

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0996-AOP-R26 AFIN: 66-00041

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

ABB Motors and Mechanical Inc.
5711 R.S. Boreham Jr. Street
Fort Smith, Arkansas 72901

3. PERMIT WRITER:

Alexander Sudibjo

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Motor and Generator Manufacturing
NAICS Code: 335312

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
4/2/2018	Minor Mod	New spray paint booth (SN-51)

6. REVIEWER'S NOTES:

With this minor modification, the facility adding a new paint booth at Bay #8 (SN-51) to paint endplate parts, removing all thoriated tungsten welding rods and replacing them with 2% lanthanoid welding rods, adding a new burn off oven for varnish hooks as A-1 insignificant activity. Additionally, this permitting action is changing the opacity limit for SN-49 to 20% and removing all additional NESHAP ZZZZ conditions (Specific Conditions #46-48) for the diesel emergency generators (SN-33, 34, 35, 40, and 46) because the generators meet all requirements of NESHAP ZZZZ by complying with

NSPS IIII. The General Provisions are being updated. There are no changes in the facility's permitted annual emissions.

7. COMPLIANCE STATUS:

As of April 2, 2018, there are no compliance issues with the facility and no violations are listed in ECHO (<https://echo.epa.gov/detailed-facility-report?fid=110000453321>).

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?

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)
All Diesel Generators (SN-33, SN-34, SN-35, SN-36, SN-40, SN-46 and SN-49)	HAPs	40 CFR 63 Subpart ZZZZ
New Diesel Generators (SN-33, SN-34, SN-35, SN-40, SN-46 and SN-49)	HAPs	40 CFR Part 60, Subpart IIII
Welding (SN-C) and Machining (SN-E)	N/A	40 CFR 63 Subpart XXXXXX
When complying with the HAP limits in this permit the facility will not be subject to Subpart MMMM.		

10. 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 Regulation 18 requirement.)

If yes, are applicable requirements included and specifically identified in the permit?

If not, explain why.

For any requested inapplicable regulation in the permit shield, explain the reason why it is not applicable in the table below.

Source	Inapplicable Regulation	Reason
N/A		

11. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

12. AMBIENT AIR EVALUATIONS:

Include the results for any ambient air evaluations or modeling. Include NSR/PSD permits and permits that require an evaluation in accordance with revisions to 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 ADEQ Air Permit Screening Modeling Instructions.

a) Reserved.

b) Non-Criteria Pollutants:

This permit contains a TLV table for non-criteria pollutants. Modeling was used to determine the permitted emission rates for ranges of non-criteria pollutants (grouped by TLV) that pass the PAER or PAIL. Therefore, modeling of specific non-criteria pollutants was not performed.

Minimum TLV (mg/m ³)	Maximum Individual HAP Content (wt %)	Maximum HAP Content (lb/gal)
170.458	100	7.0
153.412	90	6.3
136.366	80	5.6
119.320	70	4.9
102.275	60	4.2
85.229	50	3.5
68.183	40	2.8
51.137	30	2.1
34.092	20	1.4
25.569	15	1.05
17.046	10	0.70
12.784	7.5	0.525
8.523	5	0.35
4.261	2.5	0.175
1.705	1	0.07

c) H₂S Modeling:

The facility does not have any H₂S emissions.

13. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
SN-01a	Mass Balance	0.0484 gal/motor 1.3 lb VOC/gal	None	N/A	167 s/cycle 6 motors/cycle
SN-01b			None	N/A	
SN-01c	AP-42 1.4-3	<u>Units in lb/MMscf</u> PM/PM ₁₀ : 7.6 SO ₂ : 0.6 VOC: 5.5 CO: 84.0 NO _x : 100.0	None	N/A	4.0 MMBtu/hr
SN-02	Mass Balance/Testing	7.0 lb VOC/gal	None	N/A	0.017 gal/Motor 88.5 Motors/hr
SN-03			None	N/A	0.017 gal/Motor 88.5 Motors/hr
SN-05			None	N/A	0.022 gal/Motor 82.6 Motors/hr
SN-06			None	N/A	0.028 gal/Motor 77.5 Motors/hr
SN-07	Equipment capacity	7.0 lb VOC/gal	None	N/A	0.63 gal/hr
SN-11	Mass Balance/Testing	7.0 lb VOC/gal	None	N/A	0.017 gal/Motor 62.5 Motors/hr
SN-12			None	N/A	0.017 gal/Motor 62.5 Motors/hr
SN-31a	AP-42 1.4-3	<u>Units in lb/MMscf</u> PM/PM ₁₀ : 7.6 SO ₂ : 0.6 VOC: 5.5 CO: 84.0 NO _x : 100.0	None	N/A	1.8 MMBtu/hr (combined)
	Mass Balance	0.0484 gal/motor 1.3 lb VOC/gal			167 s/cycle 6 motors/cycle
SN-31b	AP-42 1.4-3	<u>Units in lb/MMscf</u> PM/PM ₁₀ : 7.6 SO ₂ : 0.6	None	N/A	1.8 MMBtu/hr (combined)

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
		VOC: 5.5 CO: 84.0 NOx: 100.0			
	Mass Balance	0.0484 gal/motor 1.3 lb VOC/gal			167 s/cycle 6 motors/cycle
SN-33	AP-42 Table 3.3-1	<u>Units in lb/MMBtu</u> PM/PM ₁₀ : 0.31 SO ₂ : 0.29 VOC: 0.36 CO: 0.95 NOx: 4.41	None	N/A	685 HP, 500 hours/yr
SN-34			None	N/A	237 HP, 500 hours/yr
SN-35			None	N/A	685 HP, 500 hours/yr
SN-36			None	N/A	85 HP, 500 hours/yr
SN-39	Mass Balance/Testing	7.0 lb VOC/gal	None	N/A	0.017 gal/rotor 40 rotors/hr
SN-40	AP-42 Table 3.3-1	<u>Units in lb/MMBtu</u> PM/PM ₁₀ : 0.31 SO ₂ : 0.29 VOC: 0.36 CO: 0.95 NOx: 4.41	None	N/A	685 HP, 500 hours/yr
SN-41	Mass Balance/Testing	7.0 lb VOC/gal	None	N/A	77.5 motors/hr 0.028 gal/motor
SN-42			None	N/A	77.5 motors/hr 0.028 gal/motor
SN-44a&b	Mass Balance/Testing	0.0484 gal/motor 1.3 lb/gal VOC	None	N/A	158 cycles/hr 6 motors/cycle
SN-C	MSDS	HAP content: 34% Manganese:5% PM:15.1 lb/10 ³ electrode	None	N/A	25,000 lbs electrode/yr
SN-E	N/A	Estimate based upon nature of process	Enclosed within building	N/A	
SN-46	AP-42 Table 3.3-1	<u>Units in lb/MMBtu</u> PM/PM ₁₀ : 0.31 SO ₂ : 0.29 VOC: 0.36 CO: 0.95 NOx: 4.41	None	N/A	80 HP, 500 hours/yr
SN-48	Mass Balance/Testing	7.0 lb VOC/gal	None	N/A	0.007 gal/Motor 5.5 Motors/hr

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
SN-49	AP-42 Table 3.3-1 (for SO ₂ only) & Exhaust Emission Data (EPA Certificate Data)	SO ₂ : 2.05 E-03 lb/Hp-Hr PM/PM ₁₀ : 0.17 g/kW-Hr VOC: 0.15 g/kW-Hr CO: 1.3 g/kW-Hr NOx: 3.4 g/kW-Hr	None	N/A	134.1 Hp, 100 kW, 500 hours/years
SN-50	MSDS	7.0 lb VOC/gal	None	N/A	0.028 gal/Motor 30 Motors/hr
SN-51	MSDS	7.0 lb VOC/gal	None	N/A	0.02 gal/Motor 77.5 Motors/hr

14. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
N/A				

15. MONITORING OR CEMS:

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

SN	Parameter or Pollutant to be Monitored	Method (CEM, Pressure Gauge, etc.)	Frequency	Report (Y/N)
N/A				

16. RECORDKEEPING REQUIREMENTS:

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

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
A	VOC Content	7.0 lb/gal	As needed	N

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
A	VOC Emissions	158.9 tpy	Monthly	Y
A	HAP Content	As Per TLV Table	As needed	N
B	VOC Content	1.3 lb/gal	As needed	N
B	VOC Emissions	40.0 tpy	Monthly	Y
Facility	HAP Emissions	Single HAP: 9.62 tpy Total HAPs: 23.94 tpy	Monthly	Y
C	Welding Wire HAP content	34% HAPs 5% Manganese	Continuous	N
C	Welding Wire Used	35,000 lb/yr	Monthly	N
C	Manufacturer's Instructions	N/A	Continuous	N
C	Management Practices	Minimum one from listed in SC#24	Continuous	N
C	Corrective action if visible emissions detected	See SC #25	As Needed	Y
C	All visual determination of opacity	No visible fugitive emissions	See SC #27	N
E	Manufacturer's Instructions	Operate according to instructions	Continuous	N
SN-33, SN-34, SN-35, SN-40, & SN-46	Fuel Type Used	Non-road Diesel only	As needed	N
SN-33, SN-34, SN-35, SN-40, SN-46, & SN-36	Maintenance Record & Manufacturer approved instructions	Changes must be permitted by manufacturer and engine must be maintained according to instructions	Continuous	N
SN-33, SN-34, SN-35, SN-40, & SN-46	If engine has a diesel particulate filter: Action taken if backpressure monitor alarm	N/A	As needed	N
SN-33, SN-34, SN-35, SN-40, & SN-46	Hours of Operation and Description of Use	500 hr/ calendar yr total 100 hr/yr maintenance 50 hr/yr	Each use	N

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
SN-36		non-emergency		
SN-36	Maintenance	Oil and Filter: 500 hours or annual Air Cleaner: 1000 hours or annual Hoses and belts: 500 Hours or annual	As needed	N
SN-33, SN-34, SN-35, SN-40, SN-46, and SN-36	Opacity Observation data and corrective actions	20% Opacity	Daily	N
SN-49	Hours of Operation	500 hrs	12-month period	N
SN-49	Opacity Observation data and corrective actions	20% during the acceleration mode, 15% during the lugging mode, and 50% during the peaks in either the acceleration or lugging modes	Daily	N

17. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
B	5%	Reg.18.501	Use of Natural Gas
C	5%	Reg.18.501	Compliance with NESHAP XXXXXX
C	Any Visual Emissions	NESHAP XXXXXX	SC# 24 through #28
E	5%	Reg.18.501	Work Practices
SN-33, SN-34, SN-35, SN-40, SN-46, SN-36, & SN-49	20%	Reg.19.503	Daily observation when operating more than 24 hours

18. DELETED CONDITIONS:

Former SC	Justification for removal
46-48	The diesel emergency generators (SN-33, 34, 35, 40, and 46) meet the requirements of NESHAP ZZZZ by meeting the requirements of NSPS III.

19. 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
Wastewater Evaporator (NG, 0.22 MMBtu/hr)	A-1	0.01	0.01	0.01	0.08	0.10	0.01	0.01
210 Area Wastewater Evaporator (NG, 0.65 MMBtu/hr)	A-1	0.03	0.01	0.02	0.24	0.28	0.01	0.01
Burn-Off Oven (NG, 1.5 MMBtu/hr)	A-1	0.05	0.01	0.04	0.55	0.65	0.02	0.02
Three natural Gas Ovens (combined: 0.3 MMBtu/hr)	A-1	0.01	0.01	0.01	0.11	0.13	0.01	0.01
Curing Oven (NG, 0.5 MMBtu/hr)	A-1	0.02	0.01	0.02	0.18	0.22	0.01	0.01
Scrap Recovery Oven (NG, 0.043 MMBtu/hr)	A-1	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Building 7 Curing Oven (NG, 3.2 MMBtu/hr)	A-1	0.11	0.01	0.08	1.16	1.38	0.03	0.03
Electric Spray Washer with Natural Gas Burner (NG, 0.44 MMBtu/hr)	A-1	0.02	0.01	0.01	0.16	0.19	0.01	0.01
Epoxy Encapsulation Curing Oven (Electric Oven)	A-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TTX Oven in 210 Area (NG, 2.5 MMBtu/hr)	A-1	0.09	0.01	0.06	0.91	1.08	0.02	0.02
Burn-Off Oven for Varnish Hooks (NG, 0.475 MMBtu/hr)	A-1	0.02	0.01	0.01	0.17	0.21	0.01	0.01
A-1 TOTAL		0.37	0.10	0.27	3.57	4.25	0.14	0.14
Endplate Washer	A-13	Electric, water vapor only. No emissions						
Grinding Operations	A-13	0.01	-	-	-	-	-	-
Varnish Line Cooling Tunnel	A-13	Cooling Tunnel emissions are accounted for in painting operations						
Forty-nine (49) Mist Collectors	A-13	0.1	-	-	-	-	-	-

Source Name	Group A Category	Emissions (tpy)						
		PM/ PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
Four (4) Laser Engravers	A-13	0.1	-	-	-	-	-	-
Soldering Station	A-13	0.04					0.04	0.04
Solvent Reclamation Unit (emissions included in SN-A)	A-13	0	0	0.52	0	0	0	0

20. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

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

Permit #
0996-AOP-R25

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-11-16

Facility Name: ABB Motors and Mechanical Inc.
 Permit Number: 0996-AOP-R26
 AFIN: 66-00041

\$/ton factor	23.93	Annual Chargeable Emissions (tpy)	257.6
Permit Type	Minor Mod	Permit Fee \$	500

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		2.8	2.8	0		
PM ₁₀		2.8	2.8	0	0	2.8
PM _{2.5}		0	0	0		
SO ₂		1.9	1.9	0	0	1.9
VOC		200.9	200.9	0	0	200.9
CO		6.7	6.7	0		
NO _x		22	22	0	0	22
Manganese	<input type="checkbox"/>	0.01	0.01	0		

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