

# OPERATING AIR PERMIT

Pursuant to the Regulations of the Arkansas Operating Air Permit Program, Regulation #26:

Permit #: 1089-AOP-R0

IS ISSUED TO:

Yazoo Valley Oil Mill  
501 O'Connor Street  
Helena, AR 72342  
Phillips County  
CSN: 54-0019

THIS PERMIT AUTHORIZES THE ABOVE REFERENCED PERMITTEE TO INSTALL, OPERATE, AND MAINTAIN THE EQUIPMENT AND EMISSION UNITS DESCRIBED IN THE PERMIT APPLICATION AND ON THE FOLLOWING PAGES. THIS PERMIT IS VALID BETWEEN:

and

AND IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.

Signed:

\_\_\_\_\_  
Keith A. Michaels

\_\_\_\_\_  
Date

**SECTION I: FACILITY INFORMATION**

Yazoo Valley Oil Mill

**CSN: 54-0019**

**Permit #: 1089-AOP-R0**

PERMITTEE: Yazoo Valley Oil Mill  
CSN: 54-0019  
PERMIT NUMBER: 1089-AOP-R0

FACILITY ADDRESS: 501 O'Connor Street  
P.O. Box 569  
Helena, Arkansas 72342

COUNTY: Phillips

CONTACT NAME: Gary Morgan  
TELEPHONE NUMBER: (601) 256-9793

REVIEWING ENGINEER: Melissa J. Blumenthal

UTM North-South (X): 721.2  
UTM East-West (Y): 3822.3

## SECTION II: INTRODUCTION

The Yazoo Helena Mill (Yazoo) produces cottonseed oil, cottonseed meal, cottonseed hull, and short-cut cotton lint from raw cottonseed. The process involves removing short-cut lint from cottonseed, hulling the seed, conditioning the inner seed meats, and finally extracting oil from the seed meats.

The facility receives cottonseed by truck. Once ready for processing, cottonseed is mechanically conveyed to the seed cleaning operations. By using air and gravity, unwanted material such as rocks, nuts, and twigs drop out. A majority of the material exiting the cleaners is clean seed. After cleaning, the cottonseed is mechanically conveyed to the delinting operations. The resulting clean lint is sent to the baler room, and the delinted cottonseed (now termed black seed) is conveyed for further processing in the huller room. During the hulling operations, the cottonseed is cut open to release the meats which are directed to the meats stream.

Following meats preparation, the solvent hexane is percolated through the seed meats in the extraction plant to recover the oil from the seed meats. Following extraction, the oil and solvent are separated by distillation and the oil is stored in one of several oil storage tanks. The oil seed meats are desolventized, dried, and cooled. The resulting meal is mechanically conveyed into meal storage tanks or storage buildings. The resulting products are shipped out for distribution.

Yazoo is proposing to make several physical modifications to the facility. These modifications will allow the facility to increase cottonseed throughput from 400 tons per day and 120,000 tons per year to 600 tons per day and 180,000 tons per year. Yazoo is proposing to install three new cyclones associated with seed cleaning operations. Yazoo is proposing to upgrade the lint room. The existing lint room will be replaced with more efficient cottonseed delinting equipment and associated cyclones. Twelve new cyclones will be added to the lint room. Yazoo is proposing to install five new cyclones associated with seed dehulling operations. Yazoo is proposing to install a new desolventizer toaster (DT). The new DT will be better sized and more efficient. Yazoo will also modify the meal loadout to reduce meal loss. The meal loadout area will be enclosed and equipped with a negative pressure hood. The effluent air stream from the hood will be filtered through a baghouse prior to release to the atmosphere.

Due to the increased efficiency of the proposed new equipment, there will be an actual facility-wide decrease in emissions of particulate matter and volatile organic compounds.

Yazoo Valley Oil Mill's Helena Mill is subject to regulation under Regulation #18 (Air Code), Regulation #19 (SIP) and Regulation #26 (Title V). The facility is an existing minor source under the PSD regulations. In addition, when the final rules are promulgated the Yazoo Helena Mill will

be subject to applicable provisions of Compliance Assurance Monitoring (40 CFR Part 64) and the Maximum Achievable Control Technology (40 CFR Part 63) for the cottonseed oil mill industry.

1089-AOP-R0 is the first operating air permit for the Helena Mill under Regulation #26. A summary of facility wide emissions is provided in the following table. Specific emission unit information is located by the indicated cross reference pages.

EMISSION SUMMARY					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
Total Allowable Emissions		PM	91.0	230.0	N/A
		PM <sub>10</sub>	71.2	223.5	
		SO <sub>2</sub>	0.1	0.1	
		VOC	80.6	288.9	
		CO	1.1	4.5	
		NO <sub>x</sub>	4.1	18.0	
		Hexane	80.5	288.5	
09	Cyclone - Seed Cleaner No. 1 and No. 2	PM/PM <sub>10</sub>	0.9	3.3	11
12	Cyclone - Seed Cleaning System No. 3	PM/PM <sub>10</sub>	1.4	4.8	11
13	Cyclone - Seed Cleaning System No. 4	PM/PM <sub>10</sub>	1.4	4.8	11
14	Cyclone - Seed Cleaning System No. 5	PM/PM <sub>10</sub>	1.4	4.8	11
15	Cyclone - Hull Vacuum to Double Drum Beater	PM/PM <sub>10</sub>	2.2	7.8	15
16	Cyclone - Hull Separator	PM/PM <sub>10</sub>	1.6	5.8	15
18	Cyclone - Purifier to Tailing Beater	PM/PM <sub>10</sub>	0.9	3.3	15
19	Cyclone - to Purifier	PM/PM <sub>10</sub>	1.4	4.8	15
20	Cyclone - Cyclone from Seed Cleaner	PM/PM <sub>10</sub>	0.4	1.3	11
30	Cyclone - C/S Meal from Solvent Plant	PM/PM <sub>10</sub>	1.6	5.5	17
		VOC	14.9	53.2	
		Hexane	14.9	53.2	
32	Cyclone - Rock Catcher System No. 2	PM/PM <sub>10</sub>	0.8	2.8	11
36	Main Vent	VOC	34.3	122.9	17
		Hexane	34.3	122.9	

EMISSION SUMMARY					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
38	Cleaver Brooks Boiler	PM/PM <sub>10</sub>	0.4	1.8	28
		SO <sub>2</sub>	0.1	0.1	
		VOC	0.1	0.4	
		CO	1.1	4.5	
		NO <sub>x</sub>	4.1	18.0	
43	Cyclone - Hull Scalper Air System	PM/PM <sub>10</sub>	2.0	6.9	15
44	Cyclone - 9x5 Cascade Air System	PM/PM <sub>10</sub>	1.7	5.8	15
45	Cyclone - 12x60 Cascade Air System	PM/PM <sub>10</sub>	1.8	6.4	15
51	Cyclone - Reclaim	PM/PM <sub>10</sub>	1.3	4.7	15
52	Cyclone - Hull Separator	PM/PM <sub>10</sub>	0.7	2.5	15
53	Cyclone - Perfection Hull System (dual)	PM/PM <sub>10</sub>	1.0	3.5	15
58	Cyclone - Finished Hull	PM/PM <sub>10</sub>	0.8	2.8	15
61	Cyclone - Three 1st Cut Delinters	PM/PM <sub>10</sub>	1.7	6.1	13
62	Cyclone - Four 1st Cut Delinters	PM/PM <sub>10</sub>	2.3	8.2	13
63	Cyclone - Three 2nd Cut Delinters	PM/PM <sub>10</sub>	1.8	6.3	13
64	Cyclone - Three 2nd Cut Delinters	PM/PM <sub>10</sub>	1.8	6.3	13
65	Cyclone - Three 2nd Cut Delinters	PM/PM <sub>10</sub>	1.8	6.3	13
66	Cyclone - Three 2nd Cut Delinters	PM/PM <sub>10</sub>	1.8	6.3	13
67	Cyclone - Two 2nd Cut Delinters	PM/PM <sub>10</sub>	1.2	4.2	13
68	Cyclone - Reclaim Shaker (15-20%)	PM/PM <sub>10</sub>	2.1	7.6	13
69	Cyclone - 1st and 2nd Cut Delinters	PM/PM <sub>10</sub>	1.0	3.5	13
70	Cyclone - Trash	PM/PM <sub>10</sub>	1.6	5.6	13
71	Cyclone - 2nd Cut Lint Bailer	PM/PM <sub>10</sub>	1.7	6.1	13
72	Cyclone - 1st Cut Lint Bailer	PM/PM <sub>10</sub>	0.9	3.1	13
73	Cyclone - Seed Cleaning System No. 6	PM/PM <sub>10</sub>	1.4	4.8	11
74	Cyclone - Seed Cleaning System No. 7	PM/PM <sub>10</sub>	1.4	4.8	11

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EMISSION SUMMARY					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
75	Cyclone - Seed Cleaning System No. 8	PM/PM <sub>10</sub>	1.4	4.8	11
76	Cyclone - Hull Air System No. 1	PM/PM <sub>10</sub>	2.0	6.9	15
77	Cyclone - Hull Air System No. 2	PM/PM <sub>10</sub>	2.0	6.9	15
78	Cyclone - Hull Air System No. 3	PM/PM <sub>10</sub>	2.0	6.9	15
79	Cyclone - Hull Air System No. 4	PM/PM <sub>10</sub>	2.0	6.9	15
80	Cyclone - Hull Air System No. 5	PM/PM <sub>10</sub>	2.0	6.9	15
81	Meal Loadout Baghouse	PM/PM <sub>10</sub>	1.3	4.7	25
82	Cyclone - Dryer Tray off D/T	PM/PM <sub>10</sub>	1.5	5.3	17
100, 101, 105	Cottonseed Receiving at Truck Dumps No. 1, No. 8 and No. 6	PM	14.9	5.6	9
		PM <sub>10</sub>	3.9	1.5	
103,104, 106	Product Loadout	PM	4.4	2.1	26
		PM <sub>10</sub>	1.2	0.6	
200 thru 213	Material Transfer	PM	7.5	1.3	22
		PM <sub>10</sub>	1.9	0.4	
400 thru 416	Cooling Fans	PM/PM <sub>10</sub>	3.8	9.1	24
500	Solvent Plant Fugitives	VOC	25.0	89.8	17
		Hexane	25.0	89.8	
501	Solvent Sump	VOC	2.1	7.5	17
		Hexane	2.1	7.5	
502	Cooling Box	VOC	4.2	15.1	17
		Hexane	4.2	15.1	

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

The Yazoo Helena Mill was originally established in 1942 under a different owner.

The Helena Mill was previously owned by Helena Cotton Oil Company. Helena Cotton Oil Company received the first permit for this facility, permit #1089-A, on September 21, 1990. The equipment at the facility had been registered but the facility was never permitted.

Permit #1089-AR-1 was issued to Helena Cotton Oil Company on November 7, 1991. This modification allowed the installation of seven additional seed processing cyclones.

On September 24, 1993 permit #1089-AR-2 was issued to Helena Cotton Oil Company. This modification allowed the facility to increase capacity from approximately 300 tons of cottonseed per day and 95,000 tons of cottonseed per year to 400 tons of cottonseed per day and 120,000 tons of cottonseed per year. This modification also documented an increase in hexane emissions from the mineral oil absorber.

On May 1, 1995 the ownership of the Helena Mill changed from Helena Cotton Oil Company to Yazoo Valley Oil Mill. This was a name and ownership change for the facility.

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**SECTION IV: EMISSION UNIT INFORMATION**



**SN-100, 101 and 105  
Cottonseed Receiving**

**Source Description**

The Yazoo facility receives cottonseed by truck. Each truck is weighed by an on-site scale before being sent to one of two primary seed dumps (SN-100 and SN-101). When necessary, seed is also unloaded via front-end loader or live-bottom truck for storage into Seed House No. 6 (SN-105). All other raw material receiving areas are not currently operational. The trucks are unloaded at the seed dumps by being elevated to a 45-degree angle. The cottonseed is released from the rear of the truck and dumped into a hopper. The cottonseed is then distributed to one of several storage houses or the seed tank.

**Specific Conditions**

1. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation #19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table.

SN	Description	Pollutant	lb/hr	tpy
100, 101, 105	Cottonseed Receiving at Truck Dumps No. 1, No. 8 and No. 6	PM PM <sub>10</sub>	14.9 3.9	5.6 1.5

2. Pursuant to §18.5 of Regulation #18, the permittee shall not cause to be discharged to the atmosphere from SN-100, SN-101 or SN-105 gases which exhibit an opacity greater than 20%. The opacity shall be measured in accordance with EPA Reference Method 9 as found in 40 CFR Part 60 Appendix A.
3. Pursuant to §19.7 of Regulation #19 and 40 CFR Part 52 Subpart E, the permittee shall conduct weekly observations of the opacity from the Cottonseed Receiving Sources and keep a record of these observations. If visible emissions are detected, then the permittee shall conduct a 6-minute opacity reading in accordance with EPA Reference Method 9. The results of these observations shall be kept on site and shall be made available to Department personnel upon request.

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4. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, Cottonseed Receiving at the plant shall not exceed 248 tons per hour (24 hour rolling average) or 180,000 tons per twelve consecutive months.
5. Pursuant to §19.7 of Regulation #19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records which demonstrate compliance with Specific Condition #4. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision #7.

**SN-09, 12, 13, 14, 20, 32, 73, 74 and 75  
Cottonseed Cleaning**

**Source Description**

Once ready for processing, the cottonseed is mechanically conveyed to the cleaning room and is then processed through the cottonseed cleaners. The cottonseed cleaners separate leaves, twigs, grabbots, and fly lint from seed. Clean seed then passes to a rock and shale trap. Lint and trash are collected by cyclones, while grabbots are sent to the hammermill. From the rock and shale trap, clean seed passes to the first cut linters. Shale and lint are combined with lint and trash from the seed cleaners and sent to the first cut cleaners. Three new cyclones are being added to the seed cleaning operations as a part of the proposed modifications.

**Specific Conditions**

6. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation #19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table.

SN	Description	Pollutant	lb/hr	tpy
09	Cyclone - Seed Cleaner No. 1 and No. 2	PM/PM <sub>10</sub>	0.9	3.3
12	Cyclone - Seed Cleaning System No. 3	PM/PM <sub>10</sub>	1.4	4.8
13	Cyclone - Seed Cleaning System No. 4	PM/PM <sub>10</sub>	1.4	4.8
14	Cyclone - Seed Cleaning System No. 5	PM/PM <sub>10</sub>	1.4	4.8
20	Cyclone - Cyclone from Seed Cleaner	PM/PM <sub>10</sub>	0.4	1.3
32	Cyclone - Rock Catcher System No. 2	PM/PM <sub>10</sub>	0.8	2.8
73	Cyclone - Seed Cleaning System No. 6	PM/PM <sub>10</sub>	1.4	4.8
74	Cyclone - Seed Cleaning System No. 7	PM/PM <sub>10</sub>	1.4	4.8
75	Cyclone - Seed Cleaning System No. 8	PM/PM <sub>10</sub>	1.4	4.8

7. Pursuant to §18.5 of Regulation #18, the permittee shall not cause to be discharged to the atmosphere from SN-09, SN-12, SN-13, SN-14, SN-20, SN-32, SN-73, SN-74 or SN-75 gases which exhibit an opacity greater than 20%. The opacity shall be measured in accordance with EPA Reference Method 9 as found in 40 CFR Part 60 Appendix A.

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8. Pursuant to §19.7 of Regulation #19 and 40 CFR Part 52 Subpart E, the permittee shall conduct weekly observations of the opacity from the Cottonseed Cleaning Sources and keep a record of these observations. If visible emissions are detected, then the permittee shall conduct a 6-minute opacity reading in accordance with EPA Reference Method 9. The results of these observations shall be kept on site and shall be made available to Department personnel upon request.
9. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, cottonseed throughput shall not exceed 600 tons per day or 180,000 tons per twelve consecutive months.
10. Pursuant to §19.7 of Regulation #19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records which demonstrate compliance with Specific Condition #9. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision #7.
11. Pursuant to §19.7 of Regulation #19 and 40 CFR Part 52, Subpart E, the permittee shall perform an initial test of either the Cyclone for the Seed Cleaning System No. 6 (SN-73), the Cyclone for the Seed Cleaning System No. 7 (SN-74) or the Cyclone for the Seed Cleaning System No. 8 (SN-75) for particulate matter emissions. Testing shall be performed in accordance with Plantwide Condition #3 and EPA Reference Method 5 as found in 40 CFR Part 60 Appendix A.

**SN-61 thru 72  
Cottonseed Delinting and Lint Cleaning**

**Source Description**

The first cut linters (SN-61 and SN-62) remove the longest lint from the cottonseed. During the process of removing lint from cottonseed, some cottonseed parts and foreign material remain caught in the lint. The first cut lint cleaners are used to clean the lint. These machines beat, stir, and convey the lint over perforated metal, which is sized to remove the various sizes of foreign material. Motes are combined with the motes from the separation room and cleaned in the motes cleaner. Motes are transferred from the motes cleaner to the motes baling press and are baled.

The partially delinted cottonseed from the first cut linters is conveyed to the second cut linters (SN-63 thru SN-67). As with the first cut linters, some cottonseed parts and foreign matter remain caught in the lint. The lint from the second cut linters with recycle lint from the cleaners is cleaned in the second cut lint cleaners (SN-68 thru SN-70). Shale and pepper from the second cut linters is treated in the hammermill. The clean first-cut and second-cut lint is conveyed to the baling room and baled (SN-71 and SN-72). Finished bales of lint are sent to storage for shipment. The shale, pepper, and trash stream from each lint cleaner and motes cleaner is combined and sent to the hammermill. Product from the hammermill is transferred to the separation room and then to the meal room. A total of twelve new cyclones are being added to the lint room as a part of the proposed modifications.

**Specific Conditions**

12. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation #19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table.

SN	Description	Pollutant	lb/hr	tpy
61	Cyclone - Three 1st Cut Delinters	PM/PM <sub>10</sub>	1.7	6.1
62	Cyclone - Four 1st Cut Delinters	PM/PM <sub>10</sub>	2.3	8.2
63	Cyclone - Three 2nd Cut Delinters	PM/PM <sub>10</sub>	1.8	6.3
64	Cyclone - Three 2nd Cut Delinters	PM/PM <sub>10</sub>	1.8	6.3
65	Cyclone - Three 2nd Cut Delinters	PM/PM <sub>10</sub>	1.8	6.3
66	Cyclone - Three 2nd Cut Delinters	PM/PM <sub>10</sub>	1.8	6.3

SN	Description	Pollutant	lb/hr	tpy
67	Cyclone - Two 2nd Cut Delinters	PM/PM <sub>10</sub>	1.2	4.2
68	Cyclone - Reclaim Shaker (15-20%)	PM/PM <sub>10</sub>	2.1	7.6
69	Cyclone - 1st and 2nd Cut Delinters	PM/PM <sub>10</sub>	1.0	3.5
70	Cyclone - Trash	PM/PM <sub>10</sub>	1.6	5.6
71	Cyclone - 2nd Cut Lint Bailer	PM/PM <sub>10</sub>	1.7	6.1
72	Cyclone - 1st Cut Lint Bailer	PM/PM <sub>10</sub>	0.9	3.1

13. Pursuant to §18.5 of Regulation #18, the permittee shall not cause to be discharged to the atmosphere from SN-61 thru SN-72 gases which exhibit an opacity greater than 20%. The opacity shall be measured in accordance with EPA Reference Method 9 as found in 40 CFR Part 60 Appendix A.
14. Pursuant to §19.7 of Regulation #19 and 40 CFR Part 52 Subpart E, the permittee shall conduct weekly observations of the opacity from the Cottonseed Delinting and Lint Cleaning Sources and keep a record of these observations. If visible emissions are detected, then the permittee shall conduct a 6-minute opacity reading in accordance with EPA Reference Method 9. The results of these observations shall be kept on site and shall be made available to Department personnel upon request.
15. Pursuant to §19.7 of Regulation #19 and 40 CFR Part 52, Subpart E, the permittee shall perform an initial test of one of the new 1st Cut Delinter Cyclones (SN-61 or SN-62) or one of the new 2nd Cut Delinter Cyclones (SN-63, SN-64, SN-65, SN-66 or SN-67) for particulate matter emissions. In the event that the cyclone tested fails, a cyclone from the other group shall also be tested. Testing shall be performed in accordance with Plantwide Condition #3 and EPA Reference Method 5 as found in 40 CFR Part 60 Appendix A. At the time of the testing, Department personnel will choose which cyclone(s) will be tested.
16. Pursuant to §19.7 of Regulation #19 and 40 CFR Part 52, Subpart E, the permittee shall perform an initial test of either SN-68, SN-69, SN-70, SN-71 or SN-72 for particulate matter emissions. Testing shall be performed in accordance with Plantwide Condition #3 and EPA Reference Method 5 as found in 40 CFR Part 60 Appendix A.

**SN-15, 16, 18, 19, 43, 44, 45, 51, 52, 53, 58 and 76 thru 80  
Hulling and Separating**

**Source Description**

After the cottonseed is delinted through the second cut linters, the black seed is transferred to a black seed storage tank for holding prior to hulling and separating. The black seed is then conveyed for processing to the safety shaker in the hulling and separating area. The safety shaker removes loose lint and any miscellaneous material from the black seed and directs the lint to the lint room. The safety shaker also screens and separates fine hulls and meats from the black seed and directs them to the huller room.

The black seed is then processed through the huller and shaker, which cut the black seed open to release the meats. Meats are then directed to the meats stream. Hulls and uncut seed are sent to the hull and seed separator. Uncut seed is separated out and recycled to the huller and shaker. Any remaining meats are separated from the hulls in the purifier, single-drum beater, and double-drum beater. Meats from these three machines are directed to the meat stream while the hulls are sent to hull storage. From storage, the hulls are loaded into trucks for transport from the facility. Five new cyclones are being added to the seed dehulling operations as a part of the proposed modifications.

**Specific Conditions**

17. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation #19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table.

SN	Description	Pollutant	lb/hr	tpy
15	Cyclone - Hull Vacuum to Double Drum Beater	PM/PM <sub>10</sub>	2.2	7.8
16	Cyclone - Hull Separator	PM/PM <sub>10</sub>	1.6	5.8
18	Cyclone - Purifier to Tailing Beater	PM/PM <sub>10</sub>	0.9	3.3
19	Cyclone - to Purifier	PM/PM <sub>10</sub>	1.4	4.8
43	Cyclone - Hull Scalper Air System	PM/PM <sub>10</sub>	2.0	6.9
44	Cyclone - 9x5 Cascade Air System	PM/PM <sub>10</sub>	1.7	5.8
45	Cyclone - 12x60 Cascade Air System	PM/PM <sub>10</sub>	1.8	6.4
51	Cyclone - Reclaim	PM/PM <sub>10</sub>	1.3	4.7

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SN	Description	Pollutant	lb/hr	tpy
52	Cyclone - Hull Separator	PM/PM <sub>10</sub>	0.7	2.5
53	Cyclone - Perfection Hull System (dual)	PM/PM <sub>10</sub>	1.0	3.5
58	Cyclone - Finished Hull	PM/PM <sub>10</sub>	0.8	2.8
76	Cyclone - Hull Air System No. 1	PM/PM <sub>10</sub>	2.0	6.9
77	Cyclone - Hull Air System No. 2	PM/PM <sub>10</sub>	2.0	6.9
78	Cyclone - Hull Air System No. 3	PM/PM <sub>10</sub>	2.0	6.9
79	Cyclone - Hull Air System No. 4	PM/PM <sub>10</sub>	2.0	6.9
80	Cyclone - Hull Air System No. 5	PM/PM <sub>10</sub>	2.0	6.9

18. Pursuant to §18.5 of Regulation #18, the permittee shall not cause to be discharged to the atmosphere from SN-15, SN-16, SN-18, SN-19, SN-43, SN-44, SN-45, SN-51, SN-52, SN-53, SN-58 or SN-76 thru 80 gases which exhibit an opacity greater than 20%. The opacity shall be measured in accordance with EPA Reference Method 9 as found in 40 CFR Part 60 Appendix A.
  
19. Pursuant to §19.7 of Regulation #19 and 40 CFR Part 52 Subpart E, the permittee shall conduct weekly observations of the opacity from the Hulling and Separating Sources and keep a record of these observations. If visible emissions are detected, then the permittee shall conduct a 6-minute opacity reading in accordance with EPA Reference Method 9. The results of these observations shall be kept on site and shall be made available to Department personnel upon request.
  
20. Pursuant to §19.7 of Regulation #19 and 40 CFR Part 52, Subpart E, the permittee shall perform an initial test of one of the five new cyclones (SN-76, SN-77, SN-78, SN-79 or SN-80) for particulate matter emissions. Testing shall be performed in accordance with Plantwide Condition #3 and EPA Reference Method 5 as found in 40 CFR Part 60 Appendix A.



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## **SN-30, 36, 82 and 500 thru 502 Solvent Extraction Plant**

### **Source Description**

The solvent extraction plant is where hexane is used to extract oil from the cottonseed processed at the Yazoo Helena Mill. The existing extraction plant will be modified by installing a new desolventizer toaster (DT) that will allow for increased production and lower hexane emissions.

Permitted emissions from the Solvent Extraction Plant include hexane, a hazardous air pollutant. The permittee modeled the hexane emissions to determine their potential impact on air quality. The results obtained did not exceed the level of significance for hexane.

### **Vegetable Oil Extraction**

Solvent extraction is the most efficient method of recovering oil from most oil-bearing vegetable seeds. Extraction is accomplished through a procedure in which oil bearing cottonseed meats are contacted with a suitable solvent. The most common solvent used in commercial continuous edible oil extraction systems, and the solvent used at the Yazoo facility, is hexane.

Before being directed to the oil extraction unit, the cottonseed meats are processed by a cooker located in the prep room. The cooker is steam-heated by a natural gas fired boiler (SN-38) which heats the meats with added moisture so that they may be “flaked” into flaking rolls. The flaking process flattens the meats into “flakes” and is necessary to improve oil extraction. After passing through the flaking rolls, the flakes pass through an expander. Under steam and pressure, oil is released and the flakes become “expanded cake.” The cake then passes through a cooler before being conveyed to the extractor.

In the solvent extraction plant, cottonseed meats are fed to a counter-current solvent extractor where oil is extracted by percolating solvent through cottonseed flakes. The extractor is operated under slight negative pressure to aid in the feeding of meats and to prevent escape of hexane vapors. During oil extraction, two streams of material are produced. The first stream consists of solvent and oil, and the second consists of meal saturated with solvent.

The largest single source of hexane emissions in vegetable oil plants is the extractor main vent (SN-36). It is estimated that 50 to 75 percent of the hexane emitted from vegetable oil extraction facilities is lost from the extractor if the main vent is uncontrolled. The extractor at the Yazoo Helena Mill employs the use of a chilled water condenser as an initial control of hexane emissions.

In addition, a mineral oil scrubber (MOS) is used to further reduce hexane losses and to better control hexane emissions. It is estimated that the combination of these two control options will result in a combined 90 to 95 percent control efficiency of hexane from the main vent. By conservatively assuming a 90 percent control efficiency, approximately 33 percent of the total hexane lost through the extraction process will be released from the main vent. An additional 24 percent is lost as fugitive emissions through valves, flanges, and seals during the solvent extraction process (SN-500).

### **Solvent/Oil Separation**

After extraction, the micella (mixture of solvent and oil) is separated by distillation. During distillation the first stage evaporator increases the oil concentration in the micella to 65 percent. The micella is then pumped to storage tanks where it is temporarily kept until further refinement. The micella is next treated in the micella refiner where it is acidified with a caustic solution (typically sodium hydroxide). This action begins the separation of the heavy soaps from the light oil. The heavy soaps are removed from the micella by centrifuge. At this point, the micella is processed through the second stage evaporator which removes the remaining hexane.

Following the proposed modification, the facility will be capable of refining crude oil. The proposed refiner will be hermetically sealed and the solvent vapors will be processed through the condenser-scrubber system. Centrifuge seal water and backwash will be treated in a separate sump before treatment in the main sump (SN-501). The oil, now stripped of hexane, is pumped to an oil dryer to remove the moisture, and is then pumped to finished oil tanks prior to shipment.

### **Solvent/Meal Separation**

The cottonseed flakes that are processed through the extractor become saturated with solvent. In order to reclaim the solvent and make the meal edible for animals, the flakes are fed to the DT unit. This device is similar to a stack cooker in which steam is used to vaporize and strip out occluded solvent from the meal. In addition to vaporizing most of the solvent, the steam also adds to the moisture content of the meal, thus minimizing fugitive dust emissions as the meal is conveyed to the meal storage tanks. The dryer off the DT will be routed to a new cyclone (SN-82).

The meal is transported to the storage tanks by a dual cyclone unit (SN-30). During the transport, the meal is cooled. The cool air stream from the cyclone is discharged to the atmosphere. The meal is mechanically conveyed to one of six meal storage tanks. The meal is dropped from a conveyor at the top of the tanks.

### Hexane Recovery and Control

The hexane laden vapors from the DT unit and the first and second stage evaporators are collected, condensed, and sent to a solvent water separator. This cooled condensate containing recovered solvent and solvent vapors is separated into solvent and water phases by gravity. The solvent layer is returned to solvent storage for re-use. The water layer is sent through a waste-heat reboiler to recover heat energy and is then clarified in the main sump. The hexane remaining in the exhaust gas from the condensers is controlled with a mineral oil scrubbing system. Mineral oil is first used to remove hexane from the exhaust gases prior to release to the atmosphere. The solvent-laden mineral oil is stripped of solvent by steam in the stripping column. The solvent vapors are recycled to the solvent condenser. Cooling water is discharged to a cooling box, which is vented to the atmosphere (SN-502).

### Specific Conditions

21. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation #19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table.

SN	Description	Pollutant	lb/hr	tpy
30	Cyclone - C/S Meal from Solvent Plant	PM	1.6	5.5
		PM <sub>10</sub>	1.6	5.5
		VOC	14.9	53.2
36	Main Vent	VOC	34.3	122.9
82	Cyclone - Dryer Tray off DT	PM/PM <sub>10</sub>	1.5	5.3
500	Solvent Plant Fugitives	VOC	25.0	89.8
501	Solvent Sump	VOC	2.1	7.5
502	Cooling Box	VOC	4.2	15.1

22. Pursuant to §18.8 of the Arkansas Air Pollution Control Code (Regulation #18), the permittee shall not exceed the emission rates set forth in the following table.

SN	Description	Pollutant	lb/hr	tpy
30	Cyclone - C/S Meal from Solvent Plant	Hexane	14.9	53.2
36	Main Vent	Hexane	34.3	122.9
500	Solvent Plant Fugitives	Hexane	25.0	89.8
501	Solvent Sump	Hexane	2.1	7.5
502	Cooling Box	Hexane	4.2	15.1

23. Pursuant to §18.5 of Regulation #18, the permittee shall not cause to be discharged to the atmosphere from SN-30 or SN-82 gases which exhibit an opacity greater than 20%. The opacity shall be measured in accordance with EPA Reference Method 9 as found in 40 CFR Part 60 Appendix A.
24. Pursuant to §19.7 of Regulation #19 and 40 CFR Part 52 Subpart E, the permittee shall conduct weekly observations of the opacity from SN-30 and SN-82 and keep a record of these observations. If visible emissions are detected, then the permittee shall conduct a 6-minute opacity reading in accordance with EPA Reference Method 9. The results of these observations shall be kept on site and shall be made available to Department personnel upon request.
25. Pursuant to A.C.A. §8-4-203 as referenced by §8-3-304 and §8-4-311, total (point source and fugitive) hexane emissions to the atmosphere from the solvent extraction plant shall not exceed 288.5 tons per twelve consecutive months.
26. Pursuant to §18.10 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-3-304 and §8-4-311, the permittee shall maintain records which demonstrate compliance with Specific Condition #25. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision #7.
27. Pursuant to §18.10 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-3-304 and §8-4-311, the permittee shall maintain records of hexane usage. These records shall be updated on a monthly basis. The records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. An

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annual total and each month's individual data shall be submitted to the Department in accordance with General Provision #7.

28. Pursuant to A.C.A. §8-4-203 as referenced by §8-3-304 and §8-4-311, the hexane disappearance rate shall not exceed 0.75 gallons per ton of cottonseed.
29. Pursuant to §18.10 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-3-304 and §8-4-311, the permittee shall maintain records which demonstrate compliance with Specific Condition #28. Compliance shall be determined on a one month rolling average. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision #7.
30. Pursuant to §19.7 of Regulation #19 and 40 CFR Part 52, Subpart E, the permittee shall perform an initial test of SN-82 for particulate matter emissions. Testing shall be performed in accordance with Plantwide Condition #3 and EPA Reference Method 5 as found in 40 CFR Part 60 Appendix A. [In order to determine the feasibility of the required testing, Department personnel will first have to perform a site inspection. If it is determined that the required testing is unsafe, Yazoo will be excused from Specific Condition #30.]

**SN-200 thru 213  
Material Transfer**

**Source Description**

There are three primary materials at the Yazoo Helena Mill that are conveyed and stored as a result of the oil extraction process. These materials include cottonseed, hulls, and meal. The seed storage houses remain partially open during seed transfer operations. The only opening to the atmosphere are the windows and doors. The tanks are loaded and unloaded through the openings on the top and/or bottom of the tank.

Emissions from the Seed Houses No. 1 thru No. 3 and No. 6 thru No. 8, the Seed Tank No. 5, the Bulk Hull House, and the Meal Tanks No. 1 thru No. 6 have been bubbled together.

**Specific Conditions**

31. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation #19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table.

SN	Description	Pollutant	lb/hr	tpy
200 thru 213	Material Transfer	PM	7.5	1.3
		PM <sub>10</sub>	1.9	0.4

32. Pursuant to §18.5 of Regulation #18, the permittee shall not cause to be discharged to the atmosphere from Material Transfer gases which exhibit an opacity greater than 20%. The opacity shall be measured in accordance with EPA Reference Method 9 as found in 40 CFR Part 60 Appendix A.
33. Pursuant to §19.7 of Regulation #19 and 40 CFR Part 52 Subpart E, the permittee shall conduct weekly observations of the opacity from the Material Transfer Sources and keep a record of these observations. If visible emissions are detected, then the permittee shall conduct a 6-minute opacity reading in accordance with EPA Reference Method 9. The results of these observations shall be kept on site and shall be made available to Department personnel upon request.
34. Pursuant to §19.7 of Regulation #19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records which demonstrate compliance with Specific Condition #31. The records

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shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision #7.

**SN-400 thru 416**

**Cooling Fans**

**Source Description**

During the colder months of late fall through early spring, cool ambient air is pulled through the cottonseed in the seed houses. Blowers located on either end of the seed houses provide the vacuum necessary to draw the ambient air through the piles. Some lint and dust particles can become entrained in the air flowing through the piles, which is then exhausted out of the fans. To account for these emissions, the seed piles are assumed to act on the ambient air much like a large baghouse.

The emissions associated with the cooling fans of Seed Houses No. 1 (3 fans), Seed House No. 2 (1 fan), Seed House No. 3 (3 fans), Seed House No. 6 (2 fans), Seed House No. 7 (2 fans), Seed House No. 8 (4 fans), the fan from the pellet cooler and the fan from the expander cooler have been bubbled together. The seed house cooling fans have been permitted for maximum capacity, continuous operation.

**Specific Conditions**

35. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation #19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table.

SN	Description	Pollutant	lb/hr	tpy
400 thru 416	Cooling Fans	PM/PM <sub>10</sub>	3.8	16.5

36. Pursuant to §18.5 of Regulation #18, the permittee shall not cause to be discharged to the atmosphere from the Cooling Fans gases which exhibit an opacity greater than 20%. The opacity shall be measured in accordance with EPA Reference Method 9 as found in 40 CFR Part 60 Appendix A.
37. Pursuant to §19.7 of Regulation #19 and 40 CFR Part 52 Subpart E, the permittee shall conduct weekly observations of the opacity from the Cooling Fans and keep a record of these observations. If visible emissions are detected, then the permittee shall conduct a 6-minute opacity reading in accordance with EPA Reference Method 9. The results of these observations shall be kept on site and shall be made available to Department personnel upon request.



**SN-81  
Meal Loadout**

**Source Description**

Product, in the form of cottonseed meal, is loaded out from the facility for transport to customers. The meal loadout is contained within an enclosed structure equipped with a collection hood. The collection hood will be connected to a baghouse (SN-81) to reduce emissions of particulate matter to the atmosphere as a part of the proposed modifications.

**Specific Conditions**

38. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation #19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table.

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	1.3	4.7

39. Pursuant to §18.5 of Regulation #18, the permittee shall not cause to be discharged to the atmosphere from SN-81 gases which exhibit an opacity greater than 5%. The opacity shall be measured in accordance with EPA Reference Method 9 as found in 40 CFR Part 60 Appendix A.
40. Pursuant to §19.7 of Regulation #19 and 40 CFR Part 52 Subpart E, the permittee shall conduct weekly observations of the opacity from SN-81 and keep a record of these observations. If visible emissions are detected, then the permittee shall conduct a 6-minute opacity reading in accordance with EPA Reference Method 9. The results of these observations shall be kept on site and shall be made available to Department personnel upon request.
41. Pursuant to §19.7 of Regulation #19 and 40 CFR Part 52, Subpart E, the permittee shall perform an initial test of SN-81 for particulate matter emissions. Testing shall be performed in accordance with Plantwide Condition #3 and EPA Reference Method 5 as found in 40 CFR Part 60 Appendix A.

**SN-103, 104 and 106  
Product Loadout**

**Source Description**

Cottonseed hulls are loaded to trucks at the hull loadout adjacent to the storage warehouse (SN-104).

The Yazoo Helena Mill can be used to store cottonseed for processing at other Yazoo Mills or for sale to other cottonseed oil processors. Cottonseed is loaded into trucks or boxcars at the car loading shed using a slinger (SN-103). When necessary, cottonseed is loaded via a front-end loader from the Seed House No. 6 into the backs of trucks (SN-106).

Emissions from the Cottonseed loadout to railcar, the Hull loadout to Truck and the Cottonseed Loadout at Seed House No. 6 have been bubbled together.

**Specific Conditions**

42. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation #19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table.

SN	Description	Pollutant	lb/hr	tpy
103,104, 106	Product Loadout	PM	4.4	2.1
		PM <sub>10</sub>	1.2	0.6

43. Pursuant to §18.5 of Regulation #18, the permittee shall not cause to be discharged to the atmosphere from the Product Loadout gases which exhibit an opacity greater than 20%. The opacity shall be measured in accordance with EPA Reference Method 9 as found in 40 CFR Part 60 Appendix A.
44. Pursuant to §19.7 of Regulation #19 and 40 CFR Part 52 Subpart E, the permittee shall conduct weekly observations of the opacity from the Product Loadout Sources and keep a record of these observations. If visible emissions are detected, then the permittee shall conduct a 6-minute opacity reading in accordance with EPA Reference Method 9. The results of these observations shall be kept on site and shall be made available to Department personnel upon request.

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45. Pursuant to §19.7 of Regulation #19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records which demonstrate compliance with Specific Condition #42. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision #7.

**SN-38  
Cleaver Brooks Boiler**

**Source Description**

The Yazoo Helena Mill operates one 700 horsepower (29.30 MMBtu/hr input heat rating at 80% efficiency) Cleaver Brooks boiler (SN-38). The steam generated by the boiler heats the cooker in the prep room of the solvent extraction plant. The boiler is currently not capable of firing any fuel other than natural gas. The boiler was constructed in 1973 and is therefore not subject to New Source Performance Standard Subpart Dc.

**Specific Conditions**

46. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control (Regulation #19) and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table.

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.4	1.8
SO <sub>2</sub>	0.1	0.1
VOC	0.1	0.4
CO	1.1	4.5
NO <sub>x</sub>	4.1	18.0

47. Pursuant to §18.5 of Regulation #18, the permittee shall not cause to be discharged to the atmosphere from SN-38 gases which exhibit an opacity greater than 5%. The opacity shall be measured in accordance with EPA Reference Method 9 as found in 40 CFR Part 60 Appendix A. Compliance with this opacity limit shall be met by compliance with Specific Condition #48.
48. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6, the permittee shall not fire in excess of 29,300 standard cubic feet of natural gas per hour or 256 million standard cubic feet of gas per twelve consecutive month.
49. Pursuant to §19.7 of Regulation #19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records which demonstrate compliance with Specific Condition #48. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement

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purposes. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision #7.

### SECTION V: PLANTWIDE CONDITIONS

1. Pursuant to §19.4(o) of Regulation #19, the Director 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.
2. Pursuant to §19.4(q) of Regulation #19, construction must commence within eighteen (18) months after the approval of the permit application. 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 condition, and continuous monitoring data. The records may be used, at the discretion of the Department, to determine compliance with the conditions of the permit.
3. Pursuant to §19.7 of Regulation #19, each emission point for which an emission test method is specified in this permit shall be tested in order to determine compliance with the emission limitations contained herein 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. 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. 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
4. Pursuant to A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304, the equipment, control apparatus and emission monitoring equipment shall be operated within their design limitations and maintained in good condition at all times.

#### **Title VI Provisions:**

5. The permittee shall comply with the standards for labeling of products using ozone depleting substances pursuant to 40 CFR Part 82, Subpart E:
  - a. All containers containing a class I or class II substance stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear

- the required warning statement if it is being introduced to interstate commerce pursuant to §82.106.
- b. The placement of the required warning statement must comply with the requirements pursuant to §82.108.
  - c. The form of the label bearing the required warning must comply with the requirements pursuant to §82.110.
  - d. No person may modify, remove, or interfere with the required warning statement except as described in §82.112.
6. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for MVACs in Subpart B:
- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
  - b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.
  - c. Persons performing maintenance, service repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
  - d. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with record keeping requirements pursuant to §82.166. (“MVAC-like appliance” as defined at §82.152.)
  - e. Persons owning commercial or industrial process refrigeration equipment must comply with leak repair requirements pursuant to §82.156.

- f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.
- 7. If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.
- 8. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

The term “motor vehicle” as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term “MVAC” as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or the system used on passenger busses using HCFC-22 refrigerant.

- 9. The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program.

**Permit Shield:**

- 10. Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements, as of the date of permit issuance, included in and specifically identified in item A of this condition.
  - A. The following have been specifically identified as applicable requirements based upon information submitted by the permittee in an application dated October 10, 1996.



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Source	Regulation	Description
Facility	Arkansas Regulation #19	Compilation of Regulations of the Arkansas State Implementation Plan for Air Pollution Control
Facility	Arkansas Regulation #26	Regulations of the Arkansas Operating Permit Program

- B. The following requirements have been specifically identified as not applicable, based upon information submitted by the permittee in an application dated October 10, 1996.

Description of Regulation	Regulatory Citation	Affected Source	Basis for Determination
New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units	40 CFR 40 Subpart Dc	SN-38	Boiler installed in 1983

- C. Nothing shall alter or affect the following:

Provisions of Section 303 of the Clean Air Act;

The liability of an owner or operator for any violation of applicable requirements prior to or at the time of permit issuance;

The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; or

The ability of the EPA to obtain information under Section 114 of the Clean Air Act.

11. This permit supersedes all previously issued air permits.
12. Pursuant to §19.5(c)(3) of Regulation #19, visible emissions from any stationary source shall not extend past its property boundaries at ground level if it is determined by the Department to be a nuisance to the surrounding community. A stationary source shall take whatever steps necessary to prevent visible emissions from extending past property boundaries.

## SECTION VI: INSIGNIFICANT EMISSION SOURCES

Pursuant to §3(d) of the Regulations of the Arkansas Operating Air Permit Program (Regulation 26), the following sources are below the de minimis emission levels. Insignificant and trivial activities will be allowable after approval and federal register notice publication of a final list as part of the operating air permit program. Any activity for which a state or federal applicable requirement applies is not de minimis, even if this activity meets the criteria of §3(e) of Regulation 26 or is listed below. De minimis emission determinations rely upon the information submitted by the permittee in an application dated October 10, 1996.

Pursuant to §19.4(c) of Regulation 19 as referenced by §3(e) of Regulation 26, the following emission units, operations, or activities have been determined by the Department to be below the de minimis emission levels. Activities included in this list are allowable under this permit and need not be specifically identified.

1. Natural gas-burning equipment with a design rate less than 1 million BTU per hour.
2. Combustion emissions from propulsion of mobile sources and emissions from refueling these sources unless regulated by Title II and required to obtain a permit under title V of the federal Clean Air Act, as amended. This does not include emissions from any transportable units, such as temporary compressors or boilers. This does not include emission from loading racks or fueling operations covered under any applicable federal requirements.
3. Air conditioning and heating units used for comfort that do not have applicable requirements under Title VI of the Act.
4. Ventilating units used for human comfort that do not exhaust air pollutants into the ambient air from any manufacturing/industrial or commercial process.
5. Non-commercial food preparation or food preparation at restaurants, cafeterias, or caterers, etc.
6. Consumer use of office equipment and products, not including commercial printers or businesses primarily involved in photographic reproduction.
7. Janitorial services and consumer use of janitorial products.
8. Internal combustion engines used for landscaping purposes.

9. Laundry activities, except for dry-cleaning and steam boilers.
10. Bathroom/toilet emissions.
11. Emergency (backup) electrical generators at residential locations.
12. Tobacco smoking rooms and areas.
13. Blacksmith forges.
14. Maintenance of grounds or buildings, including: lawn care, weed control, pest control, and water washing activities.
15. Repair, up-keep, maintenance, or construction activities not related to the sources' primary business activity, and not otherwise triggering a permit modification. This may include, but is not limited to such activities as general repairs, cleaning, painting, welding, woodworking, plumbing, re-tarring roofs, installing insulation, paved/paving parking lots, miscellaneous solvent use, application of refractory, or insulation, brazing, soldering, the use of adhesives, grinding, and cutting.<sup>1</sup>
16. Surface-coating equipment during miscellaneous maintenance and construction activities. This activity specifically does not include any facility whose primary business activity is surface-coating or includes surface coating or products.
17. Portable electrical generators that can be "moved by hand" from one location to another.<sup>2</sup>
18. Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning, or machining wood, metal, or plastic.
19. Brazing or soldering equipment related to manufacturing activities that do not result in emission of HAPs.<sup>3</sup>

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<sup>1</sup> Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant owners/operators must get a permit.

<sup>2</sup>"Moved by hand" means that it can be moved by one person without assistance of any motorized or non-motorized vehicle, conveyance, or device.

<sup>3</sup>Brazing, soldering, and welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals are more appropriate for treatment as insignificant activities based on size or production thresholds. Brazing, soldering, and welding equipment, and cutting torches related directly to plant maintenance and upkeep and repair or

20. Air Compressors and pneumatically operated equipment, including hand tools.
21. Batteries and battery charging stations, except at batter manufacturing plants.
22. Storage tanks, vessels, and containers holding or storing liquid substances that do not contain any VOCs or HAPs.<sup>4</sup>
23. Containers of less than or equal to 5 gallons in capacity that do not emit any detectable VOCs or HAPs when closed. This includes filling, blending, or mixing of the contents of such containers by a retailer.
24. Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetables oil, grease, animal fat, and non-volatile aqueous salt solutions, provided appropriate lids and covers are used and appropriate lids and covers are used and appropriate odor control is achieved.
25. Equipment used to mix and package soaps, vegetable oil, grease, animal fat, and non-volatile aqueous salt solution, provided appropriate lids and covers are used and appropriate odor control is achieved.
26. Drop hammers or presses for forging or metalworking.
27. Equipment used exclusively to slaughter animals, but not including, other equipment at slaughter-houses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.
28. Vents from continuous emission monitors and other analyzers.
29. Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.
30. Hand-held applicator equipment for hot melt adhesives with no VOCs in the adhesive.
31. Equipment used for surface coating, painting, dipping, or spraying operations, containing less than 0.4 lb/gal VOCs, has no hexavalent chromium, and emits no more than 0.1 tpy of all other HAPs.

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maintenance shop activities that emit HAP metals are treated as trivial and listed separately.

<sup>4</sup>Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids are based on size and limits including storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.

32. Lasers used only on metals and other materials which do not emit HAPs in the process.
33. Consumer use of paper trimmers/binders.
34. Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boiler deliver the steam.
35. Salt baths using non-volatile salts that do not result in emissions of any air pollutant covered by this regulation.
36. Laser trimmers using dust collection to prevent fugitive emissions.
37. Bench-scale laboratory equipment used for physical or chemical analysis.
38. Routine calibration and maintenance of laboratory equipment or other analytical instruments.
39. Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
40. Hydraulic and hydrostatic testing equipment.
41. Environmental chambers not using hazardous air pollutant gases.
42. Shock chambers, humidity chambers and solar simulators.
43. Fugitive emissions related to movement of passenger vehicles, provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.
44. Process water filtration systems and demineralizers.
45. Demineralized water tanks and demineralizer vents.
46. Boiler water treatment operations, not including cooling towers.
47. Emissions from storage or use of water treatment chemicals, except for hazardous air pollutants or pollutants listed under regulations promulgated pursuant to Section 112(r) of the Act, for use in cooling towers, drinking water systems, and boiler water/feed systems.
48. Oxygen scavenging (de-aeration) of water.

Yazoo Valley Oil Mill

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49. Ozone generators.
50. Fire suppression systems.
51. Emergency road flares.
52. Steam vents and safety relief valves.
53. Steam leaks.
54. Steam cleaning operations.
55. Steam and microwave sterilizers.
56. Site assessment work to characterize waste disposal or remediation sites.
57. Miscellaneous additions or upgrades of instrumentation.
58. Emissions from combustion controllers or combustion shutoff devices.
59. Use of products for the purpose of maintaining motor vehicles operated by the facility, not including air cleaning units or such vehicles (i.e. antifreeze, fuel additives).
60. Stacks or vents to prevent escape of sanitary sewer gases through the plumbing traps.
61. Emissions from equipment lubricating systems (i.e. oil mist), not including storage tanks, unless otherwise exempt.
62. Residential wood heaters, cookstoves, or fireplaces.
63. Barbecue equipment or outdoor fireplaces used in conjunction with any residential or recreation.
64. Log wetting areas and log fumes.
65. Periodic use of pressurized air for cleanup.
66. Solid waste dumpsters.

67. Emissions of wet lime from lime mud tanks, lime mud washers, lime mud piles, lime mud filter and filtrate tanks, and lime mud slurry tanks.
68. Natural gas odoring activities unless the Department determines that a nuisance may occur.
69. Emissions from engine crankcase vents.
70. Storage tanks used for the temporary containment of materials resulting from an emergency reporting of an unanticipated release.
71. Equipment used exclusively to mill or grind coatings in roll grinding rebuilding, and molding compounds where all materials charged are in paste form.
72. Mixers, blenders, roll mills, or calenders for rubber or plastic for which no materials in powder form are added and in which no organic solvents, diluents, or thinners are used.
73. The storage, handling, and handling equipment for bark and wood residues not subject to fugitive dispersion offsite (this applies to equipment only).
74. Maintenance dredging of pulp and paper mill surface impoundments and ditches containing cellulosic and cellulosic derived biosolids and inorganic materials such as lime, ash, or sand.
75. Tall oil soap storage, skimming, and loading.
76. Water heaters used strictly for domestic (non-process) purposes.
77. Facility roads and parking areas, unless necessary to control offsite fugitive emissions.
78. Agricultural operations, including onsite grain storage.

## SECTION VII: GENERAL PROVISIONS

1. Pursuant to 40 C.F.R. 70.6(b) (2), any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation #18 as the 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 as the origin of and authority for the terms or conditions are enforceable under this Arkansas statute.

2. Pursuant to 40 C.F.R. 70.6(a) (2) and §26.7 of the Regulations of the Arkansas Operating Air Permit Program (Regulation #26), this permit shall be valid for a period of five (5) years beginning on the date this permit becomes effective and ending five (5) years later.
3. Pursuant to §26.4 of Regulation #26, it is the duty of the permittee to submit a complete application for permit renewal at least six (6) months prior to the date of permit expiration. Permit expiration terminates the permittee's right to operate unless a complete renewal application was submitted at least six (6) months prior to permit expiration, in which case the existing permit shall remain in effect until the Department takes final action on the renewal application. The Department will not necessarily notify the permittee when the permit renewal application is due.
4. Pursuant to 40 C.F.R. 70.6(a) (1) (ii) and §26.7 of Regulation #26, where an applicable requirement of the Clean Air Act, as amended, 42 U.S.C. 7401, *et seq* (Act) is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions are incorporated into the permit and shall be enforceable by the Director or Administrator.
5. Pursuant to 40 C.F.R. 70.6(a) (3) (ii) (A) and §26.7 of Regulation #26, records of monitoring information required by this permit shall include the following:
  - a. The date, place as defined in this permit, and time of sampling or measurements;



- b. The date(s) analyses were performed;
  - c. The company or entity that performed the analyses;
  - d. The analytical techniques or methods used;
  - e. The results of such analyses; and
  - f. The operating conditions as existing at the time of sampling or measurement.
6. Pursuant to 40 C.F.R. 70.6(a) (3) (ii) (B) and §26.7 of Regulation #26, records of all required monitoring data and support information shall be retained for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.
7. Pursuant to 40 C.F.R. 70.6(a) (3) (iii) (A) and §26.7 of Regulation #26, the permittee shall submit reports of all required monitoring every 6 months. If no other reporting period has been established, the reporting period shall end on the last day of the anniversary month of this permit. The report shall be due within 30 days of the end of the reporting period. Even though the reports are due every six months, each report shall contain a full year of data. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official as defined in §26.2 of Regulation #26 and must be sent to the address below.

Arkansas Department of Pollution Control and Ecology  
Air Division  
ATTN: Compliance Inspector Supervisor  
Post Office Box 8913  
Little Rock, AR 72119

8. Pursuant to 40 C.F.R. 70.6(a) (3) (iii) (B), §26.7 of Regulation #26, and §19.6 of Regulation #19, all deviations from permit requirements, including those attributable to upset conditions as defined in the permit

shall be reported to the Department. An initial report shall be made to the Department within 24 hours of discovery of the occurrence. The initial report may be made by telephone and shall include:

- a. The facility name and location,
- b. The process unit or emission source which is deviating from the permit limit,
- c. The permit limit, including the identification of pollutants, from which deviation occurs,
- d. The date and time the deviation started,
- e. The duration of the deviation,
- f. The average emissions during the deviation,
- g. The probable cause of such deviations,
- h. Any corrective actions or preventive measures taken or being take to prevent such deviations in the future, and
- i. The name of the person submitting the report.

A full report shall be made in writing to the Department within five (5) business days of discovery of the occurrence and shall include in addition to the information required by initial report a schedule of actions to be taken to eliminate future occurrences and/or to minimize the amount by which the permits limits are exceeded and to reduce the length of time for which said limits are exceeded. If the permittee wishes, they may submit a full report in writing (by facsimile, overnight courier, or other means) within 24 hours of discovery of the occurrence and such report will serve as both the initial report and full report.

9. Pursuant to 40 C.F.R. 70.6(a) (5) and §26.7 of Regulation #26, if any provision of the permit or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications hereof which can be given effect without the invalid provision or application, and to this end, provisions of this Regulation are declared to be separable and severable.
10. Pursuant to 40 C.F.R. 70.6(a) (6) (i) and §26.7 of Regulation #26, the permittee must comply with all conditions of this part 70 permit. Any

permit noncompliance constitutes a violation of the Clean Air Act, as amended, 42 U.S.C. 7401, *et seq.* and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

11. Pursuant to 40 C.F.R. 70.6(a) (6) (ii) and §26.7 of Regulation #26, it shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
12. Pursuant to 40 C.F.R. 70.6(a) (6) (iii) and §26.7 of Regulation #26, this permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
13. Pursuant to 40 C.F.R. 70.6(a) (6) (iv) and §26.7 of Regulation #26, this permit does not convey any property rights of any sort, or any exclusive privilege.
14. Pursuant to 40 C.F.R. 70.6(a) (6) (v) and §26.7 of Regulation #26, the permittee shall furnish to the Director, within the time specified by the Director, any information that the Director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Director copies of records required to be kept by the permit. For information claimed to be confidential, the permittee may be required to furnish such records directly to the Administrator along with a claim of confidentiality.
15. Pursuant to 40 C.F.R. 70.6(a) (7) and §26.7 of Regulation #26, the permittee shall pay all permit fees in accordance with the procedures established in Regulation #9.
16. Pursuant to 40 C.F.R. 70.6(a) (8) and §26.7 of Regulation #26, no permit revision shall be required, under any approved economic incentives,

marketable permits, emissions trading and other similar programs or processes for changes that are provided for elsewhere in this permit.

17. Pursuant to 40 C.F.R. 70.6(a)(9)(i) and §26.7 of Regulation #26, if the permittee is allowed to operate under different operating scenarios, the permittee shall, contemporaneously with making a change from one operating scenario to another, record in a log at the permitted facility a record of the scenario under which the facility or source is operating.
18. Pursuant to 40 C.F.R. 70.6(b) and §26.7 of Regulation #26, all terms and conditions in this permit, including any provisions designed to limit a source's potential to emit, are enforceable by the Administrator and citizens under the Act unless the Department has specifically designated as not being federally enforceable under the Act any terms and conditions included in the permit that are not required under the Act or under any of its applicable requirements.
19. Pursuant to 40 C.F.R. 70.6(c)(1) and §26.7 of Regulation #26, any document (including reports) required by this permit shall contain a certification by a responsible official as defined in §26.2 of Regulation #26.
20. Pursuant to 40 C.F.R. 70.6(c)(2) and §26.7 of Regulation #26, the permittee shall allow an authorized representative of the Department, upon presentation of credentials, to perform the following:
  - a. Enter upon the permittee's premises where the permitted source is located or emissions-related activity is conducted, or where records must be kept under the conditions of this permit;
  - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
  - c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
  - d. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with this permit or applicable requirements.

21. Pursuant to 40 C.F.R. 70.6(c)(5) and §26.7 of Regulation #26, the permittee shall submit a compliance certification with terms and conditions contained in the permit, including emission limitations, standards, or work practices. This compliance certification shall be submitted annually and shall be submitted to the Administrator as well as to the Department. All compliance certifications required by this permit shall include the following:
  - a. The identification of each term or condition of the permit that is the basis of the certification;
  - b. The compliance status;
  - c. Whether compliance was continuous or intermittent;
  - d. The method(s) used for determining the compliance status of the source, currently and over the reporting period established by the monitoring requirements of this permit; and
  - e. Such other facts as the Department may require elsewhere in this permit or by §114(a)(3) and 504(b) of the Act.
  
22. Pursuant to §26.7 of Regulation #26, nothing in this permit shall alter or affect the following:
  - a. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section;
  - b. The liability the permittee for any violation of applicable requirements prior to or at the time of permit issuance;
  - c. The applicable requirements of the acid rain program, consistent with §408(a) of the Act;  
or
  - d. The ability of EPA to obtain information from a source pursuant to §114 of the Act.

## APPENDIX A

## APPENDIX B

## APPENDIX C



## APPENDIX D

**AIR DIVISION**  
**INVOICE REQUEST FORM**

(9-96)

**Facility Name & Address:**

Yazoo Valley Oil Mill  
P.O. Box 569  
Helena, AR 72342

**CSN:** 54-0019

**Permit No:** 1089-AOP-R0

**Permit Description:** V

(e.g. A = AIR CODE, S=SIP, H=NESHAP, P=PSD, N=NSPS, V= Title V)

**Initial Fee Calculations:**

**Title V = 3**(17.39)(TPY each pollutant, except CO) - amount of last annual air permit fee

$(17.39)(230.0 + 0.1 + 288.9 + 18.0) = (17.39)(537.0) = 9339 - 6921 = 2418$

**Mod Fee Calculations:**

**Title V = 3** (17.39)(TPY increase of each pollutant, except CO)

NOTE: Do Not double count HAPs and VOCs!!!

No greater than 4000 tpy for each contaminant but not less than \$1000

F =

**Fee Amount:** \$ 2418

**Engineer:** Melissa J. Blumenthal

**Date:** April 8, 1997