STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0449-AOP-R19 AFIN: 32-00042

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Entergy Arkansas, LLC - Independence Plant
555 Point Ferry Road
Newark, Arkansas 72562

3. PERMIT WRITER:

Thamoda Crossen

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Fossil Fuel Electric Power Generation
NAICS Code: 221112

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
10/24/2025	Renewal	-

6. REVIEWER'S NOTES:

Entergy Services, LLC on behalf of Entergy Arkansas, LLC (collectively "Entergy") submits this Title V application to renew the Title V Operating Air Permit and Acid Rain Permit for the Independence Plant.

In addition to the request to renew the current Title V permit for the site, the applicant requested the following changes:

- The ability to operate an additional coal yard dozer by proposing the combined limit of all coal yard dozer operation be increased from 12,000 hours per consecutive twelve-month period to 15,000 hours per consecutive twelve-month period.

- Removal of the compliance assurance monitoring (CAM) plan for SN-01 and SN-02 due to the exemption under 40 CFR 64.2(b)(1)(i). The exemption states that requirements of CAM shall not apply to emission limitations or standards proposed by the Administrator after November 15, 1990, pursuant to section 111 or 112 of the Act. NSPS Subpart D establishes emission limits for Particulate Matter (PM) and has its own monitoring requirements utilizing PM CEMS; therefore, the site should not also be subject to CAM.
- Revise NSPS Subpart D and Opacity specific conditions for SN-01 and SN-02. Independence currently demonstrates compliance with applicable Opacity standards using a COMS pursuant to 60.45(a). Section 60.45(b)(5) states, in pertinent part, that "[f]or affected facilities using a PM CEMS… a COMS is not required." Additionally, 60.45(b)(7) requires that when a facility elects to demonstrate compliance with 60.42 by monitoring PM emissions as specified under 60.45(b)(5), a performance test using Method 9 must be conducted "within 45 days after stopping use of an existing COMS."
- This change affects specific conditions with regards to applicable Opacity limits for SN-01 and SN-02, for the following conditions 4e, 4j, 12, 14, 30, and 31.

Permitted emissions changing by 3.4 tpy PM_{10} to 20.5 tpy PM for SCN-06C Storage Pile and Haul Road Emissions. The Facility total PM_{10} emissions would change by 19.0 tpy PM and 3.5 tpy PM_{10}.

7. COMPLIANCE STATUS:

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

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? Y
- *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.

Entergy Arkansas, LLC – Independence Plant (Entergy) is a "major stationary source" as defined under the Prevention of Significant Deterioration (PSD) regulation 40 CFR 52.21(b)(1). Entergy is in Independence County which is designated as an attainment area for all pollutants; therefore, Nonattainment New Source Review (NNSR) is not applicable. Any potential project that could constitute a physical change or change in the method of operation requires review of New Source Review (NSR) permitting applicability under the PSD program. Therefore, Entergy is required to determine if a major modification would occur from the requested change as defined by 40 CFR

§52.21(b)(2) as incorporated by Rule 19.903(D) of the Arkansas Plan of Implementation for Air Pollution Control.

A "major modification" is defined as a physical change or change in the method of operation of a major stationary source that results in both of the following:

- A significant emissions increase, as defined in §52.21(b)(40), of a regulated NSR pollutant, as defined in §52.21(b)(50) and
- A significant net emissions increase of that pollutant from the major stationary source. The first step in evaluating the PSD applicability for a proposed change is to evaluate the emission changes resulting from the proposed project according to §52.21(a)(2)(iv). If the emission changes determined according to §52.21(a)(2)(iv) are below the PSD significant emission rates (SERs), then the modification is not a "major modification" and a determination of the contemporaneous net emissions increase is not required.1

With the increased flexibility to operate an additional coal yard dozer, the potential to emit (PTE) from the operation of an additional dozer are below the significant emissions increase thresholds. The PTE from the operation of an additional coal yard dozer are 20.4tpy PM and 5 tpy PM10. The PSD SERs for PM and PM10 are 25 tpy and 15 tpy, respectively. Therefore, the proposed change is not a major modification, and no further analysis of PSD is required.

AP-42 Section 7.1 and Section 3.2, emission factors and methods have been reviewed to ensure they align with the most recent guidance. Changes to the PTE from the emissions sources are not a major modification and no further analysis of PSD is required.

There are no other physical changes or changes in the method of operations being proposed by this permit renewal application.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
SN-01 SN-02	PM SO_2 NO_x CO_2 Opacity	40 CFR Part 60, Subpart D
SN-01 SN-02	PM SO_2 CO	PSD
SN-03 SN-06A SN-06B	Opacity	40 CFR Part 60, Subpart Y
Facility	Asbestos	40 CFR Part 61, Subpart M

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
SN-20 SN-21 SN-23	There are no specific emission limits or pollutants identified, but the rules generally regulate HAPs	40 CFR Part 63, Subpart ZZZZ
SN-01 SN-02	PM SO_2 Mercury Non-Mercury Metal HAPs HCl	40 CFR Part 63, Subpart UUUUU
SN-01 SN-02	SO_2 NO_x	40 CFR Part 72, Subpart A-D – Permits Regulation (Acid Rain)
SN-05	Operating Scenario 1: Only a tune up is required Operating Scenario 2: Opacity PM CO HCl Mercury TSM	40 CFR Part 63, Subpart DDDDD
23	CO NO_x	NSPS Subpart JJJJ

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
N/A				

11. PERMIT SHIELD – TITLE V PERMITS ONLY:

Did the facility request a permit shield in this application? N
(Note - permit shields are not allowed to be added, but existing ones can remain, for minor modification applications or any 8 CAR pt. 40 requirement.)

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

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

Source	Pollutant Controlled	Cite Exemption or CAM Plan Monitoring and Frequency
01, 02	SO_2 CO_2 NO_x Opacity	CEM – Continuous Monitoring

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:

The facility has been reviewed under the NCAP strategy which includes any single NCAP HAP with emissions equal to or greater than 10 tpy or a TLV less than 1 mg/m^3. Emergency generator emissions are included in the evaluation of the DeMinimis level HAPs but are not modeled per ADEQ guidance.

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

The facility emits HAPs related to incomplete combustion.

1st Tier Screening (PAER)

Estimated hourly emissions from the following sources were compared to the Presumptively Acceptable Emission Rate (PAER) for each compound. The Department has deemed the PAER to be the product, in lb/hr, of 0.11 and the Threshold Limit Value (mg/m^3), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

Pollutant	TLV (mg/m^3)	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
Acrolein**	0.22	0.0242	0.41	N
Arsenic	0.01	0.0011	0.41	N
Beryllium	0.00005	5.5E-06	0.023	N
Cadmium	0.002	0.00022	0.054	N
2-Chloroacetophenone	0.316	0.0347	0.008	Y
Chromium	0.003	0.0033	0.274	N
Chromium VI	0.0002	0.000022	0.083	N
Cobalt	0.02	0.0022	0.101	N
Cyanide***	5.19	0.5709	2.625	N
Dimethyl Sulfate	0.51	0.0561	0.0504	Y
Hydrogen Chloride**	2.98	0.328	84.0	N
Hydrogen Fluoride	0.409	0.045	157.50	N
Manganese	0.02	0.0022	0.516	N
Mercury	0.01	0.0011	0.088	N
Methyl Hydrazine	0.0188	0.002	0.179	N
Methylene Chloride	173.68	19.1048	0.305	Y
Nickel	0.1	0.011	0.295	N
Polycyclic Organic Matter/PAH*	0.2	0.022	0.716	N
Selenium	0.2	0.022	1.368	N
2,3,7,8-TCDD	0.001****	0.00011	1.5E-08	Y
N_2O	90.02	9.90	61.68	N
H_2SO_4	0.2	0.022	17.457	N

* - TLV for coal tar pitch volatiles.
** - Ceiling Limit TLV.
*** - Ceiling Limit TLV for hydrogen cyanide.
**** - Hypothetical value. No TLV was found for 2,3,7,8-TCDD. Thus, the reviewing engineer screened this pollutant based on a hypothetical TLV of 0.001 mg/m^3.

2nd Tier Screening (PAIL)

AERMOD air dispersion modeling was performed on the estimated hourly emissions from the following sources, in order to predict ambient concentrations beyond the property boundary. The Presumptively Acceptable Impact Level (PAIL) for each compound has been deemed by the Department to be one one-hundredth of the Threshold Limit Value as listed by the ACGIH.

Pollutant	PAIL ($\mu g/m^3$) = 1/100 of Threshold Limit Value	Modeled Concentration ($\mu g/m^3$)	Pass?
Acrolein	2.2	0.00519	Y
Arsenic	0.1	0.00187	Y
Beryllium	0.0005	0.00033	Y
Cadmium	0.02	0.0008	Y
Chromium	0.03	0.0013	Y
Chromium VI	0.002	0.00033	Y
Cobalt	0.2	0.00042	Y
Cyanide	51.9	0.01044	Y
Hydrogen Chloride	29.8	0.3342	Y
Hydrogen Fluoride	4.09	0.6267	Y
Manganese	0.2	0.00247	Y
Mercury	0.1	0.00081	Y
Methyl Hydrazine	0.188	0.00071	Y
Nickel	1.0	0.00138	Y
POM/PAH	2.0	0.00022	Y
Selenium	2.0	0.00641	Y
N_2O	900.2	0.3651	Y
H_2SO_4	2.0	0.4655	Y

c) H_2S 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_2S Standards Y
If exempt, explain: No H2S emissions

15. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01	Coal Fired: Permit Limits AP-42 (Tables 1.1-13, 1.1-14, 1.1-15, 1.1-17 and 1.1-18) PSD limits Fuel Oil Fired: Estimated Emissions AP-42 (Tables 1.3-1, 1.3-3, 1.3-9, and 1.3-10) AIRS Emission Factor EPRI PSD limits	Coal Fired: AP-42 Lead: 0.00042 lb/ton HAPs: various see AP-42 Fuel Oil Fired: AP-42 SO_2: 71.0 lb/1000 gal VOC: 0.252 lb/1000 gal NO_x: 24 lb/1000 gal Lead: 9 lb/10^{12} BTU HAPs: various see AP-42	ESP	99.5%	---
	NESHAP UUUUU AP-42, 1.1-5	HCl: 2.0E-03 lb/MMBtu	None	N/A	4,600,000 ton/yr Coal heat content - 20 MMBtu/ton Hourly safety factor (x2)
02	Coal Fired: Permit Limits AP-42 (Tables 1.1-13, 1.1-14, 1.1-15, 1.1-17 and 1.1-18) PSD limits Fuel Oil Fired: Estimated Emissions AP-42 (Tables 1.3-1, 1.3-3,	Coal Fired: AP-42 Lead: 0.00042 lb/ton HAPs: various see AP-42 Fuel Oil Fired: AP-42 SO_2: 71.0 lb/1000 gal VOC: 0.252 lb/1000 gal	ESP	99.5%	---

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
	1.3-9, and 1.3-10) AIRS Emission Factor EPRI PSD limits	NO_x: 24 lb/1000 gal Lead: 9 lb/10^{12} BTU HAPs: various see AP-42			
	NESHAP UUUUU AP-42, 1.1-5	HCl: 2.0E-03 lb/MMBtu	None	N/A	4,600,000 ton/yr Coal heat content - 20 MMBtu/ton Hourly safety factor (x2)
03	Permit Limits AP-42 13.2.4-3 Equation 1	See AP-42 13.2.4-3 Equation 1	Enclosure Chemical Suppressant	50% 90%	k = 0.74 U = 7.0 mph M = 28%
04	Permit Limits AP-42 13.2.4-3 Equation 1	See AP-42 13.2.4-3 Equation 1	Baghouse Enclosure	99.9% PM 99.8% PM_{10} 80% PM/PM_{10}	Two Silos (North and South) k = 0.74 U = 7.0 mph M = 4.8%
05	AP-42 Tables 1.3-1, 1.3-3, 1.3-9, and 1.3-10 Boiler MACT	lb/Mgal: 3.3 PM 2 PM_{10} 71 SO_2 0.252 VOC 24 NO_x lb/10^{12} BTU: 9 Lead HAPs: various see AP-42 130 ppm_{vd} CO	N/A	N/A	PM_{10} emission factor represents filterable portion only Max Sulfur content = 0.5% CO emissions are based on a correction to 3% O_2 consistent with the Boiler MACT

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
06	Material Handing AP-42 13.2.4-3 Equation 1 Bull Dozing Table 11.9-1 Paved Roads 13.2.1.3 Equation 1 Unpaved Roads 13.2.2-2 Equation 1	Various Equations Used See AP-42	Enclosures Chemical Suppressant Baghouse	Up to 80% 90% 99.9% PM 99.8% PM_{10}	Haul Roads and Landfill surfaces dust suppressant is permitted to contain up to 1.0 lb VOC/gal-- Material Handing k = 0.74 U = 7.0 mph M = 28% Bull Dozing M = 28% s = 8.6% Paved Roads K=0.022 (PM_{10}) K=0.011 (PM) sL=12 g/m^2 W= 27 tons P=100 days P= 496 hrs Unpaved Roads s = 6.8 % s = 8.6% (water wagon) k = 1.5 lb/VMT(PM_{10}) k = 4.9 lb/VMT(PM) a = 0.7 (PM) a = 0.9 (PM_{10}) b = 0.45 W=27 tons W=37 tons (water wagon) P=100 days
07	TANKS	VOC 1.5 lb/hr	None	None	112,000,000 gal/yr 60,000 gal/hr

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
		0.6 tpy			
16	AP-42 Table 13.4-1	PM: 0.073 lb drift/kgal PM_{10}: 0.073 lb drift/kgal	N/A	N/A	Based on 21,600 kgal/hr circulating water flow and a total dissolved solids content of 3,600 ppm.
17	AP-42 Table 13.4-1	PM: 0.073 lb drift/kgal PM_{10}: 0.073 lb drift/kgal	N/A	N/A	Based on 21,600 kgal/hr circulating water flow and a total dissolved solids content of 3,600 ppm.
18	Material Balance, MSDS	Turbine Oil Filter Degreaser: 7.59 lb VOC/gal All Other Degreasers: 6.8 lb VOC/gal	N/A	N/A	Hourly emissions based on 1 gal/hr other degreasers and worst case of 150 hr/yr (0.213 gal/hr) for turbine oil filter degreaser. Annual emissions based on 3,480 gal/yr other degreasers and 32 gal/yr turbine oil filter degreaser.
19	AP-42 Background of 13.2.6	0.063 lb PM/lb sand 0.022 lb PM_{10}/lb sand	Baghouse	95%	Annual based on 8760 hr/yr. 550 lb sand/hr 4,818,000 lb sand/yr
20	AP-42 (Tables 3.4-1, 3.4-3, & 3.4-4)	lb/MMBtu: 0.0573 PM_{10} 0.505 SO_2 0.09 VOC 0.85 CO 3.2 NO_x HAPs: various see AP-42	N/A	N/A	2,160 hours per year. 8.22 MMBtu/hr
21	AP-42 (Tables 3.3-1 & 3.3-2)	lb/MMBtu: 0.31 PM_{10}	N/A	N/A	3,000 hours per year. 2.74 MMBtu/hr

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
		0.29 SO_2 0.36 VOC 0.95 CO 4.41 NO_x HAPs: various see AP-42			
23	NSPS Subpart JJJJ AP-42 Table 3.2	<u>lb/MMBtu</u> PM/PM_{10}: 0.01941 SO_2: 0.000588 <u>g/KW-hr</u> CO: 519 VOC: 13.4 NO_x: 13.4	N/A	N/A	500 hours per year 64.1 bhp 0.42 MMBtu/hr AP-42 factors – additional 20% safety factor HAPs emission factors used more conservative rich vs lean burn
24	TANKS	VOC 23.0 lb/hr 0.4 tpy	None	None	15,600 gal/yr 2,000 gal/hr HAP Vapor Phase Wt. % 5.7 %

16. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
01 and 02	PM	5/202	Every 5 years	To demonstrate compliance with PM emission rates.
	PM_{10}	201A/202	Every 5 years	To demonstrate compliance with PM_{10} emission rates.
	SO_2	6	Initial	NSPS Requirement
	NO_x	7	Initial	NSPS Requirement
	CO (post Low NO_X SOFA project)	10	Bi-Annual	To demonstrate compliance with PSD limit of 0.15 lb MMBtu/hr 3hr average

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)
01, 02	SO_2 CO_2 NO_x Opacity	CEM	Continuously	Y

18. RECORDKEEPING REQUIREMENTS:

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

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
01, 02	Quarterly Reports	N/A	Quarterly	Y
01, 02	SO_2 emissions	0.93 lb/MMBtu	Continuously	Y
01, 02	SO_2 emissions	0. 60 lb/MMBtu Effective August 7, 2021	Continuously 30 operating day average	Y
01, 02	NO_x emissions	0.7 lb/MMBtu	Continuously	Y
01, 02	SO_2 annual emissions	70,877.2 tpy	Monthly	Y
01, 02	NO_x annual emissions	53,348.4 tpy	Monthly	Y
01, 02	Operating Scenario	N/A	As Needed	N
01, 02	Heat Input	N/A	Hourly	N
01, 02	Opacity	20% (one-hour average)	Continuously	N
01, 02	Coal analyses documentation and Calculations (if needed)	See Specific Condition # 30	As Needed	N
01, 02, 05, 20, & 21	%S of fuel oil	0.5%	Per shipment	N
05	Average annual capacity factor	Not to exceed 10%	Monthly	Y
	Fuel use records	N/A		

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
05	Opacity records	20%	Weekly	N
05	When operated	N/A	As Needed	N
03, 06	HAP content of chemical foam spray	No HAPs	As Needed	Y
03, 06	VOC content of chemical foam spray	1.42% by weight	As Needed	Y
03, 06	Chemical foam spray usage	300,000 lb/yr	Monthly	Y
06	Total traffic from activated carbon deliveries, halide solution deliveries, and fly ash trucks vehicle miles traveled	61,320 VMT/yr (Paved roads)	Monthly	Y
06		12,045 VMT/yr (Unpaved roads)	Monthly	Y
06	Operation of Coal Yard Dozers	15,000 hr/yr (combined)	Monthly	Y
06	Water wagon vehicle miles traveled	3,000 hr/yr	Monthly	Y
06	Opacity records	20%	Weekly	N
06C	Dust Suppressant use and VOC content	10,000 gallons/yr No more than 1.0 lb VOC/gal	Monthly	Y
04	Log of baghouse maintenance inspections	N/A	Semi-annual	N
04	Opacity records	5%	Daily	Y
07	No. 2 Fuel Oil	112,000,000 gal/yr	Monthly	Y
16, 17	Dissolved solids content	3,600 ppm	Weekly	N
16, 17	Water flow	21,600 kgal/hr	Annually	N
18	VOC content of solvent	Turbine Oil Filter Degreaser: 7.59 lb/gal	As Needed	N

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
		All Other Degreasers: 6.8 lb/gal		
18	Solvent usage	Turbine Oil Filter Degreaser: 32 gal/yr All Other Degreasers: 3,480 gal/yr	Monthly	Y
20	Hours of Operation	2,160 hr/yr	Monthly	Y
21	Hours of Operation	3,000 hr/yr	Monthly	Y
23	Hours of Operation	500 hr/yr	Monthly	Y
	Hours of operation	Maintenance Check: 100 hours/year Non-emergency: 50 hours/yr	As Needed	N
24	Gasoline throughput	15,600 gal/yr	Monthly	Y
Plantwide	Coal throughput	9.2 million tons/yr	Monthly	Y

19. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
01, 02	20, 27	NSPS limit	COM
01, 02	20, 60	State limit	COM
01, 02	20	CAM (1-hr and 3-hr averages)	COM
03	20	Department guidance	Maintenance plan requirements
04	5	Department guidance	Daily observations
05	20	Department guidance	Weekly observations
06	20	Department guidance	Weekly observations
16, 17	5	Department guidance	Operating equipment within design
19	5	Department guidance	Operating control equipment within design

SN	Opacity	Justification for limit	Compliance Mechanism
20 & 21	20	Department guidance	Annually or Daily if in operation longer than 24 hours
23	5	Department guidance	Propane combustion only

20. DELETED CONDITIONS:

Former SC	Justification for removal
N/A	

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_{10}	SO_2	VOC	CO	NO_x	HAPs	
							Single	Total
Kerosene Fired Space Heater (46 Total)	A-1	0.8	0.00516	0.173	1.21	4.85	8.00E-03	0.206
Unit 1 ID Fan Lube Oil Reservoir (T8)	A-2			1.43E-07				
Unit 1 ID Fan Hydraulic Reservoir (T9)	A-2			1.45E-07				
Unit 1 ID Fan Motor Oil Reservoir (T10)	A-2			6.97E-07				
Condenser Vacuum Pump Lubricating Reservoir (T12)	A-2			9.09E-08				
Unit 2 ID Fan Lube Oil Reservoir (T19)	A-2			1.43E-07				
Unit 2 ID Fan Hydraulic Reservoir (T20)	A-2			1.59E-07				
Unit 2 ID Fan Motor Oil Reservoir (T21)	A-2			6.97E-07				
Condenser Vacuum Pump Lubricating Reservoir (T23)	A-2			9.09E-08				
Condenser Vacuum Pump Oil Separators (T24A)	A-2			5.24E-07				

Source Name	Group A Category	Emissions (tpy)						
		PM/PM_{10}	SO_2	VOC	CO	NO_x	HAPs	
							Single	Total
Condenser Vacuum Pump Oil Separators (T24B)	A-2			5.24E-07				
Oil Drum Storage (T52)	A-2			7.57E-07				
Unit 1 Seal Oil Vapor Separating Tank (T69)	A-2			4.05E-08				
Unit 2 Seal Oil Vapor Separating Tank (T70)	A-2			4.05E-08				
Unit 1 and Unit 2 Seal Oil Filters x 4 (T71-T74)	A-2			2.05E-06				
Unit 1 Lube Oil Storage Tanks x 3 (T75-T77)	A-2			3.99E-06				
Unit 2 Lube Oil Storage Tanks x 3 (T78-T80)	A-2			3.99E-06				
Vehicle Maintenance Area Lube Oil Tanks x 3 (T87-89)	A-2			3.74E-06				
Turbine Lube Oil Tank (T-91)	A-2			1.17E-06				
A-2 Total				**1.90E-05**				
Unit 1 Turbine Lube Oil Reservoir (T3)	A-3			7.31E-05				
Unit 1 EHC Reservoir (T4)	A-3			2.78E-06				
1A & 1B BFPT Lube Oil Reservoir (T5)	A-3			2.88E-06				
Unit 1 Generator Seal oil Tank (T6)	A-3			2.24E-04				
Unit 1 Lube Oil Bowser (T11)	A-3			1.63E-06				
Unit 2 Turbine Lube Oil Reservoir (T14)	A-3			7.31E-05				
Unit 2 EHC Reservoir (T15)	A-3			2.78E-06				
2A & 2B BFPT Lube Oil Reservoir (T16)	A-3			2.88E-06				

Source Name	Group A Category	Emissions (tpy)						
		PM/PM_{10}	SO_2	VOC	CO	NO_x	HAPs	
							Single	Total
Unit 2 Generator Seal Oil Tank (T17)	A-3			4.34E-06				
Unit 2 Lube Oil Bowser (T22)	A-3			7.18E-06				
Emergency Diesel Generator Fuel Oil Tank (T25)	A-3			1.63E-04				
Emergency Fire Pump Diesel Tank (T26)	A-3			1.63E-04				
Diesel Storage Tank – Landfill (T28)	A-3			3.90E-04				
Kerosene Storage Tank (T33)	A-3			4.05E-04				
Portable Diesel Storage Tanks (T83, T92)	A-3			3.82E-04				
Outage Diesel Storage Tank (T84)	A-3			1.79E-04				
Outage Diesel Storage Tank (T85)	A-3			3.43E-04				
Coal Yard Hydraulic Tank (T86)	A-3			4.93E-04				
Diesel Storage Tank 10,000 gal (T90)	A-3			1.14E-02				
A-3 Total				**1.43E-02**				
Unit 1 Turbine Lube Oil Storage Tank (T2)	A-13			2.47E-06				
Unit 2 Turbine Lube Oil Storage Tank (T13)	A-13			2.47E-06				
Oily Water Separator – RCD (W6)	A-13			1.81E-07				
Oily Water Separator (W7)	A-13			1.64E-06				
Oily Water Separator Tank (W8)	A-13			1.64E-06				
Turbine Area Sumps (W9)	A-13	No emissions expected						

Source Name	Group A Category	Emissions (tpy)						
		PM/PM_{10}	SO_2	VOC	CO	NO_x	HAPs	
							Single	Total
Unleaded Gasoline Dispensing Station (X1)	A-13			2.43E-01				
Diesel Fuel Dispensing Stations x 5 (X4)	A-13			1.22				
Kerosene Dispensing Tank # 1 (X5)	A-13			2.43E-01				
Transformers (X24-X28)	A-13	These are closed loop systems with no potential for emissions from the insulating oil.						
Switchyard Oil Circuit Breaker (X29)	A-13							
Aerosol Lubricant Fugitives (X57)	A-13			8.75E-02			5.25E-02	0.0875
Aerosol Degreaser Fugitives (X58)	A-13			1.89E-01			0.189	0.189
Insecticide Fugitives (X59)	A-13			2.96E-02				
Aerosol Can Puncture Station (X60)	A-13			3.78E-01			0.378	0.378
(2) Powdered Halide Hoppers (X61)	A-13	7.38E-05						
Bottom Ash Bunker System (X62)	A-13	4.02E-01						
Unit 1 AC Silo (X115)	A-13	3.38E-03						
Unit 2 AC Silo (X116)	A-13	3.38E-03						
Unit 1 Economizer Ash Silo (M60)	A-13	PM: 2.48E-01 PM_{10}: 1.17E-01						

Source Name	Group A Category	Emissions (tpy)						
		PM/PM_{10}	SO_2	VOC	CO	NO_x	HAPs	
							Single	Total
Unit 2 Economizer Ash Silo (M61)	A-13	PM: 2.48E-01 PM_{10}: 1.17E-01						
Fly Ash Railcar Transloader (X63)	A-13	PM: 9.43E-05 PM_{10}: 4.46E-05						
A-13 Total		PM: 9.05E-01 PM_{10}: 6.43E-01		2.39				6.55E-01

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 #
0449-AOP-R18

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-11-16

Facility Name: Entergy Arkansas, LLC - Independence Plant
Permit Number: 0449-AOP-R19
AFIN: 32-00042

$/ton factor	28.14	Annual Chargeable Emissions (tpy)	13553.65
Permit Type	Renewal No Changes	Permit Fee $	0

Minor Modification Fee $	500
Minimum Modification Fee $	1000
Renewal with Minor Modification $	500
Check if Facility Holds an Active Minor Source or Minor Source General Permit	☐
If Hold Active Permit, Amt of Last Annual Air Permit Invoice $	0
Total Permit Fee Chargeable Emissions (tpy)	0
Initial Title V Permit Fee Chargeable Emissions (tpy)	

HAPs not included in VOC or PM: *Chlorine, Hydrazine, HCl, HF, Methyl Chloroform, Methylene Chloride, Phosphine, Tetrachloroethylene, Titanium Tetrachloride*

Air Contaminants: *All air contaminants are chargeable unless they are included in other totals (e.g., H2SO4 in condensible PM, H2S in TRS, etc.)*

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
PM		6212	6231	19	0	4000
PM_{10}		5982.7	5986.2	3.5		
$PM_{2.5}$		0	0	0		
SO_2		71299.8	71299.8	0	0	4000
VOC		331	331	0	0	331
CO		11538.6	11538.6	0		
NO_X		53536.4	53536.4	0	0	4000
Lead	☑	1.95	1.95	0	0	1.95

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
Total HAP	☐	931.38	931.38	0		
Cyanide	☐	11.5	11.5	0		
Hydrogen Chloride	☑	184	184	0	0	184
Hydrogen Fluoride	☑	689.86	689.86	0	0	689.86
Methylene Chloride	☑	1.34	1.34	0	0	1.34
H2SO4	☑	75.43	75.43	0	0	75.43
N2O	☑	270.07	270.07	0	0	270.07
	☐	0	0	0		
	☐	0	0	0		
	☐	0	0	0		
	☐	0	0	0		
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