

## STATEMENT OF BASIS

For the issuance of Draft Air Permit # 1830-AOP-R15 AFIN: 28-00256

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Greenbrier Central, LLC  
7755 Highway 34 East  
Marmaduke, Arkansas 72443

3. PERMIT WRITER:

Jimmy Do

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Railroad Rolling Stock Manufacturing  
NAICS Code: 336510

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
8/3/2024	Minor Mod	Decrease permitted emissions for the Surface Coating Operations (SN-05, SN-06, SN-09, SN-10, SN-12, SN-20, SN-21, SN-23, SN-28, SN-29, and SN-32) by 62.0 tpy. Increase permitted emissions for the Rail Tank Car Flare (SN-24) for VOC by 60.7 tpy, HAPs by 61.29 tpy, NO <sub>x</sub> by 4.6 tpy, and CO by 20.6 tpy to allow an increase in activities related to rebuilding and recertifying existing tank railcars.

6. REVIEWER'S NOTES:

Greenbrier Central, LLC is a railcar fabrication and painting facility in Marmaduke, Arkansas. This minor modification was submitted to:

- Decrease permitted emissions for the Surface Coating Operations (SN-05, SN-06, SN-09, SN-10, SN-12, SN-20, SN-21, SN-23, SN-28, SN-29, and SN-32) of VOC by 62.0 tpy.
- Increase permitted emissions for the Rail Tank Car Flare (SN-24) of VOC by 60.7 tpy, HAPs by 61.29 tpy, NO<sub>x</sub> by 4.6 tpy, and CO by 20.6 tpy to allow an increase in activities related to rebuilding and recertifying existing tank railcars.

7. COMPLIANCE STATUS:

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

This facility was last inspected on December 19, 2023. There were no issues noted. There was no data on EPA ECHO.

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  $\geq 100$  tpy and on the list of 28 or single pollutant  $\geq 250$  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)
05, 06, 09, 10, 12, 20, 21, 23, 28, 29 & 32	HAPs	NESHAP MMMM
25	PM, CO, NO <sub>x</sub> , PMHAPs	NESHAP DDDDD
01, 07, 08, 18, 19, 30, 31, 33, 34 & 35	PM <sub>10</sub>	CAM
24	VOC	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

(Note - permit shields are not allowed to be added, but existing ones can remain, for minor modification applications or any Rule 18 requirement.)

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

## 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-01, SN-07, SN-08, SN-18, SN-19, SN- 30, SN-31, SN-33, SN-34, and SN-35	PM <sub>10</sub>	Daily visible emissions observations.
SN-24	VOC	Records of flare usage. Automatic controls to prevent flaring when pilot is not operating.

## 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 Department procedures for review of non-criteria pollutants, emissions of all other non-criteria pollutants are below thresholds of concern.

1<sup>st</sup> 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<sup>3</sup>), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

With the renewal permit (R14) all lb/hr HAP totals were updated; worst case surface coating operations HAPs were re-evaluated based on an updated (2022-2023) Facility paint HAPs analysis. Modeling was conducted for hourly manganese emissions (inhalable fraction). Modeling was conducted for xylene/ethylbenzene and to determine a NCAP/HAP Limit for 10 tpy HAPs (4.15 mg/m<sup>3</sup>) at the surface coating operations.

Pollutant	TLV (mg/m <sup>3</sup> )	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
arsenic	0.01	0.0011	4.90E-05	Yes
beryllium	0.00005	0.0000055	2.94E-06	Yes
cadmium	0.01	0.0011	2.70E-04	Yes
chromium	0.5	0.055	4.90E-03	Yes
cobalt	0.02	0.0022	2.06E-05	Yes
ethylbenzene	86.8	9.548	40.39	No
manganese <sup>R</sup>	0.02	0.0022	9.31E-05	Yes
manganese <sup>I</sup>	0.1	0.011	5.40E-02	No

Pollutant	TLV (mg/m <sup>3</sup> )	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
mercury	0.025	0.00275	6.37E-05	Yes
POM	0.2	0.022	2.30E-05	Yes
selenium	0.2	0.022	5.88E-06	Yes
xylene	86.8	9.548	161.65	Yes

## 2<sup>nd</sup> 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 (µg/m <sup>3</sup> ) = 1/100 of TLV	Modeled Hourly Rate (lb/hr)	Modeled Concentration (µg/m <sup>3</sup> )	Pass?
xylene	868	161.65	670.99*	Y
ethylbenzene	868	161.65	670.99*	Y
manganese	1.0	5.40E-02	0.80882	Y
NCAP/HAP Limit 10 tpy	41.509	10.0	41.509	Y

\*Used the same model at the highest hourly rate based on operations of 2000 hrs/yr.

## 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: No H<sub>2</sub>S emissions

## 15. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
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SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01, 07, 08, 18, 30, 31 & 33	AP-42 Chapter 13.2.6-1	0.69 lb PM/1,000 lb abrasive  (max hourly abrasive usage per pod: 60 lb/hr)  0.25% Cr 1.3% Mn 0.2% Ni	Dust collector	99%	SN-01: 11,000 acfm; 2 pods SN-07: 30,000 acfm; 11 pods SN-08: 30,000 acfm; 11 pods SN-18: 12,000 acfm; 2 pods SN-30: 20,000 acfm; 6 pods SN-31: 20,000 acfm; 6 pods SN-33: 20,000 acfm; 6 pods
02A, 02B, & 26	Fume Emissions Testing for Plasma Arc Cutting	WET Plasma 0.000259 lb <sub>PM/PM10</sub> /in 2.0% (of PM) Mn 0.2% (of PM) Ni 8.6E-5 lb <sub>NOx</sub> /in	N/A	N/A	SN-02A: 116 in/min SN-02B: 115 in/min SN-26: 85 in/min
05, 06, 09, 10, 12, 20, 21, 23, 28, 29 & 32	Material Balance Based on actual usage records	VOC set at max of 235 tpy then permitted hourly based on Avg. Max divided by operating 40 hours per week for 50 weeks a year. For HAPs: Scaled actual HAP usage up by 235tpy(permitted)/ 21.81tpy (2022/2023 actuals)	N/A	N/A	Annual bubble of 235 tpy VOC
11 & Flare Pilot	AP-42	<u>SN-11</u> 250 MMBtu/hr 500 MMscf/yr  <u>SN-11 &amp; Flare Pilot</u> 100 lb <sub>NOx</sub> /MMscf 84 lb <sub>CO</sub> /MMscf 5.5 lb <sub>VOC</sub> /MMscf 7.6 lb <sub>PM/PM10</sub> /MMscf 0.6 lb <sub>SO2</sub> /MMscf	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
19	MSDS  NO <sub>x</sub> Factor: Hypertherm – <i>Fume emissions testing for plasma arc cutting</i> (1999)	<u>PM/PM<sub>10</sub> Emissions</u> (PM/PM <sub>10</sub> are routed back inside building) 0.01 gr/scf 7,700 scf/min <u>NO<sub>x</sub> Emissions</u> 2.24E-04 lb NO <sub>x</sub> per inch of metal cut (1/2" Mild Steel) . . .corrected to 13/16" mild steel = 3.64E-04 lb/inch	None	None	None
24	AP-42 13.5	69.3 MMBtu/hr 35,000 MMBtu/yr 0.068 lbNO <sub>x</sub> /MMBtu 0.31 lbCO/MMBtu 0.57 lbVOC/MMBtu	Flare	98% for VOC	
34 & 35	Grain loading factor and air flow  Fume Emissions Testing for Plasma Arc Cutting	0.01 gr/scf  2.0% (of PM) Mn 0.2% (of PM) Ni 8.6.E-05 lbNO <sub>x</sub> /in	Dust Collector	99%	5,000 scfm  45 in/min

## 16. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
None				

## 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)
24	Pilot Flame	Alarm when not lit/flare won't operate	NA	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)
01, 07, 08, 18, 19, 30, 31, 33, 34 & 35	Opacity Observations	5%	Daily	N
	Filter Maintenance	Filter is functioning as designed and in use		
05, 06, 09, 10, 12, 20, 21, 23, 28, 29 & 32	VOC Emissions, VOC containing material, VOC content, & VOC usage	173 tpy	Monthly	Y
	HAP Emissions, HAP containing material, HAP content, HAP usage, & TLV of each HAP	173 tpy, Min TLV of 4.5 mg/m <sup>3</sup> if emitting 10tpy or more	Monthly	Y
	NESHAP MMMM notification	See Specific Condition 20	Initial	Y
	Manufacturer formulation data OR test data to determine mass frac. of HAP and density for each material used	See Specific Condition 20	When changed or updated	Y
	NESHAP MMMM Compliance Option used and period of time used	See Specific Condition 20	Monthly	Y
	NESHAP MMMM Calculation of organic HAP content for each coating	Under complaint material option	Monthly	Y
	NESHAP MMMM Calculation of total mass of organic HAP emissions	Under emission rate without add-on control	Monthly	Y
	NESHAP MMMM Name of Coating Vol of Coating Used Mass Frac of HAP Vol Frac of solids Density of each material Records of Waste	Specific Conditions 17-29	Monthly	Y



SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
11	Natural Gas Usage	500 MMSCF/yr	Monthly	Y
	Total Heat Capacity	250 MMBtu/hr	As equipment is added	N
	Updated list of all equipment	---	As equipment is added	N
25	Biennial Tune-up findings: Inspect burner, Clean/replace components, Inspect flame pattern, Inspect A/F ratio, Optimize CO emissions, Measure CO conc., Corrective Actions from tune-up, Fuel type and usage.	Do tune-up every 2 years, don't exceed 25 months between tune-ups. See Specific Conditions 42-58.	25 months	Y
24	NOx Emissions from vapor extraction	5.8 tpy	Monthly	Y
	CO Emissions from vapor extraction	26.1 tpy		
	VOC Emissions from vapor extraction	70.1 tpy		
	HAP Emissions from vapor extraction	70.06 tpy		
	Flare Operation	NA	When operated	N

## 19. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
SN	Opacity	Justification for limit	Compliance Mechanism
01, 07, 08, 18, 19, 30, 31, 33, 34 & 35	5%	CAM	Daily Observations
11	5%	Dept. Guidance	Natural Gas Usage

## 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
1,000 Gallon Diesel Storage Tank (SN-14)	A-3			0.0003				
1,000 Gallon Diesel Storage Tank	A-3			0.0003				
Welding Operations	A-7	1.0					0.0883 (Mn)	0.0884 (Mn+Cr+Ni)
Wastewater Treatment	A-13			0.06				
250 Gallon Gasoline Storage Tank	A-13			0.16			0.16	0.16
Foam Insulation Blowing	A-13			0.01			0.01	0.01

## 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 #
1830-AOP-R14

## APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

## Fee Calculation for Major Source

Revised 03-11-16

Facility Name: Greenbrier Central, LLC  
 Permit Number: 1830-AOP-R15  
 AFIN: 28-00256

\$/ton factor	28.14	Annual Chargeable Emissions (tpy)	343.6
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	<input type="checkbox"/>
If Hold Active Permit, Amt of Last Annual Air Permit Invoice \$	0
Total Permit Fee Chargeable Emissions (tpy)	4.6
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		38.9	38.9	0	0	38.9
PM <sub>10</sub>		36.9	36.9	0		
PM <sub>2.5</sub>		0	0	0		
SO <sub>2</sub>		0.3	0.3	0	0	0.3
VOC		245.8	245.8	0	0	245.8
CO		32.5	53.1	20.6		
NO <sub>x</sub>		44	48.6	4.6	4.6	48.6
Total HAPs	<input type="checkbox"/>	245.44	245.84	0.4		

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