

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0544-AR-19 AFIN: 03-00002

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Baxter Healthcare Corporation  
1900 Highway 201 North  
Mountain Home, Arkansas 72653

3. PERMIT WRITER:

Shawn Hutchings

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Unlaminated Plastics Film and Sheet (except Packaging)  
Manufacturing  
NAICS Code: 326113

5. ALL SUBMITTALS:

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

Date of Application	Type of Application (New, Renewal, Modification, Deminimis/Minor Mod, or Administrative Amendment)	Short Description of Any Changes That Would Be Considered New or Modified Emissions
12/30/2022	Deminimis	Change in control device. New emergency generator

6. REVIEWER'S NOTES:

Baxter Healthcare Corporation (Baxter) owns and operates a manufacturing facility located in Mountain Home, Arkansas. The facility manufactures peritoneal dialysis disposables, patient connectors, and produces plastics for the disposables manufacturing. The facility also operates a sterilization process. This deminimis modification allowed the replacement of the control train on the aeration chambers SN-116 and 117 with a LESNI system, added a 2,216 hp diesel-fired emergency generator, and added two cooling towers, two diesel tanks, and four natural gas fired air heaters as insignificant activities. There was no change in permitted emissions as higher

emitting control devices on SN-116 and 117 were required to be shut down before operation of the new sources.

7. COMPLIANCE STATUS:

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

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

The last inspection was conducted on February 24, 2020. There was a high priority violation noted. Ethylene oxide (lb/hr) limits were exceeded. CAO LIS No. 21-037 was signed May 5, 2021 for exceeding ethylene oxide limits. Permit 554-AR-18 addressed those issues.

In addition, on August 17, 2022, the Division of Environmental Quality informed the Site Director for the facility that the review of documents required to be submitted by CAO LIS No. 21-037 revealed violations, and that the Division would proceed through formal enforcement channels. Several of these violations are also addressed in the previous permit revision.

There is also a proposed CAO out for signature which addresses a number of issues. None of these issues are related to this permit action.

8. PSD/GHG APPLICABILITY:

a) Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? N  
If yes, were GHG emission increases significant? N

b) Is the facility categorized as a major source for PSD? N

- *Single pollutant ≥ 100 tpy and on the list of 28 or single pollutant ≥ 250 tpy and not on list*

If yes for 8(b), explain why this permit modification is not PSD.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
101, 116, 117	Ethylene Oxide	40 CFR Part 63, Subpart A and Subpart O
17 Temp, 18, 125	N/A	40 CFR Part 60 Subpart Dc
112, 121, 122, 124, 126	HAPs	40 CFR Part 63 Subpart ZZZZ
112, 124, 126	HC, NO <sub>x</sub> , CO & PM	40 CFR Part 60 Subpart IIII
17 Temp*, 18*, 125*	PM, CO	40 CFR Part 63 Subpart JJJJJ

10. UNCONSTRUCTED SOURCES:

Unconstructed Source	Permit Approval Date	Extension Requested Date	Extension Approval Date	If Greater than 18 Months without Approval, List Reason for Continued Inclusion in Permit
None				

11. PERMIT SHIELD – TITLE V PERMITS ONLY:

N/A

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

N/A

13. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

14. AMBIENT AIR EVALUATIONS:

The following are results for ambient air evaluations or modeling.

a) NAAQS

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

b) Non-Criteria Pollutants:

Emissions of pollutants which would have would be evaluated based on Division of Environmental Quality procedures for review of non-criteria pollutants did not increase as a result of this deminimis change and no analysis was performed.

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

A.C.A. §8-3-103 requires hydrogen sulfide emissions to meet specific ambient standards. Many sources are exempt from this regulation, refer to the Arkansas Code for details.

Is the facility exempt from the H<sub>2</sub>S Standards

Y

If exempt, explain: Does not emit H<sub>2</sub>S

## 15. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
17T	Natural Gas AP-42 Table 1.4- 1,2,3,4  Fuel Oil AP-42 Table 1.3- 1,2,3,8,9,10	<u>lb/MMscf</u> PM = 1.9 PM <sub>10</sub> = 7.6 NO <sub>x</sub> = 100 CO = 84 VOC = 5.5 SO <sub>2</sub> = 0.6  lb/Mgal PM = 2 PM <sub>10</sub> = 1.3 NO <sub>x</sub> = 20 CO = 5 VOC = 0.252 SO <sub>2</sub> = 71	N/A	N/A	13.4 MMBtu/hr Annual fuel oil limit 82,610 gal
18	Natural Gas AP-42 Table 1.4- 1,2,3,4  Fuel Oil AP-42 Table 1.3- 1,2,3,8,9,10	<u>lb/MMscf</u> PM = 1.9 PM <sub>10</sub> = 7.6 NO <sub>x</sub> = 100 CO = 84 VOC = 5.5 SO <sub>2</sub> = 0.6  lb/Mgal PM = 2 PM <sub>10</sub> = 1.3 NO <sub>x</sub> = 20 CO = 5 VOC = 0.252 SO <sub>2</sub> = 71	N/A	N/A	20.412 MMBtu/hr Annual fuel oil limit 127,721 gal
97	Mass Balance	Max Usage: VOC 6.9 lb/hr 30.0 tpy	N/A	N/A	
101	Testing Subpart O, Vendor Data, &	LESNI Cat Ox NO <sub>x</sub> – 3.0 ppmv CO – 84 lb/MMscf	LESNI – (3) Catalytic Oxidizers	99.9% hourly 99.9% annual	Worst case sent to control device = 1,402 lb/hr EtO

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
	AP-42 Table 1.4-1,2,3,4	VOC – 5.5 lb/MMscf PM/PM <sub>10</sub> – 7.6 lb/MMscf SO <sub>2</sub> – 0.6 lb/MMscf			Max EtO 600,000 lb/yr  LESNI 0.0063 MMscf/hr 33,369 dscfm
112	Kohler Power Systems Emission Data Sheet & AP 42	0.08 g/kWh PM/PM <sub>10</sub> 0.29 lb/MMBtu SO <sub>2</sub> 0.06 g/kWh VOC 5.08 g/kWh NO <sub>x</sub> 0.54 g/kWh CO	N/A	N/A	237 HP 177 kW
116 117	Vendor data          AP-42 Table 1.4-1,2,3,4	<u>SN-116</u> NO <sub>x</sub> – 0.163 lbs/MMBtu CO – 0.2 lbs/MMBtu  <u>SN-117</u> NO <sub>x</sub> – 0.265 lbs/MMBtu CO – 0.2 lbs/MMBtu  VOC – 5.5 lb/MMscf PM/PM <sub>10</sub> – 7.6 lb/MMscf SO <sub>2</sub> – 0.6 lb/MMscf	Catalytic Oxidizer  and  Thermal Oxidizer	99.9% destruction efficiency  or  0.25 ppm outlet concentration	3 MMBtu/hr each  43.47 MMBtu/hr each  8,760 hr/yr

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
121 122	AP-42 Tables 3.3-1 and 3.3-2	<u>lb/hp-hr</u> PM/PM <sub>10</sub> -2.2E-03 NOX-3.1E-02 CO-6.68E-03 VOC-2.47E-03 SO <sub>2</sub> -2.05E-03	None	N/A	218 HP (1.6 MMBtu/hr) 500 hr/yr
124 126	Mfg Specs  AP-42 Table 3.4-1	<u>g/kW-hr</u> PM/PM <sub>10</sub> = 0.03 NO <sub>x</sub> = 12.0 CO = 0.6 VOC = 0.03  SO <sub>2</sub> = 1.21E-5 <u>lb/hp-hr</u>	N/A	N/A	2,218 HP 500 hr/yr
125	AP-42 Table 1.4- 1,2,3,4  Mfg Specs  AP-42 Tables 1.3-1, - 2, -3, -8, -9, - 10	<u>lb/MMscf</u> PM = 1.9 PM <sub>10</sub> = 7.6 VOC = 5.5 SO <sub>2</sub> = 0.6  NO <sub>x</sub> = 70 CO = 18.7  <u>lb/Mgal (Fuel Oil)</u> PM = 2 PM <sub>10</sub> = 1.3 NO <sub>x</sub> = 20 CO = 5 VOC = 0.252 SO <sub>2</sub> = 71 Formaldehyde = 6.10E-02	N/A	N/A	29 MMBtu/hr Nat Gas and Fuel oil  SO <sub>2</sub> factor = 142s s=0.5% sulfur
116 and 117 with LESNI and Dry Beds	Vendor Supplied NOx AP-42 others	<u>3 ppm NOx</u> <u>AP-42 Tables</u> <u>1.4-1, 1.4-2, 1.4-</u> <u>3, and 1.4-4.</u>	N/A	N/A	

16. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
101	CO	EPA Reference Method 10	Initial	Verify Limits
101, 116, 117	Ethylene Oxide	320	Initial/Annual	Rule 18.1002 Rule 19.702 and Subpart O
101, 116, 117	Formaldehyde	EPA Reference Method 320 and 323	Initial	Verify Limits

17. MONITORING OR CEMS:

The permittee must monitor the following parameters with CEMS or other monitoring equipment (temperature, pressure differential, etc.)

SN	Parameter or Pollutant to be Monitored	Method (CEM, Pressure Gauge, etc.)	Frequency	Report (Y/N)
101	LESNI Minimum Catalyst Bed Inlet Temperature– 302 °F	Device to continuously measure and record temperature	Continuously while operating Accuracy verified twice per calendar year	N
	EtO	CEMS with StarBoost TM FTIR (Fourier transformed Infrared) monitoring system	Continuous	N
	Pressure Differential Across Enclosure	Pressure Gauge	Daily	N
116, 117	Catalyst Bed Outlet SN-116 – 360 °F SN-117 – 350 °F	Temperature monitor	Continuously Accuracy verified twice per calendar year	N
	TO Minimum Combustion Zone Outlet Temperature – SN-116 – 1,250 °F SN-117 – 1,300 °F	Device to continuously measure and record temperature	Continuously while operating Accuracy verified twice per calendar year	N
	EtO	CEMS with StarBoost TM FTIR (Fourier	Continuous	N

SN	Parameter or Pollutant to be Monitored	Method (CEM, Pressure Gauge, etc.)	Frequency	Report (Y/N)
		Transformed Infrared) monitoring system		
	Pressure Differential Across Enclosure	Pressure Gauge	Daily	N
116 117 with LESNI	LESNI Minimum Catalyst Bed Inlet Temperature– 302 °F	Device to continuously measure and record temperature	Continuously while operating Accuracy verified twice per calendar year	N
	Dry Bed Pressure	Pressure Gauge	Daily	N

18. RECORDKEEPING REQUIREMENTS:

The following are items (such as throughput, fuel usage, VOC content, etc.) that must be tracked and recorded.

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
Facility	Ethylene Oxide usage	600,000 lb/yr	monthly	N
	Annual NO <sub>x</sub> and CO emissions	97 tpy (each)	monthly	N
17 Temp	Fuel Oil (No.2 & ULSD combined) usage	82,610 gal/rolling twelve-month period	monthly	N
18	Fuel Oil (No.2 & ULSD combined) usage	127,700 gal/rolling twelve-month period	monthly	N



SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
97	VOC & HAP usage  Updated SDSs	VOC 6.85 lb/hr, 30 tpy  HAP Individual – 9.50 tpy Total – 22.00 tpy	Monthly	N
101	Temperature of LESNI Catalyst Bed Inlet Temperature	≥ 302°F	Continuously while operating	N
	Enclosure Pressure Differential	-0.007 in H <sub>2</sub> O	Once each day	N
112	Hours & Reason for Operation	Total: 500 hr/yr  Maintenance Checks and testing: 100 hr/yr  Non-emergency situations: 50 hr/yr (included in 100 hr/yr limit)  Peak shaving/income generation not allowed	As operated	N
	Purchased fuel specifications	requirements of 40 CFR 80.510 for nonroad diesel fuel	As Purchased	N
	Manufacturer's emission-related specifications and engine certification	N/A	N/A	N
	Maintenance and Repair	As per manufacturer	N/A	N

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
		instructions		
	Maintenance Plan & Testing Results	N/A	N/A	Y
116, 117	Bed outlet temperature	SN-116 Cat Ox 360°F	Continuously while operating	N
	TO outlet temperature	SN-117 Cat Ox 350°F		
		SN-116 TO 1,250°F		
		SN-116 TO 1,300°F		
	Maintenance and Repair	As per manufacturer instructions		
121 and 122	Enclosure Pressure Differential	-0.007 in H <sub>2</sub> O	Once each day	N
	Temperature of LESNI Catalyst Bed Inlet Temperature	≥ 302°F	Continuously while operating	N
	Dry Bed Maintenance and pressure drop	Manufacture Spec	Daily/as needed	N
	Hours of operation	Total: 500 hr/yr	As Necessary	N
	ZZZZ Records	Various	As Necessary	N
124 126	Hours & Reason for Operation	Total: 500 hr/yr  Maintenance Checks and testing: 100 hr/yr  Non-emergency situations: 50 hr/yr (included in 100 hr/yr limit)  Peak shaving/income generation not	As operated	N

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
		allowed		
	Purchased fuel specifications	requirements of 40 CFR 80.510 for nonroad diesel fuel	As Purchased	N
	Manufacturer's emission-related specifications and engine certification	N/A	N/A	N
	Maintenance and Repair	As per manufacturer instructions	N/A	N
	Maintenance Plan & Testing Results	N/A	N/A	Y
125	Fuel Oil (No.2 & ULSD combined) usage	178,800 gal/rolling twelve-month period	monthly	N

19. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
17 Temp, 18, 101, 116, 117, 125	5% (Natural Gas)	§18.501	Opacity Reading
17 Temp, 18, 112, 121, 122, 124, 125, 126	20% (Fuel Oil)	§19.503	Opacity Reading

20. DELETED CONDITIONS:

Former SC	Justification for removal
	None

## 21. GROUP A INSIGNIFICANT ACTIVITIES:

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

Source Name	Group A Category	Emissions (tpy)						
		PM/PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs	
							Single	Total
NG Hot Water Heater (2) (0.2 BTU/hr each)	A-1	0.01	0.01	0.01	0.14	0.17		3.23E-03
Aeration Process Heaters	A-1	2.8	0.02	0.15	2.35	2.05		5.29E-2
Total	A-1	2.81	0.03	0.16	2.49	2.22		0.06
500 gal Diesel Fuel tank for Emergency Engine	A-3			0.01				
570 gal Diesel Fuel tank (Mfg. After July 1, 2008) (New Area Source MACT does not apply)	A-3			0.01				
300 gal Diesel Fuel tank (Mfg. After July 1, 2008) (New Area Source MACT does not apply)	A-3			0.01				

DEHP Tanks (5)– 2000 gal each	A-3			0.05				
Epoxidized Oil Tanks (6) – 6000 gal each	A-3			0.06				
Epoxidized Oil Tanks (6) – 2000 gal each	A-3			0.06				
Epoxidized Oil Tank – 1500 gal	A-3			0.01				
Epoxidized Oil Tanks – 2750 gal	A-3			0.01				
Lab Vent Hoods (9)	A-5			0.01				0.01
DEHP Tanks (3)– 20,000 gal each	A-13			0.02			0.02	0.02
Fuel Oil Tanks (3) – 15,000 gal each	A-13			0.02				
Cooling Towers (9)	A-13	1.76						
Jet Cleaners (3)	A-13			0.01			0.01	0.01
Plastics Operations	A-13	1.28		0.71				
Storage Silos (29)	A-13	0.02						
Regrind Operations	A-13	0.01						
Sum for A- 13	A-13	3.06		0.76			0.03	0.03

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22. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

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

Permit #
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## APPENDIX A – EMISSION CHANGES AND FEE CALCULATION





