

## STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0698-AR-16 AFIN: 50-00006

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Firestone Building Products Company, LLC  
1406 Highway 371 North  
Prescott, Arkansas 71857

3. PERMIT WRITER:

Joseph Hurt

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Rubber Product Manufacturing for Mechanical Use  
NAICS Code: 326291

5. SUBMITTALS:

5/14/2013

6. REVIEWER'S NOTES:

Firestone Building Products Company owns and operates a rubber roofing manufacturing facility located in Prescott, Arkansas. With this permitting action Firestone Building Products requested to use the primer and laminating machines (SN-315) to prime and roll thermoplastics olefin membrane and flashing to receive 'tape' products and install two (2) diesel operated air compressors (SN-505 and SN-506) to be used as emergency backup in the event of a power failure. The emergency engines are subject to 40 CFR Part 60, Subpart IIII. The total permitted emission increases include 0.2 tpy of PM/PM<sub>10</sub>, 0.2 tpy of SO<sub>2</sub>, 27.7 tpy of VOC, 0.6 tpy of CO, 2.6 tpy of NO<sub>x</sub>, and 0.02 tpy of Toluene.

7. COMPLIANCE STATUS:

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

The last inspection on May 2, 2013 indicated that the facility was complying with all conditions of the permit. There are no current or pending enforcement issues.

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, or
- CO<sub>2</sub>e potential to emit  $\geq 100,000$  tpy and  $\geq 100$  tpy/ $\geq 250$  tpy of combined GHGs?

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

9. GHG MAJOR SOURCE (TITLE V):

Indicate one:

- Facility is classified as a major source for GHG and the permit includes this designation
- Facility does not have the physical potential to be a major GHG source
- Facility has restrictions on GHG or throughput rates that limit facility to a minor GHG source. Describe these restrictions: \_\_\_\_\_

10. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

| Source          | Pollutant  | Regulation (NSPS, NESHAP or PSD) |
|-----------------|--|----------------------------------|
| SN-503 & SN-504 | There are no specific emission limits or pollutants identified, but the rules generally regulate HAPs                | 40 CFR Part 63, Subpart ZZZZ     |
| SN-505 & SN-506 | There are no specific emission limits or pollutants identified, but the rules generally regulate Criteria pollutants | 40 CFR Part 60, Subpart IIII     |

11. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

12. NAAQS EVALUATIONS AND NON-CRITERIA POLLUTANTS:

a) NAAQS

- (i) List the reason for a NAAQS evaluation (i.e. what changes are being permitted that would require the evaluation) and pollutants affected. If a NAAQS evaluation is not required, indicate why not.

This permitting action is for a Minor Source. Criteria pollutants were not evaluated for impacts on the NAAQS.

b) 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? |
|--------------------|--------------------------------|---|----------------|-------|
| Allyl Chloride     | 3.12                           | 0.344                                   | 0.08           | Yes   |
| Hexane             | 176                            | 19.3                                    | 2.31           | Yes   |
| Methanol           | 262                            | 28.8                                    | 0.36           | Yes   |
| Methylene Chloride | 173                            | 19.1                                    | 1.13           | Yes   |
| Toluene            | 75.3                           | 8.28                                    | 2.30           | Yes   |
| Beryllium          | 0.00005                        | 5.50E-06                                | 2.00E-06       | Yes   |
| Chromium           | 0.01                           | 1.10E-03                                | 4.00E-04       | Yes   |

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? |
|-----------|--|--|-------|
| N/A       | N/A  | N/A  | N/A   |

13. CALCULATIONS:

| SN  | Emission Factor Source           | Emission Factor   | Control Equipment | Control Equipment Efficiency | Comments   |
|---|----------------------------------|---|-------------------|------------------------------|--|
| All PM Sources  | Testing                          |   | None              |                              | PM/PM <sub>10</sub> emissions from all particulate sources are based on testing data from the facility submitted on March 2, 1995 or based on process knowledge. |
| 03, 13, 14, 103, 104, 114, 202, 206, 207, 312, 313, 323A, 323B, 330 | Source Specific Emission Factors | Varies  |                   |                              | VOC and HAP emission factors are based on stack testing conducted in October 2011.   |
| 08A – 08G   | Source Specific Emission Factors | lb/hr:<br>0.2 VOC<br>0.01 Toluene<br>0.01 Allyl Chloride<br>0.01 Methylene Chloride | --                | --                           | VOC and HAP emission factors are based on stack testing conducted in October 2011.   |

| SN        | Emission Factor Source           | Emission Factor   | Control Equipment | Control Equipment Efficiency | Comments  |
|-----------|----------------------------------|---|-------------------|------------------------------|---|
| 16A & 16B | AP-42:<br>1.4                    | lb/MMSCF:<br>7.6 PM/PM <sub>10</sub><br>0.6 SO <sub>2</sub><br>5.5 VOC<br>84 CO<br>100 NO <sub>x</sub>      | --                | --                           |   |
| 315       | Mass Balance                     | lb/gal<br>2.1 VOC<br>No HAPs  | --                | --                           |   |
| 316       | Mass Balance                     | lb/gal<br>1.87 VOC<br>1.87 Toluene  |                   |                              | Automated and Manual rolling operations   |
| 317, 318  | Source Specific Emission Factors | Varies  | --                | --                           | VOC and HAP emission factors are based on stack testing conducted for SN-203 in October 2011. |
| 319       | RMA                              | Varies  | --                | --                           | Compound 9 assumed for emission estimates. Emissions based on 50% of RMA emission factors.    |
| 500, 501  | Mass Balance                     |   | None              |                              | Mass Balance assuming 100% of VOC in raw materials is emitted to atmosphere                   |
| 502       | Manufacturer's guarantee         | 0.1 lb/hr<br>PM/PM <sub>10</sub>  | Cartridge Filter  | 99.99%                       | Control efficiency based on net inlet loading of 5 grains/scf                                 |
| 503 - 506 | AP-42,<br>Table 3.3-1            | lb/hp-hr:<br>2.2E-03 PM<br>2.05E-03 SO <sub>2</sub><br>2.47E-03 VOC<br>6.68E-03 CO<br>0.031 NO <sub>x</sub> | --                | --                           | Emergency diesel fire pump, emergency generator, and two (2) diesel operated air compressors  |

14. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

| SN         | Pollutants                                | Test Method  | Test Interval   | Justification                   |
|------------|---|--|---|---------------------------------|
| 16A & 16B  | PM <sub>10</sub><br>NO <sub>x</sub><br>CO | 5 or 201A<br>7E<br>10                                      | Within 180 days of issuance of Permit 0689-AR-13, and annually thereafter. After 2 successful tests, the permittee may test once every 5 years. | Verify emissions                |
| 16A or 16B | Hexane                                    | 18   | Within 180 days of issuance of Permit 0689-AR-13.   | Verify Hexane emissions         |
| 03         | VOC                                       | 25A  | Once every 5 years.<br>The last testing was conducted in October 2011.  | To verify site specific values. |
|            | HAPs                                      | SW-846 Method 0031 (modified), and/or EPA TO-15 (modified) |   |                                 |
| 08A – 08G  | VOC<br>HAPs                               | 25A<br>EPA TO-15   | Once every 5 years.<br>The last testing was conducted in October 2011.  |                                 |

15. 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 |  |                                    |           |              |

16. 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) |
|-----|-----------------------------|--------------------------------|-----------|--------------|
| 500 | Cold Cleaning Solvent Usage | 11.0 gal/month<br>130 gal/year | Monthly   | No           |

| SN        | Recorded Item                            | Permit Limit  | Frequency    | Report (Y/N) |
|-----------|--|---|--------------|--------------|
| 500       | Cold Cleaning Solvent VOC Content        | 8.9 lb/gal  | Monthly      | No           |
| 501       | Inks and Cleaners Usage                  | 370 gal/year  | Monthly      | No           |
| 501       | Inks and Cleaners VOC Content            | 7.0 lb/gal  | Monthly      | No           |
| 315       | Primer Machine Primer Formulation Limits | 2.1 lb/gal (VOC content)<br>No HAPs                                 | Monthly      | No           |
| 315       | Primer Usage                             | 26,280 gal per 12-month period                                      | Monthly      | No           |
| 03, 103   | Total Rubber Production Limit            | 613 MM pounds per consecutive 12-month period                       | Monthly      | No           |
| 203       | Rubber Production                        | 70 MM lb/year   | Monthly      | No           |
| 16A & 16B | Boiler fuel                              | Natural gas only  | Continuously | No           |
| Plantwide | Carbon Black usage                       | As specified in the confidential application dated December 2, 2011 | Monthly      | No           |
|           | Pigment usage                            |   | Monthly      | No           |
|           | Clay usage                               |   | Monthly      | No           |
|           | EPDM usage                               |   | Monthly      | No           |
|           | Pigment Oil usage                        |   | Monthly      | No           |
|           | Mineral Oil usage                        |   | Monthly      | No           |
|           | MSDS                                     | Kept on site and updated annually                                   | Continuously | No           |
| 316       | Quick Prime Plus Formulation Limit       | 1.87 lb/gal VOC<br>1.87 lb/gal Toluene                              | Monthly      | No           |
|           | Quick Prime Plus usage                   | 4,630 gallons per consecutive 12-month                              | Monthly      | No           |
| 317 & 318 | White tape compound                      | 17,520,000 pounds per consecutive 12-month period                   | Monthly      | No           |
| 503 & 504 | Hours of operation (each)                | 100 hours per consecutive 12-month period                           | Monthly      | No           |
| 505       | Hours of operation                       | 300 hours per calendar year   | Monthly      | No           |
| 506       | Hours of operation                       | 300 hours per calendar year   | Monthly      | No           |

| SN        | Recorded Item      | Permit Limit   | Frequency | Report (Y/N) |
|-----------|--------------------|--|-----------|--------------|
| 505 & 506 | Hours of operation | Anything in excess of 100 hours per calendar year must demonstrate that the engine still qualifies as an emergency engine as outlined in §60.4211(f) | Monthly   | No           |

17. OPACITY:

| SN  | Opacity | Justification for limit | Compliance Mechanism   |
|---|---------|-------------------------|--|
| 13, 206, 207, 323A, 323B  | 20 %    | Department Guidance     | Observation  |
| 01A, 01B, 02A, 02B, 03, 07, 15, 16A, 16B, 17A, 17B, 18A, 18B, 101A, 101B, 102 - 104, 107, 116, 118, 120, 201, 202, 205, 301A, 302 - 308, 309A, 309B, 310 - 312, 317, 318, 502 | 5 %     | Department Guidance     | Observation  |
| 503 - 506   | 20 %    | Department Guidance     | Annual VE & Daily VE when either source is in operation for more than 24 hours |

18. DELETED CONDITIONS:

| Former SC | Justification for removal  |
|-----------|--|
| 14 & 15   | These conditions should have been removed when the facility ceased operation of the thermal oxidizer when it was removed with Air Permit #0698-AR-12, issued on December 16, 2011. |

19. 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 |
| Curing Cooling Tower  | 13               | 0.71                |                 |     |    |                 |        |       |
| Chiller Cooling Tower | 13               | 0.75                |                 |     |    |                 |        |       |



| 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   |
| Process Cooling Tower       | 13               | 0.44                |                 |         |    |                 |         |         |
| Effluent Cooling Tower      | 13               | 0.02                |                 |         |    |                 |         |         |
| Cooling Tower for Mixtruder | 13               | 0.44                |                 |         |    |                 |         |         |
| Day Tanks for SN-317        | 13               |                     |                 | 1.09E-4 |    |                 | 1.09E-4 | 1.09E-4 |
| Devulcanization Process     | 13               | 0.01                |                 | 0.202   |    |                 | 0.30    | 0.30    |
| Comerio Line Shredder       | 13               | 0.1                 |                 | 0.1     |    |                 | 0.06    | 0.11    |
| Slab Dip/Soap Tanks         | 13               | 1.05                |                 |         |    |                 |         |         |

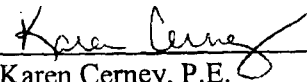
20. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

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

|            |
|------------|
| Permit #   |
| 0698-AR-15 |

21. 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

Revised 08-20-12

Facility Name: Firestone Building  
 Products Company, LLC  
 Permit Number: 0698-AR-16  
 AFIN: 50-00006

|                                   |                          |  |            |            |
|-----------------------------------|--------------------------|--|------------|------------|
|                                   |                          |  | Old Permit | New Permit |
| \$/ton factor                     | 22.97                    | Permit Predominant Air Contaminant       | 66.6       | 69.2       |
| Minimum Fee \$                    | 400                      | Net Predominant Air Contaminant Increase | 2.6        |            |
| Minimum Initial Fee \$            | 500                      |  |            |            |
| Check if Administrative Amendment | <input type="checkbox"/> | Permit Fee \$                            | 400        |            |
|                                   |                          | Annual Chargeable Emissions (tpy)        | 69.2       |            |

| Pollutant (tpy)    | Old Permit | New Permit | Change |
|--------------------|------------|------------|--------|
| PM                 | 47.9       | 48.1       | 0.2    |
| PM <sub>10</sub>   | 47.9       | 48.1       | 0.2    |
| SO <sub>2</sub>    | 0.6        | 0.8        | 0.2    |
| VOC                | 32.8       | 60.5       | 27.7   |
| CO                 | 55.4       | 56         | 0.6    |
| NO <sub>x</sub>    | 66.6       | 69.2       | 2.6    |
| Allyl Chloride     | 0.03       | 0.03       | 0      |
| Hexane             | 9.62       | 9.62       | 0      |
| Methanol           | 1.33       | 1.33       | 0      |
| Methylene Chloride | 4.41       | 4.41       | 0      |
| Toluene            | 4.93       | 4.95       | 0.02   |
| Beryllium          | 0.02       | 0.02       | 0      |
| Chromium           | 0.02       | 0.02       | 0      |