

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 1319-AR-10 AFIN: 73-00089

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Danfoss Power Solutions II, LLC
400 East Lincoln Avenue
Searcy, Arkansas 72143

3. PERMIT WRITER:

Derrick Brown

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Fluid Power Valve and Hose Fitting Manufacturing
NAICS Code: 332912

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
12/2/2024	Deminimis	New duct work, roof fan at SN-02.

6. REVIEWER'S NOTES:

Danfoss Power Solutions II, LLC operates a facility in Searcy, Arkansas that manufactures hydraulic valves, valve components, filter assemblies, vane pumps, shafts and vane motors. This modification upgrades the ventilation hood for SN-02, installing new ductwork, and a new roof fan that has more volumetric flow rate capability. This modification also includes a correction to CO from the original permit application. This modification decreases emissions by 3.2 tpy of VOC, 0.1 tpy of NO_x, and increases CO emissions by 0.9 tpy.

7. COMPLIANCE STATUS:

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

The facility's most recent inspection report dated 06/29/22 stated there were NO areas of concern.

8. PSD/GHG APPLICABILITY:

a) Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? N/A
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)
SN-08, SN-13	NO _x & CO	40 CFR Part 63, Subpart ZZZZ 40 CFR 40 Part 60, Subpart JJJJ
SN-03	HAPs	40 CFR Part 63, Subpart WWWW

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: N/A (Minor Source Permit)

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
N/A (Minor Source Permit)		

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

1st Tier Screening (PAER)

Estimated hourly emissions from the following sources were compared to the Presumptively Acceptable Emission Rate (PAER) for each compound. The Division of Environmental Quality has deemed the PAER to be the product, in lb/hr, of 0.11 and the Threshold Limit Value (mg/m³), 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?
Acetone	593.86	65.32	111.61	No

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 Division of Environmental Quality to be one one-hundredth of the Threshold Limit Value as listed by the ACGIH.

Pollutant	PAIL ($\mu\text{g}/\text{m}^3$) = 1/100 of Threshold Limit Value	Modeled Concentration ($\mu\text{g}/\text{m}^3$)	Pass?
Acetone	5938.6	994.7	Yes

c) H₂S Modeling: N/A

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.

15. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
SN-A		MSDS	6.26 lb/gal VOC	none	N/A
SN-02		AP-42 Table 1.4-1 & 1.4-2, MSDS	7.6 lb/MMft ³ PM, 5.5 lb/MMft ³ VOC, 0.6 lb/MMft ³ SO _x , 100 lb/MMft ³ NO _x , 84 lb/MMft ³ CO, 7.17 lb/gal VOC in AAA Oil, 6.45 lb/gal VOC in Oil 22, 0.0002 Toluene lb/gal in Oil 22	none	See Calcs.
SN-03		Characterizing Site Specific Source Emissions for EPA's Risk Assessment Tool for Metal Finishing Industry Table 4	41 grams/day Nickel	none	N/A
SN-04		MSDS	6.6 lb/gal VOC	none	N/A
SN-05		MSDS	6.6 lb/gal VOC	none	N/A

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
SN-07		MSDS	6.59 lb/gal Acetone 0.0003 lb/gal Benzene	none	N/A
SN-08		AP-42 Table 3.2-3	(lbs/mmmbtu) PM/PM ₁₀ : 0.0095 VOC: 0.0296 SO _x : 0.000588 NO _x : 2.27 CO: 3.72	None	N/A
SN-09		Mass Balance/MSDS	Superpaint lb/gal VOC: 4.5 PM: 9.78 Acetone: 3.42 Single HAP 0.65 Total HAP 1.23	3-stage filter	99% Particulate
SN-11		Mass Balance/MSDS	lb/gal VOC: 2.198 Acetone: 6.64 Single HAP 0.01	N/A	N/A
SN-13		CO, NO _x , and VOC from engine's Certificate of Conformity, other pollutants AP-42	CO – 2.0 g/(hp-hr) NO _x – 1.0 g/(hp-hr) VOC – 7.0 g/(hp-hr) PM – 1.94E-2 lb/MMBtu SO ₂ – 5.88E-4 lb/MMBtu HAPs -varies		
SN-11		Mass Balance/MSDS	lb/gal VOC: 2.198 Acetone: 6.64	N/A	N/A

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
			Single HAP 0.01		

16. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
See Specific Condition #36.				

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)
None this modification.				

18. RECORDKEEPING REQUIREMENTS:

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

19. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
02, 03, 06, 08 & 09	5%	Reg.18.501 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311	Inspector Observation
13	20%	Reg.19.503 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311	Inspector Observation

20. DELETED CONDITIONS:

Former SC	Justification for removal
There were no specific conditions deleted with this modification.	

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
Pre-Washer Stage 1 #PL03 – 1.5 MMBtu/hr	A-1	0.049	0.0039	0.035	0.54	0.64	0.012	0.012
Pre-Washer Stage 3 #PL03 - 1.5 MMBtu/hr	A-1	0.049	0.0039	0.035	0.54	0.64	0.012	0.012
Paint Booth Combination Oven #PL04 - 1.2 MMBtu/hr	A-1	0.039	0.0031	0.028	0.43	0.52	0.0097	0.0097
Paint Booth Air Make-up Unit #PL05 -2.6 MMBtu/hr	A-1	0.085	0.0067	0.061	0.93	1.11	0.021	0.021
Pre-Washer Tank Heater #PL03 - 0.5 MMBtu/hr	A-1	0.016	0.0013	0.012	0.18	0.21	0.0041	0.0041
Pre-Washer Air Knife #PL03 - 1.0 MMBtu/hr	A-1	0.033	0.0026	0.024	0.36	0.43	0.0081	0.0081
Thermal Deburring Unit #JEJ1 – 0.25 MMBtu/hr	A-1	0.0082	0.00064	0.0059	0.090	0.11	0.002	0.002
Pre-Washer Stage 1 #PW93 – 1.5 MMBtu/hr	A-1	0.049	0.0039	0.035	0.54	0.64	0.012	0.012
<i>Total for A-1 Category</i>		<i>0.33</i>	<i>0.026</i>	<i>0.24</i>	<i>3.62</i>	<i>4.31</i>	<i>0.081</i>	<i>0.081</i>
Coolant Makeup Tank (2000 gallons)	A-3			0.001			0.001	0.001

Source Name	Group A Category	Emissions (tpy)						
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
Coolant Concentrate Tank (4000 gallons)	A-3			0.001			0.001	0.001
Coolant Reclaim System Tank (1000 gallons)	A-3			0.001			0.001	0.001
AW 46 Hydraulic Oil Tank (4000 gallons)	A-3			0.001			0.001	0.001
AW 32 Hydraulic Oil Tank (4000 gallons)	A-3			0.001			0.001	0.001
Used Oil Storage Tank	A-3			0.001			0.001	0.001
Cutting Oil Reclaim #3	A-3			0.001			0.001	0.001
<i>Total for A-3 Category</i>				<i>0.007</i>			<i>0.007</i>	<i>0.007</i>
Gravimetric Lab				1.28			0.11	0.11
<i>Total for A-5 Category</i>				<i>1.28</i>				
Paint Storage in Small Containers (max 5 gallons in capacity)	A-8			0.152			0.075	0.084
<i>Total for A-8 Category</i>				<i>0.152</i>			<i>0.075</i>	<i>0.084</i>
Pre-Washer #PL03 - DuBois GF Clean 1052 – 0.025 lb/gal VOC	A-9			0.28				
Pre-Washer #PL03 - DuBois Secure – 0.017 lb/gal VOC	A-9			0.26				
Pre-Washer #PL03 – DuBois Secure – 0.013 lb/gal VOC	A-9						0.02	0.02
Pre-Washer #PL03 - DuBois SpectraLINK – 0.021 lb/gal VOC	A-9			0.23				

Source Name	Group A Category	Emissions (tpy)						
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
Pre-Washer #PW93 - Ransohoff Evercycle 225 – 0.013 lb/gal VOC	A-9			0.23				
Pre-Washer #PW93 - Cimclean Producto RI-600 – 0.081 lb/gal VOC	A-9			0.30				
BBO Washer – Cimcool Producto RI-600 – 0.108 lb/gal VOC	A-9			0.18				
<i>Total for A-9 Category</i>				0.72			0.02	0.02
Enclosed Sand Blasting Cabinet	A-13	0.45						
Low Vapor-pressure cleaners	A-13			0.9				
Assembly & Test Area	A-13			0.67			0.011	0.011
Empty Drum Label Painting	A-13			0.03			0.012	0.016
Two 500 Gallon Methanol Storage Tanks	A-13			0.011			0.011	0.011
Oil Reclaim System	A-13			0.31				
4 Grinders (3 connected to collector)	A-13	0.07						
Machining Operations	A-13	0.62						
Storage/Transfer from 55 gallon Paint Drums	A-13			0.38			0.180	0.212
Storage/Transfer of Metal Shavings	A-13	0.1						
Water Treating Process	A-13	0.61					0.002	0.002

Source Name	Group A Category	Emissions (tpy)						
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
Two Instapak foam-in-place systems	A-13			8.6E-07			8.6E-07	8.6E-07
Paint Kitchen	A-13							
Batch Burn-off Oven	A-13	0.644	0.04	0.038	0.577	0.687	0.012	0.013
Flush Solvent Recovery system	A-13							
<i>Total of A-13 Category</i>		<i>2.494</i>	<i>0.04</i>	<i>2.339</i>	<i>0.577</i>	<i>0.687</i>	<i>0.228</i>	<i>0.265</i>

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 #
1319-AR-9

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Minor Source

Revised 03-11-16

Facility Name: Danfoss

Permit Number: 1319-AR-10

AFIN: 73-00089

			Old Permit	New Permit
\$/ton factor	28.14	Permit Predominant Air Contaminant	114.2	114.2
Minimum Fee \$	400	Net Predominant Air Contaminant Increase	0	
Minimum Initial Fee \$	500			
		Permit Fee \$	400	
Check if Administrative Amendment	<input type="checkbox"/>	Annual Chargeable Emissions (tpy)	114.2	

Pollutant (tpy)	Old Permit	New Permit	Change
PM	0.9	0.9	0
PM ₁₀	0.9	0.9	0
PM _{2.5}	0	0	0
SO ₂	0.3	0.3	0
VOC	77.7	74.5	-3.2
CO	1.2	2.1	0.9
NO _x	1	0.9	-0.1
Acetone	114.2	114.2	0
Total HAP	17.88	17.88	0
Single HAP	4.98	4.98	0
Nickel	0.02	0.02	0