

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0904-AOP-R15 AFIN: 72-00205

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Kawneer Company, Inc.
600 Kawneer Drive
Springdale, Arkansas 72764

3. PERMIT WRITER:

Bart Patton

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Metal Window and Door Manufacturing
NAICS Code: 332321

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
11/4/2024	Minor Modification	Replace existing SN-19 with new SN-19
2/10/2025	Administrative Amendment	Add second welding station to IA A-7

6. REVIEWER'S NOTES:

The facility has submitted a minor modification application to make the following changes:

- 1) Replace the existing SN-19 (3.0 MMBtu/hr natural gas-fired Paint Room Pretreatment Tank #1 Burner) with new SN-19 (2.5 MMBtu/hr natural gas-fired Paint Room Pretreatment Tank #1 Burner)
- 2) Incorporate the applicable requirements of 40 C.F.R. 63 Subpart DDDDD for new SN-19

- 3) Clarify recordkeeping for Total HAPs as part of the plantwide HAP limit
- 4) Corrected typographical errors in the total flow rate and the annual PM limit at SN-32 (plantwide emissions were not affected)

An administrative amendment was made to add a second welding station to North Plant Welding, Insignificant Activity, Category A-7. The permit was also updated to use current standard language.

Annual permitted emission rates decreased as follows: 0.2 tpy CO, 0.3 tpy NO_x.

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 was most recently inspected on April 11, 2024. No areas of concern were identified. The facility has not current or pending enforcement activities.

8. PSD/GHG APPLICABILITY:

- a) Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? 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*

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
All Coating Operations	HAPs	NESHAP 40 C.F.R. Part 63 Subpart MMMM
Process Heaters, New (SN-19 and 35) and Existing (SN-17, 18, 20, 34 & 35)	HAPs	NESHAP 40 C.F.R. Part 63 Subpart DDDDD
Thermal Oxidizer (SN-21)	VOC & HAP	CAM

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

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
SN-09/ SN-21	VOC	1. Except for monitoring malfunctions, associated repairs and required quality assurance or control activities (maintenance and calibration checks), the permittee shall monitor the temperature of the RTO system continuously while the source is in operation. 2. The permittee shall follow a routine inspection and maintenance program. Maintenance and repair of the RTO System (SN-21) shall be performed per the manufacturer's specifications. 3. The permittee shall maintain a copy of the inspection and maintenance program to demonstrate compliance with Specific Condition #2. The inspection and maintenance program shall be maintained on-site and made available to Department personnel upon request. 4. The bed temperature at both ends of the Regenerative Thermal Oxidation (RTO) System (SN-21) shall not be less than 1500 degrees F while operating. This temperature need not be maintained while the RTO System is operating in Bypass mode or when the source is not in operation (SN-21A). 5. The permittee shall install and maintain a device to continuously measure and record the bed temperature at both ends of the regenerative thermal oxidation system (SN-09/21) in order to demonstrate compliance with Specific Condition #4 (maintain temperature 1500°F). 6. The temperature monitoring system which monitors the RTO system shall be installed,

Source	Pollutant Controlled	Cite Exemption or CAM Plan Monitoring and Frequency
		calibrated and operated according to the manufacturer's specifications. 7. The permittee shall maintain records to demonstrate compliance with Specific Condition #4. The permittee shall update these records by the fifteenth day of the month following the month to which the records pertain. These records shall be kept on-site and made available to Department personnel upon request. 8. The permittee shall continuously monitor the fan motor to verify that it is operating at or above the speed necessary for proper capture efficiency for the enclosure. 9. The permittee shall have an interlock between the fan motor speed and the automatic paint guns that prevents painting when the fan motor speed is lower than required for proper capture efficiency on the enclosure. The permittee need not operate the interlock while the RTO is operating in bypass mode (SN-21A). 10. The permittee may only operate the RTO Bypass Stack (SN-21A) when the RTO (SN-21) has an emergency outage, equipment malfunction, or is undergoing preventative maintenance. Whenever the RTO Bypass Stack (SN-21A) is opened, the permittee must keep a record that includes a description of why the Bypass Stack was opened, the length of time it remained open, the reasons for the outages of the RTO System, and the corrective actions taken. These records shall be maintained and reported in the semi-annual compliance reports required in General Provision #7 and § 63.3920. These records shall be kept on site and made available to Department personnel upon request.

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:

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?
Benzene	0.0639	0.007	0.00009	Yes

At R15, all Benzene is from combustion of natural gas. The permitted TLV limits do not allow for the use of Benzene as a process material.

c) No other modeling was required.

15. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
02, 03, 17-22, 23/24, & 34	AP-42 Table 1.4-1 & -2	(lb/MMscf) PM/PM ₁₀ – 7.6 SO ₂ – 0.6 VOC – 5.5 CO – 84 NO _x – 100	None	N/A	<u>Natural gas emission factors.</u> <u>Natural gas is only fuel used.</u>
02, 03, 17-22, 23/24, 34, & 35	AP-42 Table 1.4-3	(lb/MMscf) Benzene – 2.1E-03	None	N/A	42.0 MMBtu/hr total.
09, 21	Fall 2008 on-site PTE MSDS Sheets & Actual Usage Mass Balance	Max 32.4 gal/hr VOC – 8.0 lb/gal HAP – 8.0 lb/gal Maximum 230 tpy VOC from Coating Operations	RTO*	90% Capture & 95% Destruction Efficiency	Assumes all VOCs are HAPs. TLV Table based on AERMOD
09A	Fall 2008 on-site PTE MSDS Sheets & Actual Usage Mass Balance	Max usage 32.4 gal/hr Max VOC – 8.0 lb/gal HAP – 8.0 lb/gal x 2% loss to Cool Down	None	N/A	---

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments																				
12	MSDS Sheets & Actual Usage Mass Balance	Max usage 3.23 gal/hr ea VOC – 8.0 lb/gal HAP – 8.0 lb/gal	None	N/A	---																				
26	MSDS Sheets or equivalent documents available	<table><tr><td colspan="3">20, 880 max window units per month</td></tr><tr><td rowspan="2">Material</td><td colspan="2">Usage</td></tr><tr><td>Gallons/hr</td><td>Gal/Yr</td></tr><tr><td>Isopropyl</td><td>2.68</td><td>6004</td></tr><tr><td>Sealer</td><td>7.01</td><td>15,703</td></tr><tr><td>Lubricants</td><td>1.72</td><td>3853</td></tr><tr><td>Epoxy</td><td>0.81</td><td>1815</td></tr></table>	20, 880 max window units per month			Material	Usage		Gallons/hr	Gal/Yr	Isopropyl	2.68	6004	Sealer	7.01	15,703	Lubricants	1.72	3853	Epoxy	0.81	1815	None	N/A	Window Plant
20, 880 max window units per month																									
Material	Usage																								
	Gallons/hr	Gal/Yr																							
Isopropyl	2.68	6004																							
Sealer	7.01	15,703																							
Lubricants	1.72	3853																							
Epoxy	0.81	1815																							
29	MSDS Sheets & Actual Usage Mass Balance	Max usage 0.25 gal/hr	None	N/A	---																				
32	Site-specific TDS data	1,538 ppm Total Dissolved Solids (PM = PM ₁₀); 0.02% drift rate assumed; 0.0002 x 0.001538 = 3.076E-7 wt PM/wt water	None	N/A	225 gpm + 345 gpm + 1,558 gpm = 2,128 gpm. 2,128 x 8.34 lb/gal density x 60 min/hr = 1.065E6 lb water/hr. 1.065E6 x 3.076E-7 = 0.33 lb PM/hr. 8,760 op hr/yr. 2,000 lb/ton.																				

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
35	AP-42 1.4 Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4	Lb/MMscf PM/PM ₁₀ – 7.6 SO ₂ – 0.6 VOC – 5.5 CO – 84 NO _x – 100	-	-	Acid Etch Tank with Process Heater (6.5 MMBTU/hr)

*RTO – Regenerative Thermal Oxidizer

**SN-31 Equation

jD = Colburn J Factor (dimensionless)

V = air velocity over surface of tank

Sc = Schmidt number at 70° F (dimensionless)

psat = saturate vapor pressure of water

p = ambient vapor pressure at 70° F / 50% RH

MW = molecular weight of water

R = Ideal gas Constant

T = Temperature (°R) = °F + 460

Conc. = concentration of constituent of concern (mass fraction)

V = 5 mph * 5280 ft/mi = 26,400 ft/hr

E = 210 * (0.005 * 26,400) / 0.612^{1.5} * (0.0247 – 0.0123) * [18 / (0.73 * 565)] * 0.0005

At the next renewal, emission calculations for the combustion source group, especially rounding per OAQ standard practices, should be reviewed.

16. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
N/A				

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)
21	Temperature of both beds of the thermal oxidation system	Device to continuously measure and record temperature	Continuously	N
21	Enclosure Fan – Hertz applied to variable Speed controller	Device to continuously measure and record frequency	Continuously	N
35	pH	pH meter	Daily	N
35	Scrubber Flow	Flow meter	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	Paint mixture formulations - MSDS	8.0 lb/gal VOC & HAP as applied	On-going	N
Facility	VOC Material Balance	230.0 tpy (material usage, not including combustion HAPs)	Monthly	Y
Facility	HAP Material Balance	230.0 tpy (material usage plus combustion HAPs)	Monthly	Y
Facility	Paint mixture HAP content	Content Table – MSDS	On-going	N
Facility	Subpart M MMM Required Records	27.5 lb Hap / lb solid	Varies	Y
SN-19	Subpart D D D D D Required Records (CO and O ₂ concentrations, corrective actions)	N/A	For each 5-year tune-up	N (unless requested by Administrator)

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
SN-21	Temperature	≥ 1500 degrees F	Continuously	N
	Description of why the Bypass Stack was opened, reason for the outage of the RTO system, and the corrective actions taken	The permittee may only operate the RTO Bypass Stack (SN-21A) when the RTO (SN-21) has an emergency outage, equipment malfunction, or is undergoing preventative maintenance.	Whenever the RTO Bypass Stack (SN-21A) is opened	Y
SN-26	Window Units Produced	20,880 units/month	Monthly	N
SN-35	Recirculation Rate	150 to 250 gpm	Daily	N
	pH	>7		
Facility	Purchase invoices and receipts of aluminum billets, MSDS or equivalent documentation	All aluminum billets and logs processed shall be free of any paints, coatings, or lubricants	Monthly	N

19. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
02, 03, 07, 14-20, 22, 23/24, 3435	5%	§18.501 & Natural gas only fuel	Annual Inspection
09, 09A, 12, 21, 21A, 26, 29	20%	Reg.19.503 and 40 C.F.R. § 52 Subpart E	Annual Inspection

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 ₁₀	SO ₂	VOC	CO	NO _x	HAPs		Chromium
							Single	Total	
Dry-off Oven (1.5 MMBtu/hr)	A-1	0.05	0.01	0.04	0.54	0.64	0.01	0.01	-
Heat Shrink Gun (0.3 MMBtu/hr)	A-1	0.01	0.01	0.01	0.2	0.2	-	-	-
Ambient Temperature Control (0.5 MMBTU/hr)	A-1	0.02	0.01	0.02	0.18	0.22	0.01	0.01	-
Insulpour Radiant Heaters (4)	A-1	0.02	0.01	0.01	0.11	0.14	0.01	0.01	-
Spent Acid Storage Tank (6,000 gal) (0.1 psia)	A-3	-	-	-	-	-	0.07	0.07	-
Anodize Caustic Storage Tank (5,900 gal)	A-4	-	-	-	-	-	-	-	-
Caustic Die Cleaning System (1,500 gal total capacity)	A-4	-	-	-	-	-	-	-	-
Wastewater Spent Caustic Tank (6,000 gal)	A-4	-	-	-	-	-	-	-	-
Color Match Booth #2	A-5	-	-	0.85	-	-	0.47	0.47	-
Color Match Booth with Electric Oven for Quality Control	A-5	-	-	0.04	-	-	-	-	-
Window Plant – Welding, Cutting, Drilling, Shearing and Stamping Stations (shavings too large to be airborne)	A-7	-	-	-	-	-	0.02	0.02	-
North Plant Welding, 2 stations	A-7	0.015	-	-	-	-	3.69 E-05	3.69 E-05	-

Source Name	Group A Category	Emissions (tpy)							
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs		Chromium
							Single	Total	
<u>Anodizing Area:</u> Twenty-four (24) 10,000 gallon Capacity each, Tanks #0 - #21: Tank #1a – Soap Tank #1b – Soap Rinse Tanks #3a, 4a – Caustic (NaOH) Etch Tanks #3b, 4b – Caustic Rinse Tank #5 – Desmut Tanks #6, 8, 10, 12, 14, 15 – City Water Rinse Tanks #7, 9, 11, 13 – Sulfuric Acid Anodize (10% sulfuric acid) Tank #16 – Color Bath/Sulfuric Acid (2% sulfuric acid) Tanks #17, 18, 21 – City Water Rinse Tank #19, 20 – Seal Tanks <u>Paint Room:</u> Five (5) 5,000 gallon Capacity each, Tanks #1 - #5 Tank #1 – Soap Tank Tank #2 – City Rinse Water Tank #3 – (see A-13) Tank #4, 5 – Deionized Water Rinse	A-9	-	-	0.0	-	-	0.0	0.0	-

Source Name	Group A Category	Emissions (tpy)							Chromium
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs		
							Single	Total	
Paint Room: Tank #3 – Phosphochromating	A-13	-	-	-	-	-	-	-	0.06
Grit “Shot” Blaster (fully enclosed)	A-13	0.0	-	-	-	-	-	-	-
One (1) Parts Washer (50 gallon)	A-13	-	-	0.41	-	-	0.0	0.0	-
Solvent Still	A-13	-	-	0.09	-	-	-	-	-
Press #1 Sooter	A-13	3.4	-	-	0.02	0.01	-	-	-
Press #2 Sooter	A-13	3.4	-	-	0.02	0.01	-	-	-
Four (4) Aerosol Can Puncture Stations	A-13	-	-	<0.01	-	-	-	-	-
Insulpour	A-13	-	-	0.22	-	-	0.16 (MDI)	0.16 (MDI)	

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 #
0904-AOP-R14

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-11-16

Facility Name: Kawneer Company, Inc.

Permit Number: 0904-AOP-R15

AFIN: 72-00205

\$/ton factor	28.14	Annual Chargeable Emissions (tpy)	255.7
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) -0.3

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		3.5	3.5	0		
PM ₁₀		3.5	3.5	0	0	3.5
PM _{2.5}		0	0	0		
SO ₂		1.2	1.2	0	0	1.2
VOC		231.6	231.6	0	0	231.6
CO		16.2	15.9	-0.3		
NO _x		18.9	18.6	-0.3	-0.3	18.6
Total HAP	☐	230	230	0		

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
Ammonia	☒	0.8	0.8	0	0	0.8