# ADEQ MINOR SOURCE AIR PERMIT

Permit #: 1145-AR-3

IS ISSUED TO:

GS Roofing Products Company 2701 E. Roosevelt Road Little Rock, AR 72206 Pulaski County CSN: 60-0049

THIS PERMIT IS YOUR AUTHORITY TO CONSTRUCT, MODIFY, OPERATE, AND/OR MAINTAIN THE EQUIPMENT AND/OR FACILITY IN THE MANNER AS SET FORTH IN THE DEPARTMENT'S MINOR SOURCE AIR PERMIT AND YOUR APPLICATION. THIS PERMIT IS ISSUED PURSUANT TO THE PROVISIONS OF THE ARKANSAS WATER AND AIR POLLUTION CONTROL ACT (ARK. CODE ANN. SEC. 8-4-101 ET SEQ.) AND THE REGULATIONS PROMULGATED THEREUNDER, AND IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.

Signed:		

### **SECTION I: FACILITY INFORMATION**

PERMITTEE: GS Roofing

CSN: 60-0049

PERMIT NUMBER: 1145-AR-3

FACILITY ADDRESS: 2701 E. Roosevelt Road

Little Rock, AR 72206

COUNTY: Pulaski

CONTACT POSITION: Dan Dick, Plant Manager

TELEPHONE NUMBER: (501) 375-9173

REVIEWING ENGINEER: Siew Low

UTM North-South (X): Zone 15 3,842.30

UTM East-West (Y): Zone 15 569.40

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#### **SECTION II: INTRODUCTION**

### **Summary**

GS Roofing (CSN 60-0049) at 2701 E. Roosevelt Road, Little Rock, Arkansas 72206, owns and operates an asphalt roofing manufacturing facility. The plant contains two separate manufacturing lines: a "Roofing" Line which produces traditional smooth-surfaced roll roofing products and a "Modified" Line which utilizes modified asphalt. The facility produces smooth-surfaced and mineral-surfaced roll roofing products.

This permitting action includes installing two new compound mixers on the modified line, installing three dry chemical storage tanks and a baghouse, installing a pneumatic conveying system, installing a new ceco filter, installing a new roofing line hot filler system baghouse, modifying the modified line by installing a new coater, installing a new soap mix tank, installing a roofing line surfacing/granule reclaim system baghouse, installing a tackifier resin storage tank, installing five new surge hoppers, identifying all emission sources individually, renumbering all emission sources, updating emission factors, adding to the permit existing equipment for which emissions data did not exist previously, and revised asphalt usage limits. Total allowable emissions will increase 54.0 tons/year of PM, 56.1 tons/year of PM<sub>10</sub>, 0.9 tons/year of sulfur dioxide, 3.3 tons/year of nitrogen oxides, 84.1 tons/year of volatile organic compounds, 7.9 tons/year of carbon monoxide, 2.23 tons/year of total HAPs.

### **Process Description**

#### **Roofing Line Process Description**

#### Roofing Line Production Operations

The Roofing Line is capable of processing glass mat or dry organic felt. Glass mat is unrolled from an unwind stand and passes through the saturator (SN-101- which is not used when processing glass mat), pre-coater (SN-102), and the coater (SN-103). In the coater, the glass mat passes under smoothing rolls partially submerged in filled coating between 400 to 420 degree Fahrenheit.

Dry organic felt is unrolled from an unwind stand and fed to the dip saturator (SN-101) where the felt runs over a series of idlers staggered in two rows. The felt becomes saturated as it passes under the lower row of idlers submerged in hot asphalt at 205 to 250°C (400 to 480°F.). The felt then passes through the pre-coater (SN-102) and the coater (SN-103).

After leaving the coater, the mat passes through the granule applicator (SN-104) where granules or sand are fed onto the hot, filled coated surface. The surface minerals are pressed into the coating as the sheet passes around a turn drum, exposing the backside. Sand is then applied to the backside and pressed into the coating.

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After mineral surfacing, the glass mat or organic felt is cooled rapidly by water-cooled rolls (SN-105) and passes through press rolls used to firmly embed the granules into the filled coating. The mat then passes through a drying section where it is air-cooled.

A finish looper in the line allows continuous movement of the sheet through the preceding operations and servers to further cool and dry the roofing sheet. Paint is applied to the sheet at the Roofing Line Laying Line Applicator (SN-106) to serve as a guide to the Roofer during installation. Roll roofing is completed at this point and moves to a winder where rolls are formed. After winding, a product label is printed (SN-107) on each roll and pallets of final product roll are wrapped in plastic using a shrink-wrapping machine (SN-108).

### Roofing Line Asphalt Heating and Mixing Operations

Saturant asphalt is heated to approximately 480 degree Fahrenheit in the saturant heater (SN-122), and fed to the saturator from a saturant storage tank (SN-102). Saturant asphalt from the saturator is continuously recycled back from the saturator to the storage tank where a natural gas-fired heater (SN-121) keeps the asphalt hot. To facilitate asphalt flow, all roofing line process piping in hot asphalt service is traced by hot oil from the roofing line hot oil heater (SN-129). Coating asphalt from SN-117 is heated by a natural gas fired heater (SN-115). SBS asphalt flux is heated in a storage tank (SN-118) by a natural gas fired heater (SN-119). Granules, dry sand, or other filler material is transferred from tank trucks and railcars to the corresponding storage tanks (SN-109, SN-123, and SN-126) using multiple conveyor belts. Dust collectors control particulate emissions from the sand, granule, and filler tanks. Filler and hot asphalt are combined at the horizontal mixer (SN-113) at approximately 400 degree Fahrenheit. This mixture is further mixed in a vertical mixer (SN-114) until it is used at the coater. Rotary dies apply the filled asphalt coating to the lower side of the saturated felt, which enters the coater (SN-103) at approximately 400 degree Fahrenheit from the saturator (SN-101).

Air emissions from Saturator (SN-101), Pre-coater (SN-102), Roofing Line Pre-Coater Use Tank (SN-116) are routed to SN-901, Roofing Line High Energy Air Filter. Air emissions from the Coater (SN-103), Saturant Storage Tank (SN-120), Coating Storage Tank (SN-117) and the Vertical Mixer (SN-114) are routed and vented to SN-902, Roofing Line Ceco Filter. Air emission from Roofing Line Filler Delivery and Storage Silo (SN-109), Roofing Line Filler Heater (SN-110), Roofing Line Hot Filler Elevator (SN-111), Roofing Line Hot Filler Use Bin (SN-112), and Roofing Line Horizontal Mixer (SN-113) are routed to SN-903, Roofing Line Hot Filler System Baghouse. Air emission from Roofing Line Sand Transfer Storage Bin (SN-124) is routed to SN-904. Air emission from SN-123 is routed to SN-905. Air emission from Granule Use Bin (SN-126), Roofing Line Sand Use Bin (SN-125), and Roofing Line Sand/Granule Reclaim System are routed to SN-906.

#### **Modified Line Process Description**

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### **Modified Line Production Operations**

The Modified Line operates similarly to the roofing line but uses modified asphalt containing rubber or olefin polymers. The Modified Line only uses a pre-coater (SN-131) and coater (SN-132).

Polyester mat is unrolled from an unwind stand and fed to the pre-coater where the mat passes over a series of idlers. The mat becomes saturated as it passes through the pre-coater submerged in hot asphalt at 380 to 400 degree Fahrenheit. Air emissions from the pre-coater and coater operation are vented to a Monsanto Coalescing Filter (SN-907).

After leaving the coater, the sheet is made into mineral-surfaced rolls by passing the sheet through granule applicators (SN-133 and SN-134) where granules are fed onto the hot, coated surface. The granules or talc are pressed into the compound as the mat passes around a press roll where it is reversed, exposing the bottom side. Sand or Flamina (i.e., film) is applied to the back surface (SN-135 and SN-136) and is pressed into the compound. Some modified products have a film applied to the front and back of the polyester mat. Some products receiving a film pass through a sheet edge flame (SN-139) to shrink the excess film.

After mineral surfacing, the mat is cooled rapidly by a water bath and water-cooled rolls (SN-137) and pass through press rolls used to firmly embed any granules into the filled coating. The sheet then passes through a cooling section where it is air-cooled.

A finished product looper in the line allows continuous movement of the sheet through the preceding operations and serves to further cool and dry the roofing sheet. Paint is applied to the sheet at the Modified Line Laying Line Applicator (SN-140) to serve as a guide to the Roofer during installation. The product is completed at this point and moves to the winder where rolls are formed. After winding, a product label is printed (SN-130) on each roll, and pallets for final product roll are wrapped in plastic using a shrink-wrapping machine (SN141).

### Modified Line Asphalt Heating and Mixing Operations

Unmodified coating asphalt is fed to the pre-coater use tank (SN-144) from the modified line pre-coater storage tank (SN-142), which is heated by SN-143. Pre-coater asphalt is continuously recycled back from the pre-coater to the pre-coater use tank. To facilitate the asphalt flow, all modified line process piping in hot asphalt service is traced by hot oil from the modified line hot oil heater (SN-158). APP asphalt flux and SBS asphalt flux used at the coater are heated in storage tanks (SN-159 and SN-156) by natural gas fired and electric heaters, respectively. Dry sand, talc, and other filler material are unloaded from tank trucks and bags and transferred to storage tanks (SN-146, SN-148, SN-149, SN-151, and SN-154). The sand silo dust collectors (SN-908 and SN-909), the Talc System Baghouse (SN-910), and the Filler System Baghouse (SN-911) control particulate emissions from the sand, talc, and filler tanks. APP polymer is stored under a nitrogen blanket (SN-155). Modified coating is produced in the compound

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mixers (SN-164) by combining various mixtures of APP Flux or SBS Flux with APP Homopolymer, filler, various dry chemicals, or polymers. This mixture is transferred into a vertical mixer (SN-145) until it is used at the coater. Rotary dies apply the modified asphalt, which enters the coater at approximately 400 degree Fahrenheit, to the polyester mat.

Air emissions from Modified Line Pre-Coater (SN-131), Modified Line Coater (SN-132), and Modified Line Vertical Mixer (SN-145) are routed to SN-907, Modified Line Monsanto Coalescing Filter. Air emissions from Modified Line Sand Delivery Storage Silo #1 are routed to SN-908. Air emissions Modified Line Sand Delivery Storage Silo #2 is routed to SN-909. Air emissions from Modified Line Talc Bag Dumping Bin (SN-151), Modified Line Talc Screw Conveyor and Bucket Elevator (SN-152), and Modified Line Talc Storage Silo (SN-153) are routed to SN-910. Air emissions from Modified Line Filler Delivery System and Storage Silo (SN-154) are routed to SN-911. Air emission from Modified Line IPP Polymer Storage Hopper #1 and #2 (SN-161 and SN-162), Modified Line SBS Polymer Storage Hopper (SN-163) are routed to SN-914. Air emissions from Modified Line Compound Mixers (5 mixers) (SN-164) are routed to SN-912. Air emissions from Modified Line Storage Tank #1, #2, and #3 (SN-165, SN-166, and SN-167), Modified Line Surge Bin #1 are routed to SN-913.

### **Miscellaneous Operations**

Storage tanks at the plant contain tackifier resin (SN-173), diesel fuel (SN-174), gasoline (SN-175), kerosene (SN-176), and soap (SN-177 and SN181). GS Roofing also operates various self-contained parts washers (SN-178) to perform cleaning activities. These tanks and washers support various operations at the facility.

#### Regulations

GS Roofing is subject to regulation under the *Arkansas Air Pollution Control Code* (Regulation 18, Air Code), the *Arkansas Plan of Implementation for Air Pollution Control* (Regulation 19, SIP), and the *New Source Performance Standards (NSPS) Part 60, Subpart UU, Standards of Performance for* 

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Asphalt Processing and Asphalt Roofing Manufacture.

The following table is a summary of the facility's total emissions.

TOTAL ALLOWABLE EMISSIONS			
Pollutant	Emission Rates		
	lb/hr	tpy	
PM	50.0	69.7	
$PM_{10}$	50.0	69.7	
$SO_2$	0.3	1.1	
VOC	127.5	98.9	
CO	10.4	13.1	
$NO_x$	2.2	9.5	
Formaldehyde	1.14	1.08	
Carbonyl Sulfide	0.77	0.70	
Naphthalene	0.02	0.01	
2-Methyl phenol	0.01	0.01	
Phenol	0.02	0.01	
Dibenzofuran	0.01	0.01	
Di-n-butylphthalate	0.01	0.01	
Polycyclic Organic Matter*	0.06	0.02	
Glycol Ethers	1.25	0.05	
Toluene	0.30	0.33	

*Italics* - indicates all Hazardous Air Pollutants (HAPs)

#### **SECTION III: PERMIT HISTORY**

The Roofing Line was originally constructed in the 1970's at the Little Rock facility. The Roofing Line High Energy Air Filter (SN-902) is the only equipment moved from Martinez, California facility in 1985. The Modified Line was newly constructed at the Little Rock in 1984 and 1985. CertainTeed purchased GS Roofing in 1999 and advised that the name should remain as "GS Roofing."

<sup>\*</sup> Include emissions of 2-methyl naphthalene, phenanthrene, and acenaphthalene.

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The initial Air Permit, 1145-A was issued on April 25, 1993.

On August 3, 1993, Air Permit 1145-AR-1 was issued. In this permitting action, ESP (SN-09) was replaced with an air filter (SN-26), and a boiler was replaced by a hot oil heater.

On October 24, 2000, Air Permit 1145-AR-2 was issued. In this permitting action incorporated sources removed from service, installation of a dust collector on the Modified Line compound mixing tanks process, installation of a pre-impregnator vat on the Modified Line, designated sources as insignificant activities, and included the Modified Line baghouse which was not included in the first Air Permit.

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### **SECTION IV: EMISSION UNIT INFORMATION**

### **Specific Conditions**

1. Pursuant to §19.501 et seq of the Regulations of the Arkansas Plan of Implementation for Air Pollution Control, effective February 15, 1999 (Regulation 19) and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table.

SN	Description	Pollutant	lb/hr	tpy	
SN-101	Roofing Line Saturator	Emissions routed to SN-901			
SN-102	Roofing Line Pre-Coater	Emissions rou	ited to SN	-901	
SN-103	Roofing Line Coater	Emissions rou	ited to SN	-902	
SN-104	Roofing Line Surfacing Section	CO 0.5 0.		1.0 0.5 10.6	
SN-105	Roofing Line Cooling Section	PM <sub>10</sub> CO VOC	15.8 0.5 21.1	7.9 0.5 10.6	
SN-106	Roofing Line Laying Line Applicator	VOC 0.1 0.3		0.3	
SN-107	Roofing Line Ink Jet Label Applicator	VOC	0.7	0.1	
SN-109	Roofing Line Filler Delivery and Storage Silo	Emissions rou	ited to SN	-903	
SN-110	Roofing Line Filler Heater	Emissions rou	ated to SN	-903	
SN-111	Roofing Line Hot Filler Elevator	Emissions rou	ited to SN	-903	
SN-112	Roofing Line Hot Filler Use Bin	Emissions rou	ited to SN	-903	
SN-113	Roofing Line Horizontal Mixer	Emissions rou	Emissions routed to SN-903		
SN-114	Roofing Line Vertical Mixer	Emissions routed to SN-902			
SN-116	Roofing Line Pre-Coater Use Tank	Emissions rou	ited to SN	-901	

SN	Description	Pollutant	lb/hr	tpy
SN-117	Roofing Line Coating Storage Tank	Emissions routed to SN-902		
SN-118	Roofing Line SBS Modified Asphalt Storage Tank	PM <sub>10</sub> CO VOC	1.3 0.7 3.5	0.2 0.1 0.4
SN-120	Roofing Line Saturant Storage Tank	Emissions rou	ited to SN-	-902
SN-122	Roofing Line Saturant Heater, 7.0 MM Btu/hr	$\begin{array}{c} PM_{10} \\ NO_x \\ CO \\ SO_2 \\ VOC \end{array}$	0.1 1.1 0.6 0.2 0.1	0.3 4.8 2.6 0.6 0.2
SN-123	Roofing Line Sand Delivery and Storage Silo	Emissions rou	ited to SN	-905
SN-124	Roofing Line Sand Transfer Storage Bin	Emissions routed to SN-904		-904
SN-125	Roofing Line Sand Use Bin	Emissions rou	ited to SN	-906
SN-126	Granule Delivery and Storage Silos	$PM_{10}$	0.1	0.1
SN-127	Granule Use Bin	Emissions rou	ited to SN	-906
SN-128	Roofing Line Sand/Granule Reclaim System	Emissions rou	ited to SN	-906
SN-129	Roofing Line Hot Oil Heater, 7.0 MM Btu/hr	$\begin{array}{c} PM_{10} \\ NO_x \\ CO \\ SO_2 \\ VOC \end{array}$	0.1 1.1 0.6 0.2 0.1	0.3 4.8 2.6 0.6 0.2
SN-130	Modified Line Ink Jet Applicator	VOC	0.7	0.1
SN-131	Modified Line Pre-Coater	Emissions rou	ited to SN	-907
SN-132	Modified Line Coater	Emissions rou	ited to SN	-907
SN-133	Modified Line Granule Surfacing Applicator #1	PM <sub>10</sub> CO VOC	0.2 0.4 6.5	0.9 0.6 9.5

SN	Description	Pollutant	lb/hr	tpy
SN-134	Modified Line Granule Surfacing Applicator #2	PM <sub>10</sub> CO VOC	0.2 0.4 6.5	0.9 0.6 9.5
SN-135	Modified Line Back Surfacing Applicator #1	PM <sub>10</sub> CO VOC	0.2 0.4 6.5	0.9 0.6 9.5
SN-136	Modified Line Back Surfacing Applicator #2	PM <sub>10</sub> CO VOC	0.2 0.4 6.5	0.9 0.6 9.5
SN-137	Modified Line Cooling Section Water Bath	PM <sub>10</sub> CO VOC	4.8 0.4 6.5	5.0 0.6 9.5
SN-140	Modified Line Laying Line Applicator	VOC	0.1	0.1
SN-142	Modified Line Pre-Coater Storage Tank	PM <sub>10</sub> CO VOC	0.4 0.2 1.0	0.2 0.1 0.4
SN-144	Modified Line Pre-Coater Use Tank	PM <sub>10</sub> CO VOC	0.4 0.2 1.0	0.2 0.1 0.4
SN-145	Modified Line Vertical Mixer	Emissions rou	ited to SN	-907
SN-146	Modified Line Granule Storage Bin	$PM_{10}$	0.1	0.1
SN-147	Modified Line Granule Use Bin	$PM_{10}$	0.1	0.1
SN-148	Modified Line Sand Delivery Storage Silo #1	Emissions routed to SN-908		-908
SN-149	Modified Line Sand Delivery Storage Silo #2	Emissions routed to SN-909		-909
SN-150	Modified Line Sand/Granule Reclaim System	$PM_{10}$	0.1	0.1
SN-151	Modified Line Talc Bag Dumping Bin	Emissions rou	ited to SN	-910

SN	Description	Pollutant	lb/hr	tpy	
SN-152	Modified Line Talc Screw Conveyor and Bucket Elevator	Emissions routed to SN-910			
SN-153	Modified Line Talc Storage Silo	Emissions routed to SN-910			
SN-154	Modified Line Filler Delivery System and Storage Silo	Emissions rou	uted to SN	-911	
SN-156	Modified Line SBS Flux Storage Tank	PM <sub>10</sub> CO VOC	0.9 0.5 2.4	0.6 0.4 1.6	
SN-159	Modified Line APP Flux Storage Tank	PM <sub>10</sub> CO VOC	1.4 0.8 3.8	1.5 0.8 3.9	
SN-161	Modified Line IPP Polymer Storage Hopper #1	Emissions routed to SN-914			
SN-162	Modified Line IPP Polymer Storage Hopper #2	Emissions routed to SN-914			
SN-163	Modified Line SBS Polymer Storage Hopper	Emissions rou	Emissions routed to SN-914		
SN-164	Modified Line Compound Mixer (5 mixers)	Emissions rou	uted to SN	-912	
SN-165	Modified Line Dry Chemical Storage Tank #1	Emissions rou	uted to SN	-913	
SN-166	Modified Line Dry Chemical Storage Tank #2	Emissions rou	uted to SN	-913	
SN-167	Modified Line Dry Chemical Storage Tank #3	Emissions rou	Emissions routed to SN-913		
SN-168	Modified Line Surge Bin #1	Emissions rou	uted to SN	-913	
SN-175	Gasoline Storage Tank	VOC	2.5	0.2	
SN-178	Parts Washers	VOC	10.2	1.4	
SN-179	Granule Transfer Systems	$PM_{10}$	0.3	1.1	
	Roofing Line High Energy Air	$PM_{10}$	7.5	3.1	

SN	Description	Pollutant	lb/hr	tpy
SN-901	Filter	CO VOC	1.8 27.5	1.6 12.3
SN-902	Roofing Line Ceco Filter	$PM_{10}$ CO VOC	3.2 2.7 15.7	2.9 2.1 13.4
SN-903	Roofing Line Hot Filler System Baghouse	PM <sub>10</sub> CO VOC	2.2 0.3 13.5	5.3 0.3 16.5
SN-904	Roofing Line Sand Storage Baghouse	PM <sub>10</sub>	0.2	0.8
SN-905	Roofing Lien Sand Silo Baghouse	$PM_{10}$	0.2	0.7
SN-906	Roofing Line Surfacing/Granule Reclaim System Baghouse	$PM_{10}$	4.4	19.9
SN-907	Modified Line Monsanto Coalescing Filter	$PM_{10} \ CO \ VOC$	4.6 1.3 13.0	7.1 1.6 18.4
SN-908	Modified Line Sand Silo #1 Baghouse (Passive)	$PM_{10}$	0.2	0.7
SN-909	Modified Line Sand Silo #2 Baghouse (Passive)	$PM_{10}$	0.2	0.7
SN-910	Modified Line Talc System Baghouse	$PM_{10}$	0.4	1.4
SN-911	Modified Line Filler System Baghouse	$PM_{10}$	0.2	0.8
SN-912	Modified Line Compound Mixing Room	PM <sub>10</sub> CO VOC	1.2 0.2 4.8	4.0 0.3 9.4
SN-913	Modified Line Dry Chemical Storage Tanks Baghouse	$PM_{10}$	0.2	0.8
SN-914	Modified Line IPP/SBS Baghouse (Passive)	$PM_{10}$	0.1	0.4

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2. Pursuant to §18.801 of the Arkansas Air Pollution Control Code, effective February 15, 1999 (Regulation 18) and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed the emission rates set forth in the following table.

SN	Description	Pollutant	lb/hr	tpy
SN-101	Roofing Line Saturator	Emissions routed to SN-901		
SN-102	Roofing Line Pre-Coater	Emissions routed to	SN-90	1
SN-103	Roofing Line Coater	Emissions routed to	SN-90	2
SN-104 SN-105	Roofing Line Surfacing Section Roofing Line Cooling Section	PM (SN-104) 0.21 1.0 PM (SN-105) 15.8 7.9 Formaldehyde 0.08 0.0 Carbonyl Sulfide 0.07 0.0 Toluene 0.05 0.0		
SN-107	Roofing Line Ink Jet Label Applicator	Glycol Ethers	0.62	0.01
SN-109	Roofing Line Filler Delivery and Storage Silo	Emissions routed to SN-903		
SN-110	Roofing Line Filler Heater	Emissions routed to SN-903		
SN-111	Roofing Line Hot Filler Elevator	Emissions routed to	o SN-90	3
SN-112	Roofing Line Hot Filler Use Bin	Emissions routed to	o SN-90	3
SN-113	Roofing Line Horizontal Mixer	Emissions routed to	SN-90	3
SN-114	Roofing Line Vertical Mixer	Emissions routed to	SN-90	2
SN-116	Roofing Line Pre-Coater Use Tank	Emissions routed to SN-901		
SN-117	Roofing Line Coating Storage Tank	Emissions routed to SN-902		
SN-118	Roofing Line SBS Modified Asphalt Storage Tank	PM Formaldehyde	1.3 0.06	0.2 0.01

SN	Description	Pollutant	lb/hr	tpy
		Carbonyl Sulfide Polycyclic Organic Matter* (POM*)	0.05 0.01	0.01 0.01
SN-120	Roofing Line Saturant Storage Tank	Emissions routed to SN-902		2
SN-122	Roofing Line Saturant Heater, 7.0 MM Btu/hr	PM	0.1	0.3
SN-123	Roofing Line Sand Delivery and Storage Silo	Emissions routed to	o SN-90	5
SN-124	Roofing Line Sand Transfer Storage Bin	Emissions routed to	o SN-90	4
SN-125	Roofing Line Sand Use Bin	Emissions routed to SN-906		6
SN-126	Granule Delivery and Storage Silos	PM	0.1	0.1
SN-129	Roofing Line Hot Oil Heater, 7.0 MM Btu/hr	PM	0.1	0.3
SN-130	Modified Line Ink Jet Applicator	Glycol Ethers	0.62	0.03
SN-131	Modified Line Pre-Coater	Emissions routed to	o SN-90	7
SN-132	Modified Line Coater	Emissions routed to	o SN-90	7
SN-133	Modified Line Granule Surfacing Applicator #1	PM (SN-133) PM (SN-134) PM (SN-135)	0.2 0.2 0.2	0.9 0.9 0.9
SN-134	Modified Line Granule	PM (SN-136) PM (SN-137)	0.2 4.8	0.9 5.0
SN-135	Surfacing Applicator #2	Formaldehyde (SN-133 to SN-137)	0.05	0.05
SN-136	Modified Line Back Surfacing Applicator #1	Carbonyl Sulfide (SN-133 to SN-137)	0.04	0.04
SN-137	Modified Line Back Surfacing Applicator #2	Toluene (SN-133 to SN-	0.03	0.03

SN	Description	Pollutant	lb/hr	tpy
	Modified Line Cooling Section Water Bath	137)		
SN-140	Modified Line Laying Line Applicator	Glycol Ethers	0.01	0.01
SN-142	Modified Line Pre-Coater Storage Tank	PM Formaldehyde Carbonyl Sulfide POM*	0.4 0.02 0.01 0.01	0.2 0.01 0.01 0.01
SN-144	Modified Line Pre-Coater Use Tank	PM Formaldehyde Carbonyl Sulfide POM*	0.4 0.02 0.01 0.01	0.2 0.01 0.01 0.01
SN-145	Modified Line Vertical Mixer	Emissions routed to SN-907		7
SN-146	Modified Line Granule Storage Bin	PM	0.1	0.1
SN-147	Modified Line Granule Use Bin	PM	0.1	0.1
SN-148	Modified Line Sand Delivery Storage Silo #1	Emissions routed t	o SN-90	8
SN-149	Modified Line Sand Delivery Storage Silo #2	Emissions routed t	o SN-90	9
SN-150	Modified Line Sand/Granule Reclaim System	PM	0.1	0.1
SN-151	Modified Line Talc Bag Dumping Bin	Emissions routed to SN-910		0
SN-152	Modified Line Talc Screw Conveyor and Bucket Elevator	Emissions routed to SN-910		0
SN-153	Modified Line Talc Storage Silo	Emissions routed t	o SN-91	0
	Modified Line Filler Delivery			

SN	Description	Pollutant	lb/hr	tpy
SN-154	System and Storage Silo	Emissions routed to	o SN-91	1
SN-156	Modified Line SBS Flux Storage Tank	PM Formaldehyde Carbonyl Sulfide POM*	0.9 0.04 0.03 0.01	0.6 0.03 0.02 0.01
SN-159	Modified Line APP Flux Storage Tank	PM Formaldehyde Carbonyl Sulfide POM*	1.4 0.06 0.05 0.01	1.5 0.06 0.05 0.01
SN-161	Modified Line IPP Polymer Storage Hopper #1	Emissions routed to	o SN-91	4
SN-162	Modified Line IPP Polymer Storage Hopper #2	Emissions routed to	o SN-91	4
SN-163	Modified Line SBS Polymer Storage Hopper	Emissions routed to SN-914		
SN-164	Modified Line Compound Mixer (5 mixers)	Emissions routed to SN-912		
SN-165	Modified Line Dry Chemical Storage Tank #1	Emissions routed to	o SN-91	3
SN-166	Modified Line Dry Chemical Storage Tank #2	Emissions routed to	o SN-91	3
SN-167	Modified Line Dry Chemical Storage Tank #3	Emissions routed to	o SN-91	3
SN-168	Modified Line Surge Bin #1	Emissions routed to	o SN-91	3
SN-179	Granule Transfer Systems	PM	0.3	1.1
SN-901	Roofing Line High Energy Air Filter	PM Formaldehyde Carbonyl Sulfide POM* Toluene	7.5 0.18 0.16 0.05 0.07	3.1 0.16 0.14 0.01 0.07
SN-902	Roofing Line Ceco Filter	PM Formaldehyde	3.2 0.28	2.9 0.23

SN	Description	Pollutant	lb/hr	tpy
		Carbonyl Sulfide POM* Toluene	0.21 0.01 0.07	0.15 0.01 0.07
SN-903	Roofing Line Hot Filler System Baghouse	PM Formaldehyde Carbonyl Sulfide	2.2 0.30 0.05	5.3 0.29 0.05
SN-904	Roofing Line Sand Storage Baghouse	PM	0.2	0.8
SN-905	Roofing Lien Sand Silo Baghouse	PM	0.2	0.7
SN-906	Roofing Line Surfacing/Granule Reclaim System Baghouse	PM	4.4	19.9
SN-907	Modified Line Monsanto Coalescing Filter	PM Formaldehyde Carbonyl Sulfide Toluene	4.6 0.16 0.11 0.09	7.1 0.21 0.14 0.11
SN-908	Modified Line Sand Silo #1 Baghouse (Passive)	PM	0.2	0.7
SN-909	Modified Line Sand Silo #2 Baghouse (Passive)	PM	0.2	0.7
SN-910	Modified Line Talc System Baghouse	PM	0.4	1.4
SN-911	Modified Line Filler System Baghouse	PM	0.2	0.8
SN-912	Modified Line Compound Mixing Room	PM Formaldehyde Carbonyl Sulfide	1.2 0.04 0.01	4.0 0.06 0.01
SN-913	Modified Line Dry Chemical Storage Tanks Baghouse	PM	0.2	0.8
SN-914	Modified Line IPP/SBS Baghouse (Passive)	PM	0.1	0.4

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Italics - indicates all Hazardous Air Pollutants (HAPs)

3. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, visible emissions shall not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

SN	Limit	Regulatory Citation
122, 129	20%	19.503
104, 105, 106, 107, 118, 126, 130, 133, 134, 135, 136, 137, 140, 140, 142, 144, 146, 147, 150, 156, 159, 175, 178, 179, 903, 904, 905, 906, and 912.	5%	18.501
901, 902, and 907.	5%	18.501
144	0%	40 CFR Part 60.472(c)
908, 909, 910, 911, and 913.	1%	40 CFR Part 60.472(d)

4. Pursuant to §19.705 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the facility shall not exceed the following rolling twelve month total for the following materials:

Material	Permitted Twelve Month Rolling Total	
Asphalt	78,109 tons	
Saturant	4,919 tons	
Roofing Product Used in Modified Line Only	70,866 tons	

5. Pursuant to §18.1004 of Regulation 18, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not use materials which exceed the VOC and Glycol Ether content limits outlined in the following table:

<sup>\*</sup> Include emissions of 2-methyl naphthalene, phenanthrene, and acenaphthalene.

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Material	Maximum VOC Content Limit (lb/gallon)	Maximum Glycol Ether Content Limit (lb/ gallon)	
Paints use at SN-106 and SN-140	0.21	0.02	
Inks use at SN-107 and SN-130	1.65	5 1.65	
Parts Washer Solvents use at SN-178	6.8	-	

- 6. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall perform monthly emission calculations to demonstrate compliance with the annual emission limits set forth in Specific Condition #1 and #2 for SN-106, SN-107, SN-130, SN-140, and SN-178.
- 7. Pursuant to §19.705 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall maintain monthly records which demonstrate compliance with Specific Condition # 4, #5, and #6. Records shall be updated by the fifteenth day of the month following the month to which the records pertain. These records shall be maintained for at least two years, kept on site, and shall be made available to Department personnel upon request.
- 8. Pursuant to §18.801 of Regulation 18, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not cause or permit the emission of air contaminants, including odors or water vapor and including an air contaminant whose emission is not otherwise prohibited by Regulation #18, if the emission of the air contaminant constitutes air pollution within the meaning of A.C.A. §8-4-303.
- 9. Pursuant to §18.901 of Regulation 18, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not conduct operations in such a manner as to unnecessarily cause air contaminants and other pollutants to become airborne.
- 10. Pursuant to §19.705 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the facility shall use only pipeline quality natural gas or propane for the process heaters.

### **NSPS** Requirement

11. Pursuant to §19.304 and 40 CFR §60.470, Roofing Line High Energy Air Filter (SN-901), Roofing Line Ceco Filter (SN-902), Modified Line Monsanto Coalescing Filter (SN-907), Modified Line Sand Silo #1 Baghouse (SN-908), Modified Line Sand Silo #2 Baghouse (SN-909), Modified Line Talc System Baghouse (SN-910), Modified Line Filler System Baghouse (SN-911), Dry Chemical Storage Tanks Baghouse (SN-913), and Pre-coater Use Tank (SN-144) shall meet all applicable requirements of NSPS Subpart UU, Standards of

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Performance for Asphalt Processing and Asphalt Manufacture. A copy of NSPS Subpart UU is available at Appendix A.

- 12. Pursuant to §19.501 of Regulation #19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR §60.472, the permittee shall not discharge in excess of 0.08 lb particulate matter per ton of asphalt shingle, mineral-surfaced roll roofing, saturated felt, or smooth surfaced roll roofing produced from the Roofing Line High Energy Air Filter (SN-901), Roofing Line Ceco Filter (SN-902), and Modified Line Monsanto Coalescing Filter (SN-907). Compliance with the emission factor limits will be demonstrated by compliance with Specific Condition # 12.
- 13. Pursuant to §19.702 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, 40 CFR §60.8, 40 CFR §60.474, the permittee shall test SN-901, SN-902 and SN-907 to determine compliance with the particulate matter standards of §60.472, using EPA Reference Method 5A Additionally, the permittee shall measure the inlet gas temperature to SN-901, SN-902, and SN-907. The control device temperature during testing must be recorded, reported, and maintained on file for at least two year. These tests must be performed within 60 days after achieving the maximum production rate, but no later than 180 days after the initial start-up. At least one compliance test shall be conducted every five calendar years. There shall be no more than sixty-two months between any two compliance tests. The 5-year testing cycle shall commence with the initial compliance stack testing event.
- 14. Pursuant to §19.705 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR §60.473 (a), the permittee shall continuously monitor and record the inlet gas temperature of SN-901, SN-902, and SN-907. The temperature monitoring instrument shall have an accuracy of ± 15 °C (± 25 °F) over its range. These records shall be kept on site, updated by the last day of the following month and provided to Department personnel upon request.
- 15. Pursuant to §19.501 of Regulation #19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR §60.472, the permittee shall not cause to be discharge into the atmosphere any visible emission from the Roofing Line High Energy Air Filter's capture system, Roofing Line Ceco Filter's capture system, and Modified Line Monsanto Coalescing Filter's capture system for more than 20 percent of any period of consecutive valid observation totaling 60 minutes. Compliance with these visible emission limits will be demonstrated by compliance with Specific Condition #15.
- 16. Pursuant to §19.702 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, 40 CFR §60.8, 40 CFR §60.474, the permittee shall test the Roofing Line High Energy Air Filter's capture system, Roofing Line Ceco Filter's capture system, and Modified Line Monsanto Coalescing Filter's capture system to determine compliance with the particulate matter standards of §60.472(a)(3), using EPA Reference Method 22, modified so

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that readings are recorded every 15 seconds for a period of consecutive observations during representative conditions in accordance with §60.8(c) totaling 60 minutes. Performance tests shall consist of only one run. These tests must be performed within 60 days after achieving the maximum production rate, but no later than 180 days after the initial start-up. At least one compliance test shall be conducted every five calendar years. There shall be no more than sixty-two months between any two compliance tests. The 5-year testing cycle shall commence with the initial compliance stack testing event.

- 17. Pursuant to §19.304 and 40 CFR §60.474, testing for Modified Line Sand Silo #1 Baghouse (SN-908), Modified Line Sand Silo #2 Baghouse (SN-909), Modified Line Talc System Baghouse (SN-910), Modified Line Filler System Baghouse (SN-911), Dry Chemical Storage Tanks Baghouse (SN-913), and Pre-coater Use Tank (SN-144) shall be conducted using EPA Reference Method 9 in accordance with the schedule specified by 40 CFR §60.8. These tests must be performed within 60 days after achieving the maximum production rate, but no later than 180 days after the initial start-up.
- 18. Pursuant to §19.705 of Regulation 19, §18.1004 of Regulation 18, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall report the findings of all opacity tests to the Department in accordance with General Condition #7.

#### **SECTION V: INSIGNIFICANT ACTIVITIES**

The following types of activities or emissions are deemed insignificant on the basis of size, emission rate, production rate, or activity in accordance with Group A of the Insignificant Activities list found in Regulation 18 and 19 Appendix A. Insignificant activity emission determinations rely upon the information submitted by the permittee in an application dated September 20, 2002.

Description		Category
SN-108	Roofing Line Shrink Wrap	A-13
SN-115	Coating Asphalt Heater, 3.5 MM Btu/hr	A-1
SN-119	Roofing Line SBS Modified Asphalt Storage Tank Heater, 0.8 MM Btu/hr	A-1
SN-121	Roofing Line Saturant Storage Tank and Heater, 2.5 MM Btu/hr	A-1
SN-138	Modified Line Backing Film Applicator	A-13
SN-139	Modified Line Sheet Edge Flame Shrinking, 0.03 MM Btu/hr	A-1
SN-141	Modified Line Shrink Wrap	A-13

SN-143	Modified Line Pre-Coater Storage Tank Heater, 0.8 MM Btu/hr	A-1
SN-157	Modified Line SBS Flux Storage Tank Electric Heater	A-13
SN-158	Hot Oil Heater, 6.0 MM Btu/hr	A-1
SN-160	Modified Line APP Flux Storage Tank Heater, 0.8 MM Btu/hr	A-1
SN-180	Modified Line Sheet Splicing, 0.06 MM Btu/hr	A-1
SN-174	1,500 gallon Diesel Tank	A-3
SN-176	Kerosene Storage Tank	A-3
SN-155	Modified Line APP Polymer Storage Tank	A-3
SN-173	Modified Line Tackifier Resin Storage Tank	A-3

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#### **SECTION VI: GENERAL CONDITIONS**

- 1. Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq.*) as the sole origin of and authority for the terms or conditions are not required under the Clean Air Act or any of its applicable requirements, and are not federally enforceable under the Clean Air Act. Arkansas Pollution Control & Ecology Commission Regulation 18 was adopted pursuant to the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq.*). Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq.*) as the origin of and authority for the terms or conditions are enforceable under this Arkansas statute.
- 2. Pursuant to A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, this permit shall not relieve the owner or operator of the equipment and/or the facility from compliance with all applicable provisions of the Arkansas Water and Air Pollution Control Act and the regulations promulgated thereunder.
- 3. Pursuant to §19.704 of the Regulations of the Arkansas Plan of Implementation for Air Pollution Control (Regulation 19) and/or A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, the Department shall be notified in writing within thirty (30) days after construction has commenced, construction is complete, the equipment and/or facility is first placed in operation, and the equipment and/or facility first reaches the target production rate.
- 4. Pursuant to §19.410(B) of Regulation 19 and/or §18.309(B) of the Arkansas Air Pollution Control Code (Regulation 18) and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, construction or modification must commence within eighteen (18) months from the date of permit issuance.
- 5. Pursuant to §19.705 of Regulation 19 and/or §18.1004 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, records must be kept for five years which will enable the Department to determine compliance with the terms of this permit--such as hours of operation, throughput, upset conditions, and continuous monitoring data. The records may be used, at the discretion of the Department, to determine compliance with the conditions of the permit.

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6. Pursuant to §19.705 of Regulation 19 and/or §18.1004 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, any reports required by any condition contained in this permit shall be certified by a responsible official and submitted to the Department at the address below.

Arkansas Department of Environmental Quality Air Division ATTN: Compliance Inspector Supervisor Post Office Box 8913 Little Rock, AR 72219

- 7. Pursuant to §19.702 of Regulation 19 and/or §18.1002 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, any equipment that is to be tested, unless stated in the Specific Conditions of this permit or by any federally regulated requirements, shall be tested with the following time frames: (1) Equipment to be constructed or modified shall be tested within sixty (60) days of achieving the maximum production rate, but in no event later than 180 days after initial start-up of the permitted source or (2) equipment already operating shall be tested according to the time frames set forth by the Department. The permittee shall notify the Department of the scheduled date of compliance testing at least fifteen (15) days in advance of such test. Compliance test results shall be submitted to the Department within thirty (30) days after the completed testing.
- 8. Pursuant to §19.702 of Regulation 19 and/or §18.1002 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, the permittee shall provide:
  - a. Sampling ports adequate for applicable test methods
  - b. Safe sampling platforms
  - c. Safe access to sampling platforms
  - d. Utilities for sampling and testing equipment
- 9. Pursuant to §19.303 of Regulation 19 and/or §18.1104 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, the equipment, control apparatus and emission monitoring equipment shall be operated within their design limitations and maintained in good condition at all times.

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- 10. Pursuant to §19.601 of Regulation 19 and/or §18.1101 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, if the permittee exceeds an emission limit established by this permit, they shall be deemed in violation of said permit and shall be subject to enforcement action. The Department may forego enforcement action for emissions exceeding any limits established by this permit provided the following requirements are met:
  - a. The permittee demonstrates to the satisfaction of the Department that the emissions resulted from an equipment malfunction or upset and are not the result of negligence or improper maintenance, and that all reasonable measures have been taken to immediately minimize or eliminate the excess emissions.
  - b. The permittee reports the occurrence or upset or breakdown of equipment (by telephone, facsimile, or overnight delivery) to the Department by the end of the next business day after the occurrence or the discovery of the occurrence.
  - c. The permittee shall submit to the Department, within five business days after the occurrence or the discovery of the occurrence, a full, written report of such occurrence, including a statement of all known causes and of the scheduling and nature of the actions to be taken to minimize or eliminate future occurrences, including, but not limited to, action to reduce the frequency of occurrence of such conditions, to minimize the amount by which said limits are exceeded, and to reduce the length of time for which said limits are exceeded. If the information is included in the initial report, it need not be submitted again.
- Pursuant to A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, the permittee shall allow representatives of the Department upon the presentation of credentials:
  - a. To enter upon the permittee's premises, or other premises under the control of the permittee, where an air pollutant source is located or in which any records are required to be kept under the terms and conditions of this permit
  - b. To have access to and copy any records required to be kept under the terms and conditions of this permit, or the Act
  - c. To inspect any monitoring equipment or monitoring method required in this permit
  - d. To sample any emission of pollutants
  - e. To perform an operation and maintenance inspection of the permitted source

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- 12. Pursuant to A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, this permit is issued in reliance upon the statements and presentations made in the permit application. The Department has no responsibility for the adequacy or proper functioning of the equipment or control apparatus.
- 13. Pursuant to §19.410(A) of Regulation 19 and/or §18.309(A) of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, this permit shall be subject to revocation or modification when, in the judgment of the Department, such revocation or modification shall become necessary to comply with the applicable provisions of the Arkansas Water and Air Pollution Control Act and the regulations promulgated thereunder.
- 14. Pursuant to §19.407(B) of Regulation 19 and/or §18.307(B) of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, this permit may be transferred. An applicant for a transfer shall submit a written request for transfer of the permit on a form provided by the Department and submit the disclosure statement required by Arkansas Code Annotated §8-1-106 at least thirty (30) days in advance of the proposed transfer date. The permit will be automatically transferred to the new permittee unless the Department denies the request to transfer within thirty (30) days of the receipt of the disclosure statement. A transfer may be denied on the basis of the information revealed in the disclosure statement or other investigation or, if there is deliberate falsification or omission of relevant information.
- 15. Pursuant to A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, this permit shall be available for inspection on the premises where the control apparatus is located.
- Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, this permit authorizes only those pollutant emitting activities addressed herein.
- 17. Pursuant to Regulation 18 and 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, this permit supersedes and voids all previously issued air permits for this facility.

