

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0617-AOP-R15 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. ALL 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
5/17/2016	Minor Modification	New Sources added.

6. REVIEWER'S NOTES:

Aerojet Rocketdyne, Inc. currently operates a manufacturing facility located in the Highland Industrial Park near East Camden, Arkansas. This permit modification adds new rocket manufacturing program with the new sources SN-03G Rocket Test Facility; SN-99 Spray Liner Machine; SN-100A/B Floor Operations; SN-101A/B Hot Water Heaters; SN-102 and 103 Emergency Power Generators and SN-104 Propellant Cutting Operation.

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 actions against 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-95 102 103	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	HAPs	MACT DDDDD

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
SN-25C		
SN-25D		
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		
SN-97		

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:

1st Tier Screening (PAER)

All pollutants of concern with permitted increases 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?
Lead	0.5	0.02	Yes
Acetone	5,930	374.24	
Chromium	0.5	0.13	
Methanol	2620	246.6	
Toluene	1884	504	
Xylene	4341	986	

12. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
03					
99	Usage rates	None	None		
100 A and B	Usage Rates	None	None		
101 A and B	AP-42 Natural gas	Varied	None		
102 and 103	AP-42 natural gas engines and NSPS limits	Varied	None		
104	Mass Balance of removed material	10/lb/hr wet material processed	Cyclone and Dust Filter	99%	

13. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
No testing was added				

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)
No CEMS required				

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)
Engines	Hours of Operation	500	Monthly	Y
03	Material combusted	Table in Specific Condition 12	Monthly	Y
Plantwide	Material Usages in Contents	Tables In Plantwide Condition 7 through 20	Monthly	Y
Plantwide	Subpart GG Records	Plantwide 24 through 39	Monthly	Y

16. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
101A 101B 102 103 104	5%	Reg.18.501 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311	

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 M-85	Group A, Number 13			0.09			.06	.06
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						
Dry Ice Blasting	Group A Number 13	CO ₂ only. Not regulated until threshold met.						
Total	A-13	.73		.13		.06	.06	
Water Heater Building	Group A, Number 1	0.14	0.01	0.09	1.19	1.41	0.01	

Permit #: 0617-AOP-R15

AFIN: 07-00035

Page 7 of 7

#47								
Diesel Tank for Generator at M-2 Building	Group A, Number 3							

19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

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

Permit #
0617-AOP-R14

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-11-16

Aerojet Rocketdyne, Inc.
 Permit #: 0617-AOP-R15
 AFIN: 07-00035

\$/ton factor	23.93	Annual Chargeable Emissions (tpy)	745.25
Permit Type	Minor Mod	Permit Fee \$	500

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)	31.02
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		205.9	206.6	0.7		
PM ₁₀		205.9	206.6	0.7	0.7	206.6
PM _{2.5}			0	0		
SO ₂		6.1	6.5	0.4	0.4	6.5
VOC		157.6	171.9	14.3	14.3	171.9
CO		96.4	103.3	6.9		
NO _x		91.5	96.4	4.9	4.9	96.4
Lead	<input type="checkbox"/>	6.71	6.73	0.02		

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
Acetaldehyde	<input type="checkbox"/>	0.1	0.1	0		
Acrolein	<input type="checkbox"/>	0.1	0.1	0		
Benzene	<input type="checkbox"/>	0.2	0.2	0		
1,2 Butylene Oxide	<input type="checkbox"/>	1.04	1.73	0.69		
1,3 Butadiene	<input type="checkbox"/>	0.1	0.1	0		
Cadmium	<input type="checkbox"/>	0.08	0.08	0		
Chlorine	<input checked="" type="checkbox"/>	7.83	7.83	0	0	7.83
Chromium	<input type="checkbox"/>	0.11	0.64	0.53		
Cumene	<input type="checkbox"/>	1.5	1.68	0.18		
DGMbEA	<input type="checkbox"/>	1.5	1.86	0.36		
DGMeEA	<input type="checkbox"/>	2.9	3.61	0.71		
Ethyl Acrylate	<input type="checkbox"/>	4.3	4.83	0.53		
Ethyl Benzene	<input type="checkbox"/>	8.04	9.33	1.29		
Formaldehyde	<input type="checkbox"/>	0.48	0.5	0.02		
Hydrogen Chloride	<input checked="" type="checkbox"/>	145.4	145.4	0	0	145.4
Hydrogen Fluoride	<input checked="" type="checkbox"/>	0.8	0.8	0	0	0.8
Methanol	<input type="checkbox"/>	17.38	19.08	1.7		
Methylene Chloride	<input checked="" type="checkbox"/>	24.6	26.02	1.42	1.42	26.02
Methyl Isobutyl Ketone	<input type="checkbox"/>	31.6	36.62	5.02		
PAH	<input type="checkbox"/>	0.1	0	-0.1		
Phenol	<input type="checkbox"/>	3.58	4.4	0.82		
Tetrachloroethylene	<input checked="" type="checkbox"/>	2.25	2.6	0.35	0.35	2.6
Toluene	<input type="checkbox"/>	40.14	44.95	4.81		
1,1,1 Trichloroethane	<input checked="" type="checkbox"/>	34.91	39.56	4.65	4.65	39.56
Trichloroethylene	<input type="checkbox"/>	5.76	6.68	0.92		
Xylene	<input type="checkbox"/>	32.68	37.63	4.95		
HAPs	<input type="checkbox"/>	0.65	0.81	0.16		
Acetone	<input checked="" type="checkbox"/>	34.8	39.1	4.3	4.3	39.1

