. SUBMITTALS:

7/29/2010

6. REVIEWER'S NOTES:

Armtec Countermeasures Company (Armtec) is located at Building M-25 in the Highland Industrial Park, East Camden, Calhoun County, Arkansas. Armtec manufactures and tests explosive ordnance and disposes of explosive/pyrotechnic waste in open thermal treatment units. This modification is to renew the facility's existing permit. There are no physical revisions at the facility at this time, however permitted emission limits have been revised for SN-02A, SN-02B, SN-02C, and SN-03. Permitted limits are now based on AP-42 factors for these sources rather than mass balance estimates of the products of combustion and ordnance testing. Permitted emission limits will decrease as follow: 95.1 tons/year (tpy) PM₁₀: 94.3 tpy PM, 6.3 tpy NO_x, 2.93 tpy HF, and 0.07 tpy F. Permitted emissions will increase as follows: 0.2 tpy SO₂, 0.8 tpy VOC, and 2.2 tpy CO.

7. COMPLIANCE STATUS:

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

There are no active or pending enforcement actions for this facility at this time.

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 ≥ 100 tpy and on the list of 28 or single pollutant ≥ 250 tpy and not on list?

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
Facility	Hexane	NESHAP Subpart FFFF

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.

Pollutant	Emission Rate (lb/hr)	NAAQS Standard (µg/m ³)	Averaging Time	Highest Concentration (µg/m ³)	% of NAAQS
PM ₁₀	12.0	150	24-Hour	69.48	46%
SO ₂	0.5	80	Annual	0.68	0.85%
		1300	3-Hour	177.65	14%
		365	24-Hour	22.72	7%
CO	4.3	10,000	8-Hour	239.76	3%
		40,000	1-Hour	953.85	3%
NO _x	2.6	100	Annual	4.46	5%

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 has deemed the PAER 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).

Pollutant	TLV (mg/m ³)	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
n-Hexane	176.24	19.386	3.56	Pass
Acetone	1187.12	130.583	181.55	No

2nd 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 (µg/m ³) = 1/100 of Threshold Limit Value	Modeled Concentration (µg/m ³)	Pass?
Acetone	11,871.2	1217.37	Y

12. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01	Mass Balance	450,000 lbVOC/year			Annual limits based on production rates. Hourly limits based on 4,000 hour /year operation

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
02	AP-42 Table 15.8.16-1 (7/2009)	<u>lb/lb explosive wt</u> NOx: 4.34E-04 CO: 4.20E-03 VOC: 1.30E-03 PM: 2.80E-02 PM ₁₀ : 2.00E-02 SO ₂ : 2.60E-02			Synthetic limitation of 40,000 lb/yr explosive material testing. Total maximum hourly testing rate is 90 lb/hr
03	AP-42 Table 15.8.16-2 (7/2009)				
04	AP-42 Tables 1.4-1 and 1.4-2	<u>lb/MMscf</u> NOx:100 CO: 84 VOC: 11 PM/PM ₁₀ : 7.6 SO ₂ :0.6			There are 17 boilers with a total natural gas heat input of 19.691 MMBtu/hr; 0.0193 MMscf/hr@1020 Btu/scf

13. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
There are no testing requirements for this permit.				

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)
There are no monitoring requirements for this permit.				

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)
01	n-Hexane volume	3%	As Received	Y
01	Hexane Purchased	9.50 tpy	Monthly	Y
01	Acetone Purchased	346.50 tpy	Monthly	Y
01-R1	VOC Acetone n-Hexane	3.7 tpy 0.20 tpy 0.11 tpy	Monthly	Y
02	Amount of Ordinance tested	40,000 lb/year	Monthly	Y
03	Amount of Waste Burned	500 lb/day	Daily	Y
03	Amount of Waste Burned	130,000 lb/year	Monthly	Y

16. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
02	No Limit	Waiver from Opacity limits of Reg 19 granted by July 17, 2002 letter from ADEQ Director	N/A
03	No Limit		N/A
04	5%	Department Guidance	Daily Observation

17. DELETED CONDITIONS:

Former SC	Justification for removal
	N/A

18. GROUP A INSIGNIFICANT ACTIVITIES

Source Name	Group A Category	Emissions (tpy)						
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
3 – 0.840 MMBtu/hr Water Heater	1							
3 - 0.305 MMBtu/hr Hot Water Heater	1							
0.210 MMBtu/hr Water Heater	1	0.2	0.03	0.2	1.1	2.7		
4- 0.270 MMBtu/hr Water Heater	1							
1 – 2.1 MMBtu/hr Hot Water Heater	1							
Misc. Coatings, Adhesives, and Inks Usage	13			0.5				0.07
R-1 Area Research and Development Facility	13							
Acetone for Cleaning Purposes	13							

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19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

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

Permit #
1865-AOP-R5

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 Major Source

Revised 03-01-10

Armtec Countermeasures Arkansas Operations
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\$/ton factor	22.07	Annual Chargeable Emissions (tpy)	584.9
Permit Type	Renewal No Changes	Permit Fee \$	0

Minor Modification Fee \$	500
Minimum Modification Fee \$	1000
Renewal with Minor Modification \$	500
Check if Facility Holds an Active Minor Source or Minor Source General Permit	<input type="checkbox"/>
If Hold Active Permit, Amt of Last Annual Air Permit Invoice \$	0
Total Permit Fee Chargeable Emissions (tpy)	-102.6
Initial Title V Permit Fee Chargeable Emissions (tpy)	

HAPs not included in VOC or PM:

Chlorine, Hydrazine, HCl, HF, Methyl Chloroform, Methylene Chloride, Phosphine, Tetrachloroethylene, Titanium Tetrachloride

Air Contaminants:

All air contaminants are chargeable unless they are included in other totals (e.g., H2SO4 in condensable PM, H2S in TRS, etc.)

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
PM	<input checked="" type="checkbox"/>	97.5	3.2	-94.3	-94.3	3.2
PM ₁₀	<input type="checkbox"/>	97.5	2.4	-95.1		
SO ₂	<input checked="" type="checkbox"/>	0.1	0.3	0.2	0.2	0.3
VOC	<input checked="" type="checkbox"/>	225.4	226.2	0.8	0.8	226.2
CO	<input type="checkbox"/>	5.4	7.6	2.2		
NO _x	<input checked="" type="checkbox"/>	15	8.7	-6.3	-6.3	8.7
n-Hexane	<input type="checkbox"/>	9.5	9.5	0		
Acetone	<input checked="" type="checkbox"/>	346.5	346.5	0	0	346.5
HF	<input checked="" type="checkbox"/>	2.93	0	-2.93	-2.93	0
F	<input checked="" type="checkbox"/>	0.07	0	-0.07	-0.07	0