

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0617-AOP-R21 AFIN: 07-00035

1. PERMITTING AUTHORITY:

Division 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:

The following is a list of ALL permit applications included in this permit revision.

| 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 |
|---------------------|--|---|
| 3/26/2023           | Modification/Minor Modification  | A number of new sources see below.  |
| 2//07/2023          | Modification   | None Federal Subpart Changes only   |

6. REVIEWER'S NOTES:

Aerojet Rocketdyne, Inc. currently operates a manufacturing facility located in the Highland Industrial Park near East Camden, Arkansas. This permit is a modifications to add subpart GG requirements in the permit; add a AAL Automated Spray Liner at Building 29 as SN-143; and add a Ductless Paint Booth at Building 48 as SN-145; and a minor modification to add a Grit Blasting Cabinet at Building M-2 West as SN-67Z; add a Diesel Emergency Generator at Building 29 as SN-144; and add an Ultrasonic Cleaner at Building M-8 as a Group A-13 insignificant activity. Permitted emission rates

increased 0.1 tpy of particulate, 0.5 tpy of SO<sub>2</sub>, 4.1 tpy of VOC, 1.2 tpy of CO, 2.2 tpy of NO<sub>x</sub>, and 3.5 tpy of HAPs.

7. COMPLIANCE STATUS:

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

The facility has a proposed CAO for issues with Subpart GG compliance. This modification will fix permit requirements related to that issue. They also had a recent CAO for unpermitted sources.

8. PSD/GHG APPLICABILITY:

a) Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? /N  
If yes, were GHG emission increases significant? 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 for 8(b), explain why this permit modification is not PSD.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

| Source   | Pollutant                    | Regulation<br>(NSPS, NESHAP or PSD) |
|--|------------------------------|-------------------------------------|
| SN-86, SN-87, SN-89, SN-95, SN-102, SN-103, SN-120, SN-123, SN-138, SN-139,  | VOC<br>CO<br>NO <sub>x</sub> | NSPS JJJJ                           |
| 81, 81A, 81B, SN-86, SN-87, SN-89, SN-91, SN-92, SN-95, SN-102, SN-103, SN-103, SN-120, SN-123, SN-138, SN-139, 90, 91, 93, 121, 143 | HAPs                         | MACT ZZZZ                           |
| 71   | VOC/HAP                      | NSPS Kb                             |
| 72   | VOC/HAP                      | NSPS Kb                             |
| Plantwide  | VOC/HAP                      | NESHAP Part 63 Subpart GG           |
| SN- 02C,02F, 02G, 25A, 25C, 25E, 25F, 69E, 69F, 69G, 69H, 94, 96, 112, 113, 115, 116, 117, 119, and 122                              | HAPs                         | MACT DDDDD                          |
| 121, 81, 81A, 81B, 143   | Criteria                     | NSPS IIII                           |

10. UNCONSTRUCTED SOURCES:

| Unconstructed Source               | Permit Approval Date | Extension Requested Date | Extension Approval Date | If Greater than 18 Months without Approval, List Reason for Continued Inclusion in Permit |
|------------------------------------|----------------------|--------------------------|-------------------------|---|
| None added with this modification. |                      |                          |                         |   |

11. PERMIT SHIELD – TITLE V PERMITS ONLY:

Did the facility request a permit shield in this application? N  
 (Note - permit shields are not allowed to be added, but existing ones can remain, for minor modification applications or any Rule 18 requirement.)

If yes, are applicable requirements included and specifically identified in the permit? N  
 If not, explain why.

For any requested inapplicable regulation in the permit shield, explain the reason why it is not applicable in the table below.

| Source | Inapplicable Regulation | Reason |
|--------|-------------------------|--------|
| N/A    |                         |        |

12. COMPLIANCE ASSURANCE MONITORING (CAM) – TITLE V PERMITS ONLY:

List sources potentially subject to CAM because they use a control device to achieve compliance and have pre-control emissions of at least 100 percent of the major source level. List the pollutant of concern and a brief summary of the CAM plan (temperature monitoring, CEMs, opacity monitoring, etc.) and frequency requirements of § 64.

| Source                               | Pollutant Controlled | Cite Exemption or CAM Plan Monitoring and Frequency |
|--------------------------------------|----------------------|---|
| 67, 73, 104, 118, 124, 125, 126, 128 | Particulate          | Pre-control below major source thresholds.          |

13. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

14. AMBIENT AIR EVALUATIONS:

The following are results for ambient air evaluations or modeling.

a) NAAQS

A NAAQS evaluation is not required under the Arkansas State Implementation Plan, National Ambient Air Quality Standards, Infrastructure SIPs and NAAQS SIP per Ark. Code Ann. § 8-4-318, dated March 2017 and the DEQ Air Permit Screening Modeling Instructions.

b) Non-Criteria Pollutants:

HAP emission evaluation of the previous permit below. There were no changes to emissions.

The non-criteria pollutants listed below were evaluated. Based on Division of Environmental Quality procedures for review of non-criteria pollutants, emissions of all other non-criteria pollutants are below thresholds of concern.

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 Division of Environmental Quality has deemed the PAER to be the product, in lb/hr, of 0.11 and the Threshold Limit Value (mg/m<sup>3</sup>), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

| Pollutant     | TLV (mg/m <sup>3</sup> ) | PAER (lb/hr) = 0.11 × TLV | Proposed lb/hr | Pass? |
|---------------|--------------------------|---------------------------|----------------|-------|
| Acetone       | 1,781                    | 196                       | 372            | N     |
| Chromium      | 0.01                     | 0.0011                    | 23.9           | N     |
| Chromium VI   | 0.0002                   | 0.000022                  | 23.9           | N     |
| Ethyl Benzene | 86.8                     | 9.55                      | 132            | N     |
| Lead          | 0.05                     | 0.0055                    | 284            | N     |
| Methanol      | 262                      | 288                       | 265            | N     |
| MDI           | 0.05                     | 0.0055                    | 0.06           | N     |
| MIBK          | 81.9                     | 9                         | 489            | N     |
| Toluene       | 75.4                     | 8.3                       | 570            | N     |

| Pollutant | TLV<br>(mg/m <sup>3</sup> ) | PAER (lb/hr) =<br>0.11 × TLV | Proposed lb/hr | Pass? |
|-----------|-----------------------------|------------------------------|----------------|-------|
| TDI       | 0.01                        | 0.0011                       | 0.02           | N     |
| Xylene    | 434                         | 47.8                         | 520            | N     |

### 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 Division of Environmental Quality to be one one-hundredth of the Threshold Limit Value as listed by the ACGIH.

| Pollutant     | PAIL (µg/m <sup>3</sup> ) = 1/100 of<br>Threshold Limit Value | Modeled Concentration<br>(µg/m <sup>3</sup> ) | Pass? |
|---------------|---|---|-------|
| Acetone       | 1.78E+04  | 5.21E+02                                      | Y     |
| Chromium      | 1.00E-01  | 1.73E-01                                      | Y*    |
| Chromium VI   | 2.00E-01  | 3.07E-02                                      | Y*    |
| Ethyl Benzene | 8.68E+02  | 3.69E+02                                      | Y     |
| Lead          | 5.00E-01  | 1.26E-02                                      | Y     |
| Methanol      | 2.62E+03  | 4.28E+02                                      | Y     |
| MDI           | 5.12E-01  | 9.34E-02                                      | Y     |
| MIBK          | 8.19E+02  | 7.64E+02                                      | Y     |
| Toluene       | 7.53E+02  | 6.20E+02                                      | Y     |
| TDI           | 7.12E-02  | 2.20E-02                                      | Y     |
| Xylene        | 4.34E+03  | 1.30E+03                                      | Y     |

For Cr(VI) an alternative standard to the PAIL is used to evaluate the off-site impacts. The annual average modeled concentration was compared to the chronic reference exposure level (REL) from the California Office of Environmental Health Hazard Assessment (OEHHA). For Cr the OSHA 8-hr TWA was used.

### c) H<sub>2</sub>S Modeling:

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  
 If exempt, explain: No H<sub>2</sub>S emitted

N

15. CALCULATIONS:

| SN                                     | Emission Factor Source (AP-42, testing, etc.) | Emission Factor (lb/ton, lb/hr, etc.) | Control Equipment     | Control Equipment Efficiency | Comments |
|--|---|---------------------------------------|-----------------------|------------------------------|----------|
| Natural Gas Fired sources              | AP-42 Natural gas                             | Varied                                | None                  | None                         |          |
| Engines                                | AP-42 Combustion engines                      | Varied                                | None                  | None                         |          |
| Bubbled Sources, Lacquer, foam blowing | Usage Rates Mass Balance                      | Varied                                | None                  | None                         |          |
| 03A-F<br>04<br>30                      | EQTCH Products of Combustion model            | Varied                                | None                  | None                         |          |
| Blast Machines                         | BAAQMD emission factors for abrasive blasting | Varied per material used              | Cyclone and Baghouses | 90 and 99%                   |          |
| Tanks                                  | EPA Tanks Program                             | Equations                             | None                  | none                         |          |
| 13 19                                  | AP-42 Table 4.6-2                             | 0.08 Lb/hr/ft <sup>2</sup>            |                       |                              |          |
| 56                                     | Mass Balance                                  |                                       |                       |                              |          |
| 63                                     | Mass Balance                                  |                                       | Condenser             | 95%                          |          |
| 64 84 98 141, 142, 143a, b, c          | Mass Balance                                  |                                       | None                  | N/A                          |          |
| 73 104 118, 124                        | Mass Balance                                  | 5% material loss                      | Baghouse              | 99.9                         |          |

16. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

| SN  | Pollutants | Test Method | Test Interval | Justification |
|---|------------|-------------|---------------|---------------|
| This permit contains no testing requirements. |            |             |               |               |

17. 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) |
|--------------|---|------------------------------------|-----------|--------------|
| 24, 125, 126 | differential pressure and/or air velocity | Pressure gauge, or velocity meter  | Weekly    | Y            |

#### 18. 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- 02C,02F, 02G, 25A, 25C, 25E, 25F, 69E, 69F, 69G, 69H, 94, 96, 112, 113, 115, 116, 117, 119, and 122 | DDDDD Records                                 | None   | As needed      | Y            |
| 03  | Materials Tested                              | Table in Specific Condition 12                     | Monthly        | Y            |
| 11  | Lacquer premix used                           | 20,000 pounds                                      | Monthly        | Y            |
| 4   | Materials Processed hourly. Emissions monthly | Conditions 16, 17, and 18                          | Daily, Monthly | Y            |
| 30  | Energetic materials used                      | 300 pounds per hour<br>24,000 pounds per 12 months | Monthly        | Y            |
| 47  | Resin usage                                   | 40,000 lbs/12 mo                                   | Monthly        | Y            |
| 48A, 48B, and 49  | Phenolic Resin                                | 500,000 lbs/12 mo                                  | Monthly        | Y            |
| 63  | Stabilizing Solvent                           | 20,000lb/12 months                                 | Monthly        | Y            |
| 81, 81A, 81B  | Hours   | 8760 per 12-month combined                         | Monthly        | Y            |
| 84  | Asphalt and wax coatings                      | 15,000 pounds each                                 | Monthly        | Y            |

| SN   | Recorded Item                   | Permit Limit                           | Frequency | Report (Y/N) |
|--|---------------------------------|--|-----------|--------------|
| Emergency Engines  | Operation hours and maintenance | Hours based on calculations see permit | Monthly   | Y            |
| 07, 12, 13, 19, 20A & B, 22, 24, 28, 36 37B, 38A & B, 39A & B, 40A & B, 41A & B, 42, 43, 44A - AC, 52A & B, 74, 75, 76A & B, 77A & B, 78A & B, 85, 98, 99, 101A & B, 107, 108, 109, 110, 111, 125, 126, 127, 128, 129, 140, 141, 145 | Solvent usage                   | See Plantwide Condition 10             | Monthly   | Y            |
| SN-12, 24, 43, 44A - AC, 101A & B, 125, 126  | Surface Coating Materials       | 63,000 pounds                          | Monthly   | Y            |
| SN-12, 24, 43, 44A - AC, 101A & B, 125, 126  | VOC and HAP contents            | See table Plantwide Condition 14       | Monthly   | Y            |
| SN-44A - AC, SN-100A, SN-100B and 128  | Miscellaneous Materials         | 35,500 pounds                          | Monthly   | Y            |
| SN-44A - AC, SN-100A, SN-100B and 128  | VOC and HAP content             | See table Plantwide Condition 14       | Monthly   | Y            |
| SN-39A & B, 40A & B, 41A & B, 44A - AC, 76A & B, 77A & B, 78A & B, 98, 99, 101A & B, 108, and 109  | Usage                           | 41,400 lbs per 12 mo                   | Monthly   | Y            |
| SN-39A & B, 40A & B, 41A & B, 44A - AC, 76A & B, 77A & B, 78A & B, 98, 99, 101A & B, 108, and 109  | Content                         | Plantwide 22                           | Monthly   | Y            |



| SN  | Recorded Item  | Permit Limit                       | Frequency | Report (Y/N) |
|---|--|------------------------------------|-----------|--------------|
| SN-48 and 49  | Phenolic Molding compounds   | 500,000 per year                   | Monthly   | Y            |
| SN-67C through S  | Blasting Media   | 300,000 per 12 months              | Monthly   | Y            |
| SN-39A & B, 40A & B, 41A & B, 44A – AC, 76A & B, 77A & B, 78A & B, 98, 99, 101A & B, 108, 109, 145  | adhesives, adhesive primers, adhesive catalysts, barrier coatings, and related compounds | 27,600 pounds                      | Monthly   | Y            |
| SN-39A & B, 40A & B, 41A & B, 44A – AC, 76A & B, 77A & B, 78A & B, 98, 99, 101A & B, 108, 109, 145  | VOC and HAP content  | See table Plantwide Condition 19   | Monthly   | Y            |
| All   | HAP substitution records   | Comply with Plantwide Condition 22 | Annual    | N            |
| 71  | Gasoline throughput  | 200,000 gallons per 12 months      | Monthly   | Y            |
| 72  | Diesel Throughput  | 40,000 gallons per year            | Monthly   | Y            |
| SN-86, SN-87, SN-89, SN-90, SN-91, SN-92, SN-93, SN-95, SN-102, SN-103, SN104, SN-105, SN-106, SN-120, SN-121, SN-123, 130, 138, 139, 143 | III JJJJ and ZZZZ records  | None                               | As needed | Y            |
| 84  | Throughput   | 15,000 pounds asphalt coating      | Monthly   | Y            |
| SN-86, SN-87, SN-89, SN-90, SN-91, SN-92, SN-93, SN-95,   | Hours of Operation   | 500 per 12 mo.                     | Monthly   | Y            |

| SN  | Recorded Item | Permit Limit | Frequency | Report (Y/N) |
|---|---------------|--------------|-----------|--------------|
| SN-102, SN-103, SN104, SN-105, SN-106, SN-120, SN-121, SN-123, 130, 138, 139, 143 |               |              |           |              |
| Plantwide   | GG Records    | None         | As Needed | Y            |

19. OPACITY:

| SN   | Opacity | Justification for limit | Compliance Mechanism  |
|--|---------|-------------------------|---|
| SN-02C, 02F, 02G, 25A, 25C, 25E, 25F, 69E, 69F, 69G, 69H, 94, 96, 97, 101A, 101B, 112, 113, 115, 116, 117, 119, 122, 131, 132, 133, 134, 135, 136, and 137 | 5%      | Department Guidance     | Natural Gas Combustion only.  |
| SN-24, 40A, 40B, 43  | 5%      | Department Guidance     | Weekly Observations   |
| 56   | 5%      | Department Guidance     |   |
| 67C through z  | 5%      | Department Guidance     | Weekly Observations   |
| 73, 73B, 73C, 73D, 73E, 73F  | 5%      | Department Guidance     | Established standard operating procedures for processing energetic materials. |
| 81, 81A, 81B   | 20%     | Department Guidance     | Daily Observations  |
| SN-86 SN-87<br>SN-89 SN-90<br>SN-95 SN-102<br>SN-103 SN-105<br>SN-120 SN-123<br>SN-138 SN-139  | 5%      | Department Guidance     | Natural Gas Combustion only.  |
| SN-91 SN-92<br>SN-93 SN-106<br>SN-121 SN-130, 144  | 20%     | Department Guidance     |   |
| SN-125<br>SN-126   | 5%      | Department Guidance     | Weekly control device monitoring  |
| 81, 81A, 81B   | 20%     | Department Guidance     | Daily Observation   |
| 118, 124, 12, 44A-44AC, 100A, 100B, 56, 145  | 5%      | Department Guidance     | Plantwide Condition<br>5  |

20. DELETED CONDITIONS:

| Former SC | Justification for removal |
|-----------|---------------------------|
|           | None                      |

21. GROUP A INSIGNIFICANT ACTIVITIES:

The following is a list of Insignificant Activities including revisions by this permit.

| 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 |  |
| DOA Storage Tank (3,500 gallons)                     | Group A, Number 3 |                     |                 | 0.01 |    |                 |        |       |  |
| Diesel Fuel Tank #1, 550 gal, Building 41, for SN-81 | Group A, Number 3 |                     |                 | 0.01 |    |                 |        |       |  |
| Diesel Fuel Tank #2, 550 gal, Building 41, for SN-81 | Group A, Number 3 |                     |                 | 0.01 |    |                 |        |       |  |
| Diesel Fuel Tank, 500 gal, Building 66, for SN-91    | Group A, Number 3 |                     |                 | 0.01 |    |                 |        |       |  |
| Diesel Fuel Tank, 200 gal, Building M-2, for SN-92   | Group A, Number 3 |                     |                 | 0.01 |    |                 |        |       |  |
| Diesel Fuel Tank, 520 gal, Building M-14, for SN-106 | Group A, Number 3 |                     |                 | 0.01 |    |                 |        |       |  |
| Diesel Fuel Tank, 460 gal, Building                  | Group A, Number 3 |                     |                 | 0.01 |    |                 |        |       |  |

| Source Name   | Group A Category   | Emissions (tpy)     |                 |      |      |                 |        | HAPs  |  |
|---|--------------------|---------------------|-----------------|------|------|-----------------|--------|-------|--|
|   |                    | PM/PM <sub>10</sub> | SO <sub>2</sub> | VOC  | CO   | NO <sub>x</sub> | Single | Total |  |
|   |                    |                     |                 |      |      |                 |        |       |  |
| 105, for SN-121                                       |                    |                     |                 |      |      |                 |        |       |  |
| Diesel Fuel Tank, 2,400 gal, Building 301, for SN-141 | Group A, Number 3  |                     |                 | 0.01 |      |                 |        |       |  |
| Total   | Group A, Number 3  |                     |                 | 0.08 |      |                 |        |       |  |
| Water Heater #4 (Building 301) 1.05 MMBTU             | Group A, Number 1  | 0.04                | 0.01            | 0.03 | 0.38 | 0.46            | 0.01   |       |  |
| Water Heater #2 (Building M-11) 1.314 MMBTU           | Group A, Number 1  | 0.05                | 0.01            | 0.04 | 0.48 | 0.57            | 0.02   |       |  |
| Laboratory at Building 17                             | Group A, Number 5  |                     |                 | 0.79 |      |                 |        | 0.79  |  |
| Laboratory at Building 109                            | Group A, Number 5  |                     |                 | 0.79 |      |                 |        | 0.79  |  |
| Total   | Group A, Number 5  |                     |                 | 1.59 |      |                 |        | 1.59  |  |
| MLRS Igniter Assembly at Building M-85                | Group A, Number 13 |                     |                 | 0.09 |      |                 |        | 0.06  |  |
| Ingredient Preparation Room                           | Group A, Number 13 | 0.03                |                 |      |      |                 |        |       |  |
| Metalworking Lathes at Building 2-SH-3                | Group A, Number 13 | 0.28                |                 |      |      |                 |        |       |  |
| Polymer Tank Farm                                     | Group A, Number 13 |                     |                 | 0.04 |      |                 |        |       |  |

| 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 |  |
| Parts Fabrication in Trailer at Building 2-SH-4       | Group A, Number 13 | 0.27                |                 |      |    |                 |        |       |  |
| Dry Ice Blasting                                      | Group A, Number 13 | CO2 only            |                 |      |    |                 |        |       |  |
| Vibratory Ceramic Pill Parts Cleaner at Building M-82 | Group A, Number 13 | 0.01                |                 |      |    |                 |        |       |  |
| Winding and Curing Operation A at Building M-8        | Group A, Number 13 |                     |                 | 0.07 |    |                 | 0.01   | 0.01  |  |
| Winding and Curing Operation B at Building M-8        | Group A, Number 13 |                     |                 | 0.07 |    |                 | 0.01   | 0.01  |  |
| Winding and Curing Operation C at Building M-8        | Group A, Number 13 |                     |                 | 0.07 |    |                 | 0.01   | 0.01  |  |
| Winding and Curing Operation D at Building M-8        | Group A, Number 13 |                     |                 | 0.07 |    |                 | 0.01   | 0.01  |  |
| Composite Case Grinder A at Building M-8              | Group A, Number 13 | 0.05                |                 |      |    |                 |        |       |  |
| Composite Case Grinder B at Building M-8              | Group A, Number 13 | 0.05                |                 |      |    |                 |        |       |  |

| 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 |  |
| Composite Case Grinder C at Building M-8                              | Group A, Number 13 | 0.05                |                 |      |    |                 |        |       |  |
| Composite Case Grinder D at Building M-8                              | Group A, Number 13 | 0.05                |                 |      |    |                 |        |       |  |
| Saw, Drill, & Chamfer Machine A at Building M-8                       | Group A, Number 13 | 0.21                |                 |      |    |                 |        |       |  |
| Saw, Drill, & Chamfer Machine B at Building M-8                       | Group A, Number 13 | 0.21                |                 |      |    |                 |        |       |  |
| Saw, Drill, & Chamfer Machine C at Building M-8                       | Group A, Number 13 | 0.21                |                 |      |    |                 |        |       |  |
| Winding and Curing Operation at Building M-85                         | Group A, Number 13 |                     |                 | 0.07 |    |                 | 0.01   | 0.01  |  |
| Six (6) Cooling Towers at Buildings 2-SH-14, 2-SH-3, 23, 24, 25, & 51 | Group A, Number 13 | 0.44                |                 |      |    |                 |        |       |  |
| Ultrasonic Cleaner  | Group A, Number 13 |                     |                 | 0.13 |    |                 |        |       |  |
| Total   | Group A, Number 13 | 1.81                |                 | 0.61 |    |                 | 0.11   | 0.11  |  |

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22. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

The following is a list of all active permits voided/superseded/subsumed by the issuance of this permit.

| Permit #     |
|--------------|
| 0617-AOP-R20 |





## APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

## Fee Calculation for Major Source

Aerojet Rocketdyne, Inc.  
 Permit #: 0617-AOP-R21  
 AFIN: 07-00035

|   |                          |                            |
|---|--------------------------|----------------------------|
| \$/ton factor   | 27.27                    | Annual Chargeable Emission |
| Permit Type   | Modification             | Permit Fee \$              |
| 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)                                   | 7.7                      |                            |
| Initial Title V Permit Fee Chargeable Emissions (tpy)                         |                          |                            |

*HAPs not included in VOC or PM:*

*Chlorine, Hydrazine, HCl, HF, Methyl Chloroform, Methylene Chloride, Titanium Tetrachloride*

*Air Contaminants:*

*All air contaminants are chargeable unless they are included in the list of exempt contaminants in TRS, etc.)*

| Pollutant (tpy)        | Check if Chargeable Emission        | Old Permit | New Permit |
|------------------------|-------------------------------------|------------|------------|
| PM                     |                                     | 236        | 236.1      |
| PM <sub>10</sub>       |                                     | 236        | 236.1      |
| PM <sub>2.5</sub>      |                                     | 0          | 0          |
| SO <sub>2</sub>        |                                     | 9.9        | 10.4       |
| VOC                    |                                     | 217.2      | 221.3      |
| CO                     |                                     | 110.4      | 111.6      |
| NO <sub>x</sub>        |                                     | 89.4       | 91.6       |
| Lead                   | <input type="checkbox"/>            | 7.37       | 7.37       |
| Chlorine               | <input checked="" type="checkbox"/> | 11.3       | 11.3       |
| Ethyl Benzene          | <input type="checkbox"/>            | 10.43      | 10.58      |
| Hydrogen Chloride      | <input checked="" type="checkbox"/> | 187.8      | 187.8      |
| Hydrogen Fluoride      | <input checked="" type="checkbox"/> | 1.1        | 1.1        |
| Methanol               | <input type="checkbox"/>            | 19.93      | 19.93      |
| Methylene Chloride     | <input checked="" type="checkbox"/> | 6.87       | 6.87       |
| Methyl Isobutyl Ketone | <input type="checkbox"/>            | 39.56      | 39.56      |
| Toluene                | <input type="checkbox"/>            | 46.5       | 48.52      |
| 1,1,1-Trichloroethane  | <input checked="" type="checkbox"/> | 44.66      | 44.66      |
| Xylene                 | <input type="checkbox"/>            | 41.49      | 42         |
| Other HAPs             | <input type="checkbox"/>            | 15.51      | 15.52      |

