STATEMENT OF BASIS

For the issuance of Air Permit # 1624-AOP-R6 AFIN: 03-00081

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

BassCat Boats d/b/a Yar-Craft Boats
754 County Road 12
Midway, Arkansas 72651

3. PERMIT WRITER:

Amanda Leamons

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Boat Building
NAICS Code: 336612

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
7/10/2019	Renewal with Modification	Doubled the production throughput limits and increase permitted emission limits

6. REVIEWER'S NOTES:

The facility was previously limited to a maximum production of 4 boats per day, with this modification the facility will now be allowed to manufacture a maximum of 7 boats per day. All the HAP and VOC emissions were updated using current SDSs, Unified emission factors and mass balances. Both options are now included in the permit for compliance with NESHAP VVVV. All usage limits that are for the entire facility have been moved to the plantwide conditions. The facility has to comply with either 4V or 4M

for all the HAP containing materials – both rules contain content limits. The facility also has usage limits they comply with which are the basis for the emissions in the permit.

7. COMPLIANCE STATUS:

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

The last inspection was conducted in July 2019. No areas of concern were identified by the inspector. Currently there are no formal enforcement actions, informal enforcement actions, penalties, or non-compliance issues on-going.

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/A

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)
Facility	HAPs	NESHAP Subpart VVVV
Facility	HAPs	NESHAP 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.)

11. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

12. 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 ADEQ 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.

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?
Acetone	1187.12	130.58	69.3	Yes
Hexamethylene-di-isocyanate (HMDI)	0.034	0.00374	0.0015	Yes
Methylene diphenyl diisocyanate (MDI)	0.05	0.0055	0.007	No
Methyl methacrylate (MMA)	204.76	22.5236	20.87	Yes
Styrene	85.20	9.37	70.11	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 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?
MDI	0.5	0.8575	N
Styrene	852	6,179.84	N

The following alternative HAP evaluation was approved by the Department for the issuance of Permit #1624-AOP-R6.

Alternative Acceptable Off Site Concentration Values for HAPs

Styrene and dimethyl phtalate concentrations were above the department's Presumptively Acceptable Impact Level (PAIL) screening concentrations of 1/100th of the ACGIH TLV. Alternative acceptable off site concentration values for these pollutants are discussed below:

Styrene

1. Acute values. The maximum 24-hour average modeled offsite impact is 6,179.84 µg/m^3, which exceeds the department PAIL screening level of 852 µg/m^3. The ATSDR acute minimal risk level (MRL) for styrene is 21,300 µg/m^3. The 24-hour modeled impact level is below the ATSDR MRLs so no further toxicity evaluation appears to be warranted. The ATSDR issues health-based screening levels for numerous substances. Detailed background toxicology information can be found at https://www.atsdr.cdc.gov/minimalrisklevels/index.html.

   It is noted that the department's Non-Criteria Pollutant Control Strategy utilizes a Presumptively Acceptable Impact Level (PAIL), which is based on a 24-hr average concentration. The ATSDR acute MRL is roughly equivalent to this averaging period, being based on an exposure time of 14 days or less.

2. Chronic values. The ATSDR chronic MRL for styrene is 852 µg/m^3. The chronic MRL is for exposure periods of greater than 365 days. The maximum annual average modeled offsite impact is 601 µg/m^3, which is less than the ATSDR chronic MRL of 852 µg/m^3.

Styrene Exposure	ATSDR MRL (µg/m^3)	Modeled Concentration (µg/m^3)	Pass?
Acute	21,300	6,179.84	Y
Chronic	852	601	Y

Methylene diphenyl diisocyanate (MDI)

The maximum 24-hr average modeled impact is 0.8575 µg/m^3 and the maximum annual average predicted high impact level was 0.0923 µg/m^3 . The 24-hr average impact exceeds the department's PAIL screening level of 0.5 µg/m^3 for MDI. Therefore, we compared the modeled concentration to the the ATSDR chronic minimal risk level (MRL) for MDI of 1.00 µg/m^3. Both the 24-hour modeled impact and the annual maximum impact are below the chronic ATSDR MRLs so no further

toxicity evaluation appears to be warranted. ATSDR did not list an acute MRL for MDI. The ATSDR issues health-based screening levels for numerous substances. Detailed background toxicology information can be found at https://www.atsdr.cdc.gov/minimalrisklevels/index.html.

c) H_2S Modeling: N/A

13. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01, 02, 06-14	Mass Balance UEF (Sty/MMA) SDS% (VOC & other HAP)	7 boats per day 2,044,000 lb_{Resin}/yr Mech: 34% Styrene 74 $lb_{styrene}/Ton_{Resin}$ Man: 31% Styrene 52.92 $lb_{styrene}/Ton_{Resin}$ 677,075 $lb_{Gelcoat}$/yr 41% Styrene 336 $lb_{styrene}/Ton_{Resin}$ 12% MMA 180 lb_{MMA}/Ton_{Resin} 81,632 $lb_{Catalyst\ \#1}$/yr #1:8.35 lb/gal 2.25% HAP 2,225.92 $lb_{Catalyst\ \#2}$/yr #2: 9.68 lb/gal 1% HDMI 112,740 $lb_{Solvents\ etc}$/yr 60 lb_{Ad}/yr @1% HAP/VOC 600 lb_{Primer}/yr @46% HAP & 6.52 lb_{VOC}/gal 120 lb_{Wax}/yr @1.7% HAP 120 lb_{Cement}/yr @54.3%VOC 2,600 lb_{Flex}/yr @6.74% HAP &0.238 lb_{VOC}/gal 30,660 $gallons_{Acetone}$/yr 217,175 lb_{Foam}/yr	N/A	N/A	Used Worst Case coating/GC/Resin for each process 4 chopper guns 458 lb_{Resin}/hr 6 GC Guns (2 at a time) 262 lb_{GC}/hr

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
03	Mass balance SDS %	7,665 gal_{Paint}/yr #1: 7.87 lb/gal 30.7% xylene 5.4% ethylbenzene 2.1% toluene 5.01 lb_{VOC}/gal			Used Worst Case Coating for each HAP/AC
04	AP-42 Table 13.2.6-1	25 trailers per week 39,000 lb coal slag 13 lb_{PM10}/1,000 lb CS 27 lb_{PM}/1,000 lb CS	N/A	N/A	

14. TESTING REQUIREMENTS:

The permit does require testing of any sources.

SN	Pollutants	Test Method	Test Interval	Justification
01, 02, 06-14	Organic HAP Content	Varies See SC 21	As needed	NESHAP VVVV, only if they choose to test the materials to determine the HAP content instead of using manuf. data.

15. MONITORING OR CEMS:

No CEMS or other monitoring equipment in use at the facility or required in the permit.

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)
Plantwide	Resin Usage	2,044,000 lb/yr	Monthly	No
	Gelcoat Usage	677,075 lb/yr	Monthly	No
	Foam Usage	217,175 lb/yr	Monthly	No
	Catalyst	83,858.2 lb/yr	Monthly	No
	Solvent / Thinner / Adhesive / Mold release / Wax / Other	112,740 lb/yr	Monthly	No
	Paint and Primer	7,665 gal/yr	Monthly	No

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
	Acetone Usage	30,660 gal/yr	Monthly	No
Plant wide	Boat Production	7 Boats/day	Daily	No
	Name and Type of each VOC-containing material used	N/A	Monthly	N
	Amount (pounds) of each VOC-containing material used	N/A	Monthly	N
	VOC content (% weight) of each VOC-containing material used	SDS documents must be retained for a min. of 24 months beyond the date of the materials' last use	Monthly	N
	12-month rolling total of the VOC emissions emitted from the facility	165.5 tons per rolling 12 month period	Monthly	N
	Emission factors used in calculations	N/A	Monthly	N
	Name and type of each HAP-containing material used	N/A	Monthly	N
	Amount (pounds) of each HAP-containing material used during each month	N/A	Monthly	N
	HAP content (% weight) of each HAP-containing material used, as documented by SDS or equivalent	SDS documents must be retained for a minimum of 24 months beyond the date of the materials' last use	Monthly	N
	Twelve month rolling total of the HAP emissions emitted from the facility	12.71 tons total other HAPs 30.53 tons MMA 95.60 tons Styrene per rolling 12 months	Monthly	N
	Emission factors used in calculations	N/A	Monthly	N
	Acetone Usage and emissions per rolling 12 months	101.76 tons per rolling 12 months	Monthly	N
VVVV sources: 01, 02, 06-14	Copy of each VVVV notification &/or report submitted and documentation supporting any notifications/reports that were submitted per S.C. 22 & 23	Keep records for 5 years following record, must be on-site the first 2 years (See S.C. 25)	Monthly	N

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
	Records demonstrating compliance with either Emission Averaging Option or Complaint Material Option	Emission Avg. Option See S.C.s 8a, 9, 11, 12 Complaint Material Option: See S.C.s 8b, 10, 13	Monthly	Y
	Organic HAP content of adhesives	5% HAP (S.C.20)	Monthly	Y
MMMM source: 03	Manf. Formulation data or test data to determine mass frac. of organic HAP and density of each coating, thinner, additive, cleaner & the volume frac. of coating solids for each coating.	2.6 lb organic HAP/ gal coatings solids/ rolling 12 months	Monthly	Y
	Calculations of mass of organic HAP for coatings, etc.; total vol. of coatings solids; calculation of 12-month organic HAP emission rate; name & vol. of coating, etc.; mass frac. of organic HAP for each coating, etc.; vol. frac. of coating solids for each coating; density of each coating, etc.; date, time, & duration of each deviation.		Monthly	N
	HAP waste records, if applicable	See S.C. 36 of permit	As utilized	N
04	Abrasive (Coal slag) usage	39,000 pounds per rolling 12-month period	Monthly	Y

17. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
04	5%	Reg. 18.501	Weekly Observation

18. DELETED CONDITIONS:

Former SC	Justification for removal
04, 06 & PWCs 12 & 13	HAPs from VVVV affected sources and MMMM already have federal limits which dictate the maximum contents allowable, additionally the facility has facility wide emission calculations and records to ensure they stay within the permit limits.
07-09	The PAER limit is too restrictive. VVVV, MMMM, usage, and facility wide

Former SC	Justification for removal
	emission limits with the requirement to keeps records to support calculations are sufficient.

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
Welding Shop (SN-05)	A-7	0.01		0.01			0.01	0.01

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 #
1624-AOP-R5

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-11-16

Facility Name: BassCat Boats d/b/a Yar-Craft Boats
Permit Number: 1624-AOP-R6
AFIN: 03-00081

$/ton factor	23.93	Annual Chargeable Emissions (tpy)	267.86
Permit Type	Modification	Permit Fee $	2354.4727

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)	98.39
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		0.3	0.6	0.3	0.3	0.6
PM_{10}		0.3	0.3	0		
$PM_{2.5}$		0	0	0		
SO_2		0	0	0	0	0
VOC		114.1	165.5	51.4	51.4	165.5
CO		0	0	0		
NO_X		0	0	0	0	0
MMA*	☐	1.01	30.53	29.52		

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
Styrene*	☐	56.68	95.6	38.92		
Total Other HAPs*	☐	21.5	12.71	-8.79		
Acetone	☑	55.07	101.76	46.69	46.69	101.76