

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0617-AOP-R12 AFIN: 07-00035

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Aerojet Rocketdyne, Inc.
East Walton Road, (Highway 274) Highland Industrial Park
East Camden, Arkansas 71701

3. PERMIT WRITER:

Shawn Hutchings

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Ammunition (except Small Arms) Manufacturing
NAICS Code: 332993

5. SUBMITTALS:

Date of Application	Type of Application (New, Renewal, Modification, Deminimis/Minor Mod, or Administrative Amendment)	Short Description of Any Changes That Would Be Considered New or Modified Emissions
2/24/2015	Minor Mod	New boiler.

6. REVIEWER'S NOTES:

Aerojet Rocketdyne, Inc., currently operates a manufacturing facility located in the Highland Industrial Park near East Camden, Arkansas. This modification adds a natural gas fired boiler, SN-96

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 known enforcement issues with the facility.

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*

If yes, explain why this permit modification is not PSD.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
SN-86, SN-87, SN-89 and SN-95	VOC CO NO _x	NSPS JJJJ
81 86 87 89 90 91 92 93 95	HAPs	MACT ZZZZ
71	VOC/HAP	NSPS Kb
72	VOC/HAP	NSPS Kb
Plantwide	VOC/HAP	NESHAP Part 63 Subpart GG
02A 02B 02C 02D 02E 02F 02H SN-25A SN-25B SN-25C SN-25D	HAPs	MACT DDDDD

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
SN-25E		
SN-25F		
SN-25G		
SN-69A		
SN-69B		
SN-69C		
SN-69D		
SN-69E		
SN-69F		
SN-69G		
SN-69H		
SN-94		
SN-96		

10. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

11. AMBIENT AIR EVALUATIONS:

a) Reserved.

b) Non-Criteria Pollutants:

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/m^3), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

Pollutant	TLV (mg/m^3)	PAER (lb/hr) = $0.11 \times \text{TLV}$	Proposed lb/hr	Pass?
Acetone	1090	120	115	Yes
All other evaluated non criteria pollutants were modeled.				

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 ($\mu\text{g}/\text{m}^3$) = 1/100 of Threshold Limit Value	Modeled Concentration ($\mu\text{g}/\text{m}^3$)	Pass?
Acrolein	2.29	0.5	Yes
Cadmium	0.1	0.003	
Chromium	0.1	0.03	
Hydrogen Chloride	29.3	26.7	
Hydrogen Fluoride	4.1	0.08	
Methanol	2620	355	
Methylene Chloride	1032	1000	
Methyl Isobutyl Ketone	2048	1013	
Toluene	1884	595	
1,1,1 Trichloroethane	545	515	
Xylene	4341	1311	

12. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
96	AP-42	Varied	None	N/A	

13. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
This permit required no additional testing.				

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)
This permit required no additional monitoring.				

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)
96	DDDDD Records	None	As necessary	Y

16. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
96	5%	Department Guidance	Natural gas combustion only

17. DELETED CONDITIONS:

Former SC	Justification for removal
No conditions were removed.	

18. GROUP A INSIGNIFICANT ACTIVITIES:

Source Name	Group A Category	Emissions (tpy)							
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs		
							Single	Total	
DOA Storage Tank (3,500 gallons)	Group A, Number 3								
MLRS Igniter Assembly (SN-55) at Building	Group A, Number 13			0.09				.06	.06

M-85								
SN-60 Ingredient Preparation Room	Group A, Number 13	0.03						
SN-66 Lathes at Building 2- SH-3	Group A, Number 13	.28						
SN-70 Polymer Tank Farm	Group A, Number 13			0.04				
Motor Case Cutting Equipment	Group A, Number 13	.27						
Motor Case Grinding	Group A, Number 13	.14						
Composite Case Grinding Machine at Building M-8	Group A, Number 13	.01						
Total	A-13	.73		.13		.06	.06	
Water Heater Building #47	Group A, Number 1	0.14	0.01	0.09	1.19	1.41	0.01	
Diesel Tank for Generator at M-2 Building	Group A, Number 3							

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19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

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

Permit #
0617-AOP-R11

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 08-25-14

Aerojet Rocketdyne, Inc.
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\$/ton factor	23.89	Annual Chargeable Emissions (tpy)	451.7
Permit Type	Modification	Permit Fee \$	1000

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)	2.5
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		205.3	205.6	0.3		
PM ₁₀		205.3	205.6	0.3	0.3	205.6
SO ₂		5.9	6	0.1	0.1	6
VOC		150.3	150.5	0.2	0.2	150.5
CO		93.3	94.8	1.5		
NO _x		87.7	89.6	1.9	1.9	89.6
Lead	<input type="checkbox"/>	6.77	6.71	-0.06		
Acetaldehyde	<input type="checkbox"/>	0.12	0.1	-0.02		

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
Acrolein	<input type="checkbox"/>	0.1	0.1	0		
Benzene	<input type="checkbox"/>	0.242598	0.2	-0.042598		
1,2 Butylene Oxide	<input type="checkbox"/>	1.04	1.4	0.36		
1,3 Butadiene	<input type="checkbox"/>	0.12	0.1	-0.02		
Cadmium	<input type="checkbox"/>	0.08	0.08	0		
Chlorine	<input type="checkbox"/>	7.83	7.83	0		
Chromium	<input type="checkbox"/>	0.11	0.11	0		
Cumene	<input type="checkbox"/>	1.5	1.5	0		
Diethylene Glycol Monobutyl Ether Acetate	<input type="checkbox"/>	1.5	1.5	0		
Diethylene Glycol Monoethyl Ether Acetate	<input type="checkbox"/>	2.9	2.9	0		
Ethyl Acrylate	<input type="checkbox"/>	4.1	4.3	0.2		
Ethyl Benzene	<input type="checkbox"/>	8.14	8.04	-0.1		
Formaldehyde	<input type="checkbox"/>	0.6828	0.48	-0.2028		
Hydrogen Chloride	<input type="checkbox"/>	145.4	145.4	0		
Hydrogen Fluoride	<input type="checkbox"/>	0.9	0.8	-0.1		
Methanol	<input type="checkbox"/>	17.18	17.38	0.2		
Methylene Chloride	<input type="checkbox"/>	24.6	24.6	0		
Methyl Isobutyl Ketone	<input type="checkbox"/>	30.9	31.6	0.7		
PAH	<input type="checkbox"/>	0.02	0.1	0.08		
Phenol	<input type="checkbox"/>	3.58	3.58	0		
Propylene Oxide	<input type="checkbox"/>	0.1	0	-0.1		
Tetrachloroethylene	<input type="checkbox"/>	2.25	2.25	0		
Toluene	<input type="checkbox"/>	39.78539	40.14	0.35461		
1,1,1 Trichloroethane	<input type="checkbox"/>	34.91	34.91	0		
Trichloroethylene	<input type="checkbox"/>	5.76	5.76	0		
Xylene	<input type="checkbox"/>	33.10017	32.68	-0.42017		
Acetone	<input type="checkbox"/>	28.6	28.6	0		
Ammonia	<input type="checkbox"/>	0.04	0.04	0		

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
HAPs	<input type="checkbox"/>	0.1	0.55	0.45		
HFC-245fa	<input type="checkbox"/>	2.5	2.5	0		
	<input type="checkbox"/>	0	0	0		
	<input type="checkbox"/>	0	0	0		
	<input type="checkbox"/>	0	0	0		
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