

Notice of Construction (NOC) Worksheet



Source: Fluid Motion LLC	NOC Number: 12411
Installation Address: 17939 59th Ave NE Bldg #4 Arlington, WA 98223	Registration Number: 29632
Contact Name: Dennis Pearson	Contact Email: dennispearson@rangertugs.com
Applied Date: 01/24/2024	Contact Phone: (425) 212-8136
Engineer: Madeline McFerran	Inspector: Rain Yates

A. DESCRIPTION

For the Order of Approval:

Fiberglass boat manufacturing in Building 10. Two 10,000 cfm each exhaust stacks to vent one spraying area equipped with wall panel filters with 98% removal efficiency.

Additional Information (if needed):

Facility

Fluid Motion is a fiberglass boat manufacturing facility producing 25 foot- 45 foot fiberglass pleasure boats through lamination of successive layers of gelcoat, vinylester resin, polyester resins and fiberglass inside open female molds. Different molds are used to make decks, hulls, and small parts comprising the boat.

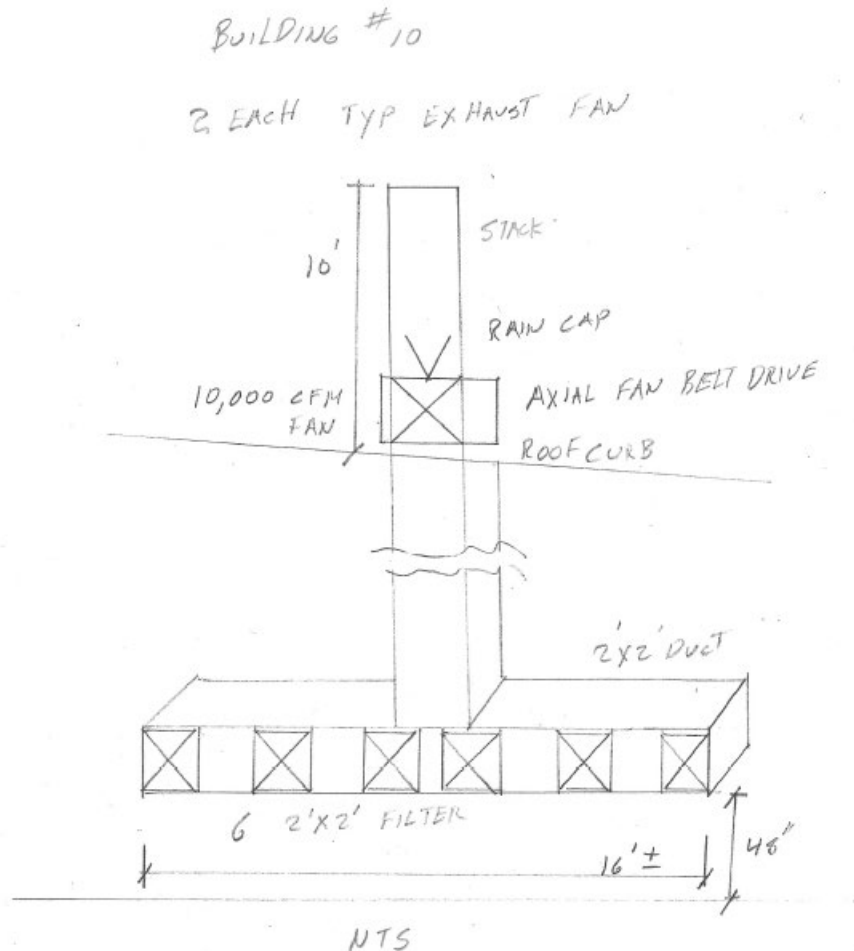
An aerial view of the facility can be found below. Buildings 2 and 3 currently are permitted for active fiberglass boat fabrication (lamination) and this NOC 12411 reviews the addition of Building 10 for fabrication operations.



Proposed Equipment/Activities

This application requests approval to add an additional production building for smaller boats (28' and under) and parts from Building 2 and 3 (permitted under Notice of Construction Order of Approval 12155) into an existing building on site (Building 10) which is not currently utilized for operations. The operation and manufacturing materials used in Building 10 will be identical to those used in Buildings 2 and 3. The production limits of NOC 12155 will continue to apply to Buildings 2 and 3, however the addition of production in Building 10 will increase facility-wide production and the emissions of Building 10 comprise a new source.

The applicant provided the diagram shown below detailing one of the two exhaust stacks. Each exhaust stack will serve 6 filter banks (2'x2') and the fan will pull 10,000 cfm. The spray area served by the two exhaust stacks is a 70' by 50' portion of Building 10 as shown in the diagram above.



Permit History

Notice of Construction Minor New Source Review

Order of Approval No. 8695 (cancelled) was issued on June 19, 2003, for the installation of a fiberglass boat manufacturing facility consisting of a single building with three rooms (the East Lamination Building). This Order of Approval included synthetic minor emission limits on single HAP, total HAP and Volatile Organic Compounds to keep the facility out of the Title V program. Order of Approval was cancelled and superseded by NOC 11711.

Order of Approval No. 11711 (cancelled) was issued on August 26, 2019 for the addition of the West Lamination Building (one lamination room). The synthetic minor emission limits of Order of Approval 10761 were maintained in this Order of Approval and the conditions from Order of Approval 10761 were pulled into this Order of Approval.

Order of Approval No. 12155 was issued on June 3, 2022 for the removal of the synthetic minor emission limits facility-wide. Upon issuance of this NOC 12155, Fluid Motion became a HAP major source subject to the Title V program. Order of Approval No. 12155 cancelled and superseded Order of Approval 11711.

Title V Operating Permit 29632 An initial air operating permit application was received by the Agency from the applicant on June 2, 2023, pursuant to WAC 173-401-500(3). The application was determined to be complete on June 8, 2023. Draft permit was out for public comment from February 27, 2024 through March 29, 2024. No comments were received. Proposed permit sent to EPA for 45 day review period on April 10, 2024. No comments were received during the EPA review period. Issuance of the Title V Operating Permit 29632 is pending at the time of this review.

B. DATABASE INFORMATION

Reg:	29632 - Fluid Motion LLC			Item #:	5
Code:	41 - molding of fiberglass, FRP, plastics and styrofoam w/ styrene monomer				
Year Installed:	2024	Units Installed:	2	Rated Capacity:	10000.00
Primary Fuel:		Standby Fuel:		Units:	CFM
NC/Notification #:	12411	<input type="checkbox"/> NOC Not Required? <input type="checkbox"/> (b)(10) Exemption?			
Removed?	<input type="checkbox"/>				
Operating Requirements:	to be included in first AOP renewal				
Comments:	two exhaust stacks serving 6 2ft x 2ft panels for fiberglass fabrication in Building 10 70'x50' fabrication area 98% arrestance efficiency on filters				

New NSPS due to this NOCOA?	No	Applicable NSPS: NA	Delegated? NA
New NESHAP due to this NOCOA?	No	Applicable NESHAP: VVVV	Delegated? Yes
New Synthetic Minor due to this NOCOA?	No		

This permitting action does not affect the existing NESHAP applicability of 40 CFR 63 Subpart VVVV nor the facility's existing Title V major source status.

The additional fiberglass fabrication area will be subject to the requirements of 40 CFR 63 Subpart VVVV and facility-wide requirements of the AOP.

C. NOC FEES AND ANNUAL REGISTRATION FEES

NOC Fees:

Fees have been assessed in accordance with the fee schedule in Regulation I, Section 6.04. All fees must be paid prior to issuance of the final Order of Approval.

Fee Description	Cost	Amount Received (Date)
Filing Fee	\$ 3,000	
Equipment (lamination room)	\$1,000	
Review of Dispersion Model	\$1,500	
SEPA DNS	\$1,200	
Public Notice*	\$750	
Filing received		\$ 3,000 (1/24/24)
Additional fee received		\$4,450 (5/2/2024)
Total		\$7,450

*Publication fees to be invoiced following public comment period

Registration Fees:

Registration fees are assessed to the facility on an annual basis. Fees are assessed in accordance with Regulation I, Section 7.07.

The 2024 invoice for Fluid Motion is shown below. This permitting action has the potential to increase total fees paid for HAP and VOC under Regulation I 7.07(b)(2).



Puget Sound Clean Air Agency

1904 Third Avenue, Suite 105
Seattle, WA 98101-3317
Tax ID: 91-0823558
206.689.4072

Invoice for Year 2024 Operating Permit Fees

Bill To:
Fluid Motion LLC Accounting 17300 Tye St SE Monroe, WA 98272

Invoice Date:	Invoice #:
November 18, 2023	20240032
Due Date:	Terms:
January 02, 2024	Net 45 Days
Facility ID (Permit #):	
29632	

Site Address: Fluid Motion LLC
17939 59th Ave NE Bldg #4, Arlington, WA 98223

The annual operating permit fee is required by Washington State law and Puget Sound Clean Air Agency's Regulation I. Your fees are based on your NAICS code and your actual emissions during 2022.

Facility Fees and Applicable Regulations			Charges
Facility Fee for Operating Permit Sources. Reg I, 7.07(b)(1)(iii)			\$ 41,830.00
NAICS 336612 -- Boat Building			
Emission Surcharges - Reg I, 7.07(b)(2)	Tons in 2022	Per Ton	
HAP (Hazardous Air Pollutants)	40	\$ 60	\$ 2,400.00
VOC (Volatile Organic Compounds)	40	\$ 60	\$ 2,400.00
			\$ 4,800.00
Fee Totals			
Operating Permit Fee (After February 16, 2024, the fee is \$54,755.00).			\$ 46,630.00
<i>The Total Fee is due by January 02, 2024. If unpaid after February 16, 2024, an additional delinquent fee of \$8,125.00 will be applied. The delinquent fee is equal to 25% of the Operating Permit Fee, not to exceed \$8,125 (Reg I, 7.07(b)).</i>			
WA State Department of Ecology surcharge, Reg I, 7.07(d)			\$ 775.97
<i>For further information regarding the WDOE surcharge, please call 1-360-407-7530.</i>			
TOTAL FEE			\$ 47,405.97

D. STATE ENVIRONMENTAL POLICY ACT (SEPA) REVIEW

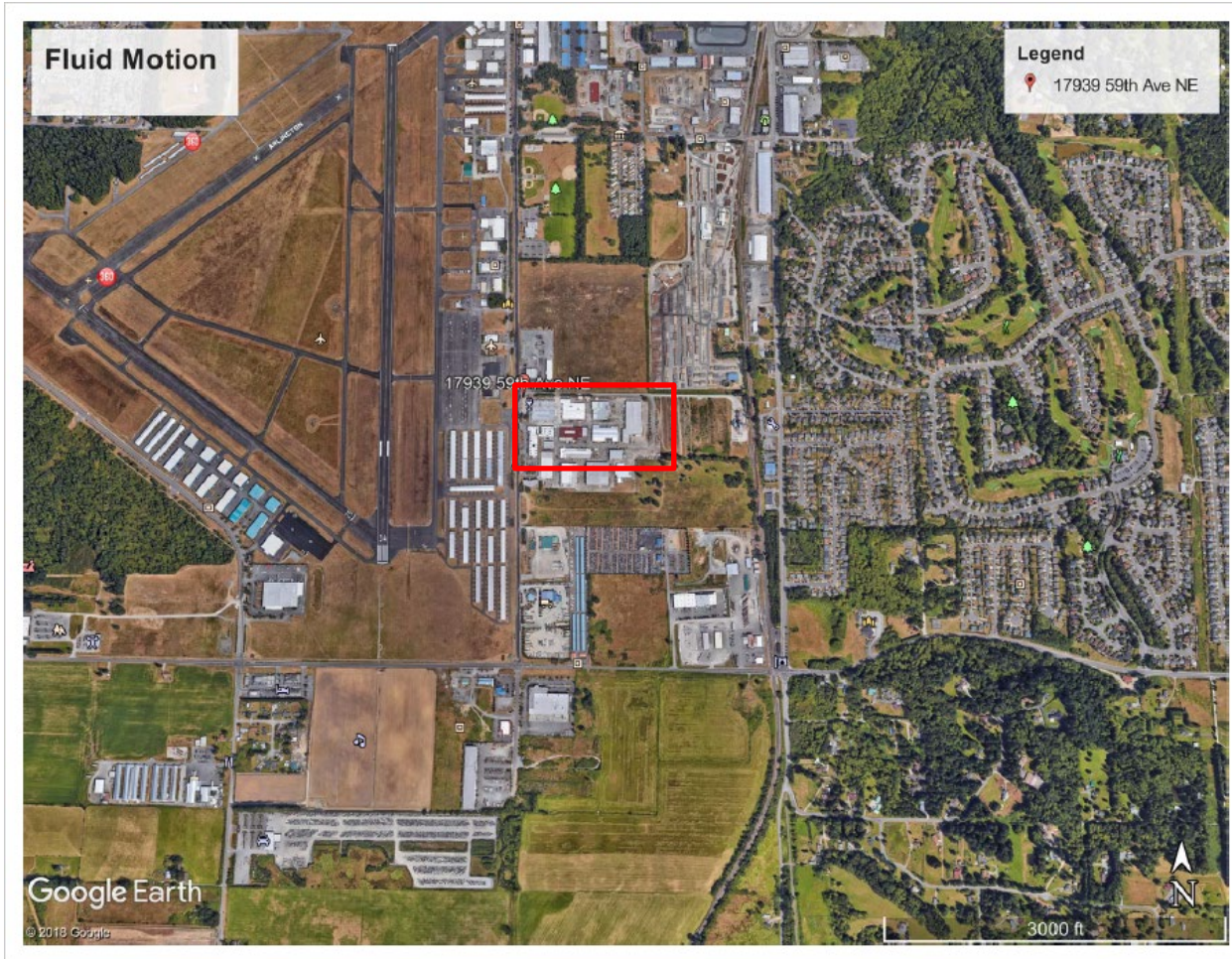
State Environmental Policy Act (SEPA) review was conducted in accordance with Regulation I, Article 2. The SEPA review is undertaken to identify and help government decision-makers, applicants, and the public to understand how a project will affect the environment. A review under SEPA is required for projects that are not categorically exempt in WAC 197-11-800 through WAC 197-11-890. A new source review action which requires a NOC application submittal to the Agency is not categorically exempt.

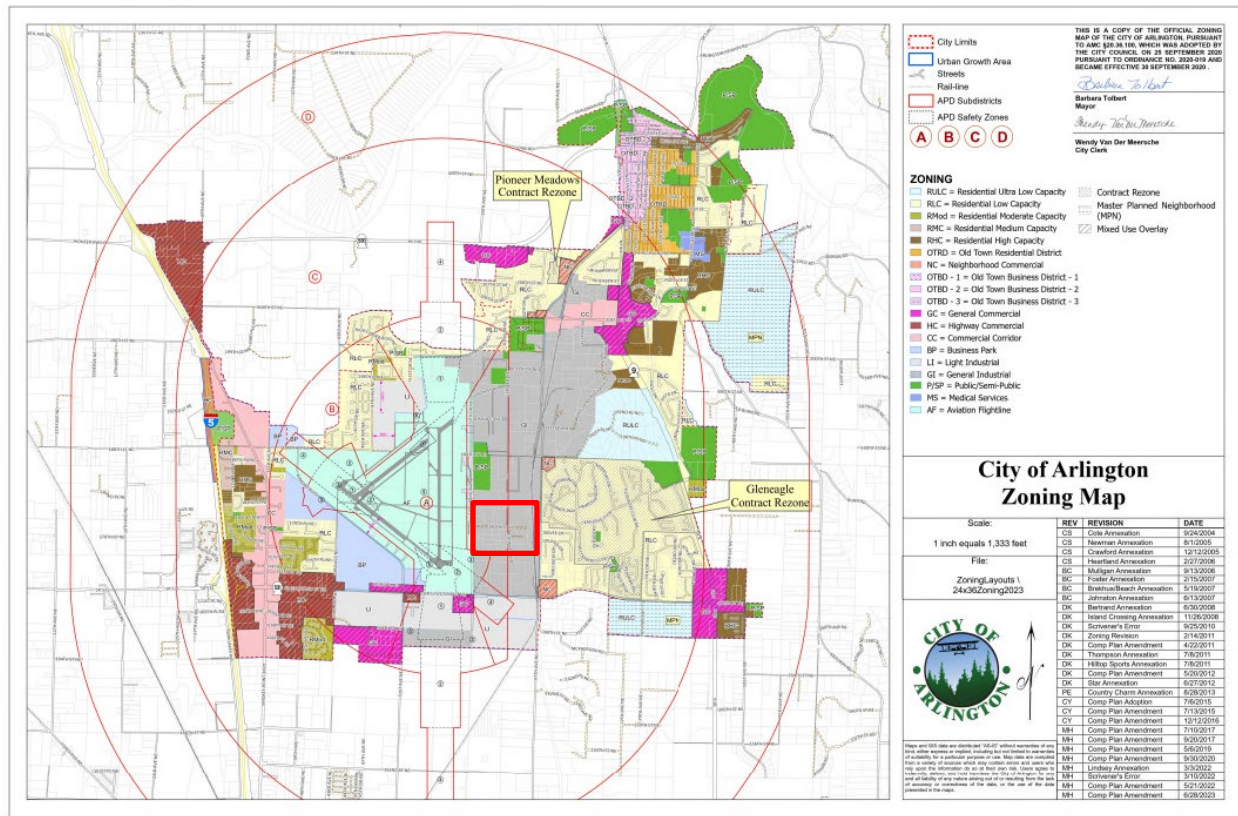
PSCAA is the SEPA lead agency for this project. The applicant submitted a completed Environmental checklist that is included below.



SEPA Checklist NOC
12411.pdf

Fluid Motion is located between the Arlington Municipal Airport to the west, commercial/industrial sources to the south (including foundry activities and marijuana producers/processors), the Bill Quake Memorial Park (city park) to the north, and residential housing to the east. The City of Arlington zoning map pasted below shows the facility is located within the General Industrial zone (approximate location marked with the red rectangle). The operational expansion is occurring in Building 10, an existing building located south of Building 2.





The City of Arlington was consulted for comments on February 5, 2024 and replied on February 12, 2024 that they had “record of mechanical permits associated with this business that were completed in 2023, so it is presumed that they are just following up with PSCAA for approval of their proposed production” but that “The city does not have a permit application from this business that would require us to be the lead agency, since it appears that all proposed changes are within the existing facilities”.



RE_SEPA Input for
Expanded Production

Based on the proposed action and the information in the checklist, the project will not: adversely affect environmentally sensitive or special areas, or endangered or threatened species; conflict with local, state, or federal laws or requirements for the protection of the environment, or establish a precedent for future actions with significant effects. This proposal is not likely to have a probable significant adverse environmental impact, and I recommend the issuance of a Determination of Non-Significance with public comment concurrent with public comment for this Notice of Construction proposed Order of Approval.

E. TRIBAL CONSULTATION

On November 21, 2019, the Agency’s Interim Tribal Consultation Policy was adopted by the Board. Criteria requiring tribal consultation are listed in Section II.A of the policy and include establishment of a new air operating permit source, establishment of a new emission reporting source, modification of an

existing emission reporting source to increase production capacity, or establishment or modification of certain equipment or activities. In addition, if the Agency receives an NOC application that does not meet the criteria in Section II.A but may represent similar types and quantities of emissions, the Agency has the discretion to provide additional consultation opportunities.

The Agency identified that this NOC application meets one of the criteria in the Agency's Interim Tribal Consultation Policy, adopted by the Board on November 21, 2019. This project would increase the capacity at an existing reporting source and meets criterion II.A.3.

In accordance with the policy, the Agency notified each Tribe within the Agency's jurisdiction on February 2nd 2024 of the intent to hold a consultation.

No requests for consultation nor additional comments were received.

On June 17, 2024, the Agency notified each tribe that the Agency would be proceeding with the final steps to issue the conditional approval of this Notice of Construction application.

F. BEST AVAILABLE CONTROL TECHNOLOGY (BACT) REVIEW

Best Available Control Technology (BACT)

New stationary sources of air pollution are required to use BACT to control all pollutants not previously emitted, or those for which emissions would increase as a result of the new source or modification. BACT is defined in WAC 173-400-030 as, "an emission limitation based on the maximum degree of reduction for each air pollutant subject to regulation under Chapter 70.94 RCW emitted from or which results from any new or modified stationary source, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each pollutant."

An emissions standard or emissions limitation means "a requirement established under the Federal Clean Air Act or Chapter 70.94 RCW which limits the quantity, rate, or concentration of emissions of air contaminants on a continuous basis, including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction and any design, equipment, work practice, or operational standard adopted under the Federal Clean Air Act or Chapter 70.94 RCW."

Best Available Control Technology for Toxics (tBACT)

New or modified sources are required to use tBACT for emissions control for TAP. Best available control technology for toxics (tBACT) is defined in WAC 173-460-020 as, "the term defined in WAC 173-400-030, as applied to TAP."

Fiberglass boat manufacturing involves the atomized (small particles of liquid or solid suspended in air as occurs with a spray gun) and non-atomized (as occurs with hand rolling) application of VOC containing compounds which include gelcoats, resins, and small pieces of fiberglass. When the gelcoat is applied,

styrene and methyl methacrylate (MMA) evaporate as the gelcoat dries. The resins used to bind with the fiberglass also contain styrene. The mold release agents, putty, initiator, wood stain, and spray adhesive also contain VOC and toxics. Styrene and MMA are also odorous compounds. Some particulate is also generated during the application process.

Similar Permits

PSCAA has permitted boat lamination lines at Fluid Motion Arlington (this facility, most recently in 2022 for increased operating hours) and also at Fluid Motion Monroe in 2023 for an increase in production:

NOC	BACT Limit
11660 (3/24/2023) Fluid Motion (Monroe) fiberglass boat lamination line production increase	Organic HAP & VOC: <ul style="list-style-type: none"> ▪ Pigmented gel coats less than or equal to 33% organic HAPs ▪ Clear gel coats less than or equal to 48% organic HAP ▪ Resins less than or equal to 35% HAP ▪ Use of non-atomizing spray application methods for production and tooling resin ▪ Use of HVLP/electrostatic/airless/air-assisted airless spray equipment for gel-coat application ▪ Use of low VOC content resin and gel-coat materials ▪ Cleaning solvents shall not contain VOC and HAP All resins and adhesives applied with non-atomizing application (does not include hand-held aerosol spray cans (less than 1 quart capacity) since these are categorically exempt from NOC permitting requirement in Reg I, Section 6.03(c)(59))
	Odor: <ul style="list-style-type: none"> ▪ Best management practices ▪ Closure of doors/windows/openings when applying resin and gel-coat
	Particulate: <ul style="list-style-type: none"> ▪ 98% filtration efficiency panel filters ▪ Minimum transfer efficiency of 65% HVLP
12155 (6/3/2022) – Fluid Motion, LLC fiberglass boat lamination line production increase	<ul style="list-style-type: none"> ▪ Pigmented gel coats less than or equal to 33% organic HAPs ▪ Clear gel coats less than or equal to 48% organic HAP ▪ Resins less than or equal to 35% HAPs ▪ Adhesives less than 5% organic HAPs ▪ Use of non-atomizing spray application methods for production and tooling resin ▪ Use of HVLP/electrostatic/airless/air-assisted airless spray equipment for gel-coat application ▪ Use of low VOC content resin and gel-coat materials ▪ Cleaning solvents shall not contain VOC and HAP All resins and adhesives applied with non-atomizing application (does not include hand-held aerosol spray cans (less than 1 quart capacity) since these are categorically exempt from NOC permitting requirement in Reg I, Section 6.03(c)(59))
	Odor: best management practices, closure of doors/windows/openings when applying resin and gel-coat
	PM: 98% filtration efficiency, minimum 65% transfer efficiency for atomized product application (gel coat)

11711 (8/26/2019) – Fluid Motion, LLC fiberglass boat lamination line	Styrene, MMA, Organic HAP and VOC: <ul style="list-style-type: none"> • Gel coat <33% organic HAP • Resins <35% organic HAP • Adhesives <5% organic HAP • Non atomizing spray methods for production and tooling resin • Use of HVLP/electrostatic/airless/air-assisted airless spray equipment for gel coat application • Cleaning solvents not to contain VOC and HAP • All resins and adhesives applied with non-atomizing application
	Odor: best management practices, closure of doors/windows/openings when applying resin and gel-coat
	PM: 98% filtration efficiency, minimum 65% transfer efficiency for atomized product application (gel coat)
10761 (8/18/2016) – Fluid Motion, LLC fiberglass boat lamination line	<ul style="list-style-type: none"> • Use of non-atomizing spray application methods for production and tooling resin • Use of dry filter system equipped with gauge minimum pressure drop shall not be less than the pressure drop measured with a clean properly installed filter • Use of HVLP/electrostatic/airless/air-assisted airless spray equipment for gel-coat application • Use of low VOC content resin and gel-coat materials • Cleaning solvents shall not contain VOC and HAP • Closure of doors/windows/openings when applying resin and gel-coat

Other Regulatory Agencies BACT

Agency	Limit(s)		
NWCAA NOC 1357 Aspen Catamarans (fiberglass boat manufacturing) (11-17-2020)	Use of compliant materials with Table 2 of 40 CFR 63 Subpart VVVV, good work practice standards (combined VOCT BACT, styrene t-BACT)		
40 CFR 63 Subpart VVVV			Weighted Average Organic HAP Limit (weight percent)
	Operation	Application Method	
	Production resin operations	Non-atomized	35
	Tooling resin operations	Non-atomized	39
	Pigmented gel coat operations	Any method	33
	Clear gel coat operations	Any method	48
	Tooling gel coat operations	Any method	40
	Carpet and fabric adhesive	Any method	5
SCAQMD BACT Determination 9/23/2003 Navigator Yachts	<ul style="list-style-type: none">• Compliance with SCAQMD Rule 1162, add-on control was elected by facility to stay below public comment threshold.• Carbon adsorber/thermal oxidizer system with 85% VOC control is achieved in practice (100% capture with permanent total enclosure)• Spray booth vented to two portable carbon adsorption beds. Beds regenerated once every 5 days at the facility by steam stripping the adsorbed VOC to a thermal oxidizer. Thermal oxidizer waste heat recovered in boiler to produce steam for the stripping process.		

<p>SCAQMD BACT Guideline for Non-Major Polluting Facilities Fiberglass Operations Fabrication – Hand and Spray Layup (10-20-2000 Rev. 0)</p>	<ul style="list-style-type: none"> • Airless Spray Equipment and Spray Booth with Mesh Type Filter • Compliance with SCAQMD Rule 1162: <ul style="list-style-type: none"> ○ Non-atomizing application techniques for open mold resin materials except for gel coats ○ Application of gel coat materials with air-assisted airless, electrostatic attraction, or HVLP only ○ Monomer Percentage Limit by Weight As Applied (table below) or operation of emission control system with 90% or greater VOC removal on mass basis <table border="1" data-bbox="662 567 1198 1228"> <thead> <tr> <th>Resin Material</th><th>Limits</th></tr> </thead> <tbody> <tr> <td>Clear Gel Coat Marble Resins</td><td>40%</td></tr> <tr> <td>Clear Gel Coat Other Resins</td><td>44%</td></tr> <tr> <td>White & Off White Gel Coat</td><td>30%</td></tr> <tr> <td>Non-White Gel Coat</td><td>37%</td></tr> <tr> <td>Primer Gel Coat</td><td>28%</td></tr> <tr> <td>Specialty Gel Coat</td><td>48%</td></tr> <tr> <td>General Purpose Marble Resins</td><td>10% or 32% as supplied, no fillers</td></tr> <tr> <td>Solid Surface Resins</td><td>17%</td></tr> <tr> <td>Tub/Shower Resins</td><td>24% or 35% supplied, no fillers</td></tr> <tr> <td>Lamination Resins</td><td>31% or 35% supplied, no fillers</td></tr> <tr> <td>Others</td><td>35%</td></tr> <tr> <td>Fire Retardant Resin</td><td>38%</td></tr> <tr> <td>Corrosion Resistant Resin</td><td>48%</td></tr> <tr> <td>High Strength Resin</td><td>48%</td></tr> </tbody> </table> ○ VOC-containing material storage in closed containers 	Resin Material	Limits	Clear Gel Coat Marble Resins	40%	Clear Gel Coat Other Resins	44%	White & Off White Gel Coat	30%	Non-White Gel Coat	37%	Primer Gel Coat	28%	Specialty Gel Coat	48%	General Purpose Marble Resins	10% or 32% as supplied, no fillers	Solid Surface Resins	17%	Tub/Shower Resins	24% or 35% supplied, no fillers	Lamination Resins	31% or 35% supplied, no fillers	Others	35%	Fire Retardant Resin	38%	Corrosion Resistant Resin	48%	High Strength Resin	48%
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<p>BAAQMD BACT Guideline 129.2.1 (9/27/2006)</p>	<ul style="list-style-type: none"> Technologically feasible/Cost effective: Enclosure of operation and vent to an afterburner ≥ 0.3 sec residence time and $\geq 1400^{\circ}\text{F}$ operating temperature or activated carbon adsorption system with ≤ 6 ppm at outlet Achieved in Practice: Compliance with BAAQMD Reg. 8 Rule 50, use of polyester resin material with monomer content of no greater than 34% by weight and use of aqueous emulsion cleaner or acetone for clean up to maximum extent possible <ul style="list-style-type: none"> Resins and gel coats only applied to open molds with non-atomizing techniques, hopper guns, non-spray techniques e.g. roller or: use of emission control system with minimum of 85% control efficiency Storage of VOC-containing materials in closed containers Cleaning products with less than or equal to 25 gram/liter VOC content <table border="1"> <caption>TABLE 1</caption> <thead> <tr> <th>Gel Coats and Resins</th><th>Monomer Percentage by Weight</th></tr> </thead> <tbody> <tr> <td>Gel Coats</td><td></td></tr> <tr> <td>Clear Gel Coats</td><td></td></tr> <tr> <td>Marble Resin Gel Coats</td><td>42%</td></tr> <tr> <td>Boat Manufacturing Gel Coats</td><td>48%</td></tr> <tr> <td>All Other Clear Gel Coats</td><td>44%</td></tr> <tr> <td>Pigmented Gel Coats</td><td></td></tr> <tr> <td>White and Off-White Gel Coats</td><td>30%</td></tr> <tr> <td>Non-White Boat Manufacturing Gel Coats</td><td>33%</td></tr> <tr> <td>Other Non-White Gel Coats</td><td>37%</td></tr> <tr> <td>Primer Gel Coats</td><td>28%</td></tr> <tr> <td>Specialty Gel Coats</td><td>48%</td></tr> <tr> <td>Resins</td><td></td></tr> <tr> <td>Marble Resins</td><td>10% with fillers or 32% without fillers*</td></tr> <tr> <td>Solid Surface Resins</td><td>17%</td></tr> <tr> <td>Tub/Shower Resins</td><td>24% with fillers or 35% without fillers*</td></tr> <tr> <td>Boat Manufacturing (atomized)</td><td>28%</td></tr> <tr> <td>Boat Manufacturing (non-atomized)</td><td>35%</td></tr> <tr> <td>Lamination Resins</td><td>31% with fillers or 35% without fillers*</td></tr> <tr> <td>Fire Retardant Resins</td><td>38%</td></tr> <tr> <td>Corrosion Resistant, High Strength and Tooling Resins</td><td></td></tr> <tr> <td>Non-atomizing Mechanical Application</td><td>46%**</td></tr> <tr> <td>Filament Application</td><td>42%**</td></tr> <tr> <td>Manual Application</td><td>40%**</td></tr> <tr> <td>Other Resins</td><td>35%</td></tr> </tbody> </table>	Gel Coats and Resins	Monomer Percentage by Weight	Gel Coats		Clear Gel Coats		Marble Resin Gel Coats	42%	Boat Manufacturing Gel Coats	48%	All Other Clear Gel Coats	44%	Pigmented Gel Coats		White and Off-White Gel Coats	30%	Non-White Boat Manufacturing Gel Coats	33%	Other Non-White Gel Coats	37%	Primer Gel Coats	28%	Specialty Gel Coats	48%	Resins		Marble Resins	10% with fillers or 32% without fillers*	Solid Surface Resins	17%	Tub/Shower Resins	24% with fillers or 35% without fillers*	Boat Manufacturing (atomized)	28%	Boat Manufacturing (non-atomized)	35%	Lamination Resins	31% with fillers or 35% without fillers*	Fire Retardant Resins	38%	Corrosion Resistant, High Strength and Tooling Resins		Non-atomizing Mechanical Application	46%**	Filament Application	42%**	Manual Application	40%**	Other Resins	35%
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<p>SJVAPCD BACT Guideline 4.8.1 (12/7/2006) Fiberglass Boating Manufacturing Operation (<120 gallons/day and <25 tons VOC per yr)</p>	<ul style="list-style-type: none"> • Technologically Feasible: <ul style="list-style-type: none"> ○ PM10- for gelcoats: air assisted airless application (or equivalent) and an enclosed spray booth with filters rated at 95% or greater PM10 control efficiency ○ VOC: <ul style="list-style-type: none"> ▪ 98% control efficiency for thermal/catalytic oxidation with 100% capture ▪ 95% control efficiency for carbon adsorption with 100% capture ▪ 63.7% control efficiency (thermal/catalytic incineration and hood vent with 65% capture) ▪ 61.7% total control efficiency (carbon adsorption and hood vent with 65% capture) • Achieved in Practice <ul style="list-style-type: none"> ○ PM10- for gelcoats: air assisted airless application and enclosed spray booth with filters rated 66% or greater PM10 control efficiency; for resins: non-atomized spray technique flowcoaters, pressure fed rollers, resin impregnators, hand lay-up ○ VOC – for gelcoats: air assisted airless application and material VOC content less than or equal to: - pigmented gelcoats: 33% - clear gelcoats: 48% - tooling gelcoats: 40% for resins, any of the following application methods: 1) non-atomized spray technique (such as the use of fluid impingement technology (FIT) spray guns), 2) flowcoaters, 3) pressure-fed rollers, 4) resin impregnators, 5) hand lay-up, or 6) any equivalent method as approved by the APCO; and materials with a material VOC content (by weight) less than or equal to: - resins: 35% - tooling resins: 39% and the use of non-VOC containing cleaning solvents
<p>SMAQMD Minor Source BACT Determination #161 & #162 8/25/2017</p>	<ul style="list-style-type: none"> • VOC: compliance with Rule 465 and VOC control system with $\geq 90\%$ Collection Efficiency and $\geq 95\%$ Destruction Efficiency or use of super compliant materials $< 5\%$ VOC by weight, or use of Low VOC Materials resulting in equal emission reduction • PM10 & PM2.5: Spray booth with exhaust filters and HVLP or equivalent application equipment as specified in Rule 465

Analysis

For PM BACT, use of 98% control dry filtration system is consistent with recent BACT determinations from fiberglass boat manufacturing.

The PSCAA, NWCAA, SCAQMD, SMAQMD, BAAQMD, and SJVAPCD BACT determinations reviewed overlap with many of the controls identified in the applicant's 2019 referenced BACT determination: low monomer resins and gel coats, non atomizing resin application, and add-on controls, specifically activated carbon adsorption and thermal oxidizer regeneration.

The identified control technologies, from most to least stringent are ranked below:

1. 86% VOC control (90% collection efficiency, 95% destruction efficiency) – SMAQMD Minor Source BACT #161 & #162
2. 85% VOC control emissions control, 6 ppmv at outlet – BAAQMD BACT Guideline 129.2.1, SCAQMD BACT Determination 9/23/2003
3. 63.7% VOC control (thermal/catalytic incineration with hood vent with 65% capture) – SJVAPCD technologically feasible
4. Organic HAP composition limits (tabulated below): PSCAA 11711, SCAQMD, BAAQMD SJVAPCD, SMAQMD SCAQMD achieved in practice, NWCAA 1357, 40 CFR 63 Subpart VVVV

Clear Gelcoats	<ol style="list-style-type: none"> 1. 44% - SCAQMD 2. 48% - BAAQMD, SJVAPCD, 40 CFR 63 Subpart VVVV 3. 50% - SMAQMD
Pigmented (non-white) Gelcoats	<ol style="list-style-type: none"> 1. 33% - BAAQMD, SJVAPCD, 40 CFR 63 Subpart VVVV 2. 37% - SCAQMD 3. 45% - SMAQMD
Pigmented (white) Gelcoats	<ol style="list-style-type: none"> 1. 30% - BAAQMD, SCAQMD 2. 33% - SJVAPCD 3. 45% SMAQMD
Boat Manufacturing Resins	<ol style="list-style-type: none"> 1. 28% (atomized) BAAQMD 2. 35% - SMAQMD, SJVAPCD, (non-atomized) BAAQMD, SCAQMD, 40 CFR 63 Subpart VVVV

Note: across SCAQMD, BAAQMD, SJVAPCD and SMAQMD different subcategories of gelcoats and resins apply; when available, boat manufacturing limits used first. If no corresponding boat manufacturing category was available for an agency regulation, then the “other” category or closest matching category was utilized.

The most stringent controls are those achieved through use of add on controls when high capture efficiency can be achieved. The Navigator Yachts facility, permitted by SCAQMD in September 2003 which is the basis for the SCAQMD achieved in practice BACT determination, was implemented at a facility fabricating custom yachts. The system at Navigator Yachts utilized a carbon adsorption system which allowed for a relatively dilute exhaust stream, and intermittent operation, to accumulate styrene and then to be steam regenerated with the volatilized VOC exhausting to a regenerative thermal oxidizer. The RTO generated steam which was recovered for the carbon regeneration process. The SCAQMD BACT Determination does not include many details regarding the specifics of operation at Navigator Yachts, however more operational specifics for this facility are discussed in Georgia EPD’s Preliminary Determination for Prevention of Significant Deterioration Air Quality Review (January 2007)¹. The Georgia EPD document specifies “Navigator Yachts manufactures multi-million dollar yachts

¹ “Preliminary Determination Permit Application No. 16624 January 2007” saved as “Georgia EPD PSD Chaparral Boats.PDF”

by hand lay-up, making only a few boats per year” contrasting with a facility like Fluid Motion, where open mold large boats are fabricated in large rooms.

The intermittent nature of the batch production such as the operations at Fluid Motion, can introduce more fuel combustion and operational challenges for thermal controls. Batch processes typically need to include combustion of auxiliary fuel to sustain operation during periods of downtime. In addition to the intermittent nature of the manual fiberglass manufacturing, the size of the boats manufactured across two lamination bays results in high volume (dilute) exhaust flow rate to be routed to the afterburner, requiring larger sizing for a more dilute gas stream. Additionally, higher capture efficiency for the air in the whole building may be more difficult to achieve and require higher energy input.

The most recent Risk and Technology Review amendments to 40 CFR 63 Subpart VVVV National Emission Standards for Hazardous Air Pollutants for Boat Manufacturing were finalized March 20, 2020 and did not result in changes in numeric emissions for Maximum Achievable Control Technology (MACT). MACT is based on the emission limitation achieved by the best performing 12 percent of the existing sources. The MACT monomer composition limits from 40 CFR 63 Subpart VVVV are included as part of the analysis although a MACT determination is for existing sources and may be less stringent than BACT.

PSCAA review of 40 CFR 63 Subpart VVVV semiannual reports submitted to WebFIRE (60+ reports reviewed for the reporting period of January 1, 2023 – June 30, 2023) found that each of the reviewed reports utilized emission averaging with compliant resins for HAP content (no sources complied with the NESHAP by using emission controls).

The lamination area is sized to accommodate the open molding of boats up to 28’. The design as proposed would result in an estimated 0.54 lb/hr styrene emission rate across two 10,000 scfm spray zones, an estimated inlet loading of 1 ppm styrene, based on the lamination workers per shift, the production time for lamination workers to fabricate each boat and the pounds of styrene utilized for each boat.

The applicant completed cost analyses for thermal and catalytic oxidizers and adsorption systems (with incineration following steam regeneration). PSCAA considered the cost analysis provided by the applicant however cost per ton was considered holistically with other environmental considerations and the specific facility design and operations rather than looking only at the applicant’s calculated cost per ton. The assumptions utilized in the cost effectiveness calculations from the applicant were that production would be limited to total VOC of 11.6 tpy and 6240 hours per year based on the applicant’s facility-wide limit on operating hours established in NOC OA 12155 and incorporated into AOP 29632.

Based on the specific operations at the facility (large boats completed manually using open molds in a 50’x70’ area within a building limited production by worker-hours) and the additional energy and cost considerations for implementation of add-on controls for the intermittent operation at the facility BACT in this case will be Organic HAP composition limits detailed below.

Odor modeling was completed for styrene with AERMOD dispersion as summarized by the applicant’s Table 9 and is also shown below. The table indicates potential odor impacts due to styrene and unlikely odor impacts due to MMA.

Table 9: Odor Threshold Comparison

Pollutant	1-Hour Avg Concentration ($\mu\text{g}/\text{m}^3$)	3-Minute Avg Concentration ($\mu\text{g}/\text{m}^3$)	3-Minute Avg Concentration (ppmv)	Odor Threshold Range (ppmv)
Methyl Methacrylate	24	44	0.011	0.014 – 0.66
Styrene	481	876	0.21	0.0028 – 61

Notes:

- 1-hour model-predicted concentrations were converted to 3-minute average concentrations using Equation 5.12 from Turner Workbook (Turner 1969). Example for styrene:

$$876 \frac{\mu\text{g}}{\text{m}^3} = 481 \frac{\mu\text{g}}{\text{m}^3} * \left(\frac{60 \text{ min}}{3 \text{ min}} \right)^{0.2}$$

- 3-minute average concentrations were converted to parts per million assuming a molar volume of 24.45 L/mol at standard temperature and pressure. Example for styrene:

$$0.21 \text{ ppmv} = \frac{481 \mu\text{g styrene}}{\text{m}^3 \text{ air}} * \frac{\text{mol sty.}}{104 \text{ g sty.}} * \frac{1 \text{ g sty.}}{10^6 \mu\text{g sty.}} * \frac{24.45 \text{ L sty.}}{\text{mol sty.}} * \frac{\text{m}^3 \text{ sty.}}{1000 \text{ L sty.}} * \frac{10^6 \text{ m}^3 \text{ air}}{\text{million m}^3 \text{ air}}$$

- Odor threshold ranges from American Industrial Hygiene Association (AIHA) *Odor Thresholds for Chemicals with Established Occupational Health Standards*, 2nd Edition (Murnane et al.).

Abbreviations:

avg = average

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

ppmv = parts per million by weight

Similar permits for odorous sources, including marijuana production facilities, have required weekly monitoring of the immediate area outside the facility at least once every calendar week. Similar odorous sources are also required to contact an independent third party to check the immediate area outside the facility (e.g. building perimeter) once every 3 months and take corrective action if odor is observed. The marijuana facilities permitted have zero odor at the fenceline requirements which have been shown to be achievable in that industry, however zero odor has not been demonstrated to be achievable for fiberglass boat manufacturing at this time. PSCAA Regulation I 9.11 applies and investigating identified odors and taking actions in response to odors represents good operating practice. In this case, if odor is observed, corrective action shall be taken and may include, but not be limited to, ceasing operation, changing location of operation within the building, closing any building openings and adjusting production rates or schedules. The City of Jacksonville review utilized the following odor control measures for a fiberglass manufacturing facility in Florida, with local regulations also requiring odor control²:

- Prohibiting spray gel coat application when resin or gel coat was also being applied by hand lay-up or resin being applied by spray
- Requirement for vent fan during operation

² Technical Evaluation & Preliminary Determination for Taylor Made Fiberglass, "0310629-001 tepd.pdf"

- Maintaining inward airflow through building openings
- An odor mitigation plan

Odor BACT in this case will include:

- Closure of all building openings during application of resins and gel coats
- Weekly odor self-inspection with corrective action as needed
- Quarterly 3rd party odor inspection with corrective action as needed

Recommendations

Pollutant	Available Method That Meets BACT	Implementation of Method
Styrene, MMA, Organic HAPs and VOC	<ul style="list-style-type: none"> ▪ Pigmented gel coats less than or equal to 33% organic HAPs ▪ Clear gel coats less than or equal to 48% organic HAP ▪ Resins less than or equal to 35% HAPs ▪ Adhesives less than 5% organic HAPs ▪ Use of non-atomizing spray application methods for production and tooling resin ▪ Use of HVLP/electrostatic/airless/air-assisted airless spray equipment for gel-coat application ▪ Use of low VOC content resin and gel-coat materials ▪ Cleaning solvents shall not contain VOC and HAP <p>All resins and adhesives applied with non-atomizing application (does not include hand-held aerosol spray cans (less than 1 quart capacity) since these are categorically exempt from NOC permitting requirement in Reg I, Section 6.03(c)(59))</p>	Material selection; SDS documentation
Odor	<ul style="list-style-type: none"> ▪ Best management practices ▪ Closure of doors/windows/openings when applying resin and gel-coat 	<ul style="list-style-type: none"> ▪ Weekly odor self-inspection with corrective action as needed ▪ Quarterly 3rd party odor inspection with corrective action as needed
PM	<ul style="list-style-type: none"> ▪ 98% filtration efficiency ▪ Minimum 65% transfer efficiency for atomized product application 	<ul style="list-style-type: none"> ▪ Use of dry filter system equipped with gauge minimum pressure drop shall not be less than the pressure drop measured with a clean properly installed filter ▪ Use of HVLP/electrostatic/airless/air-assisted airless spray equipment for gel-coat application

G. EMISSION ESTIMATES

Proposed Project Emissions

Actual Emissions

Actual emissions are anticipated to be at or below the potential emissions summarized below.

Potential Emissions

The permitted potential to emit calculations are based on operating at 100% rated capacity and 6,240 hour per year as limited in both NOC 12155 and this NOC 12411.

The applicant calculated emissions based on the material usage specified below:

Table 1: Potential Air Emissions from Planned Building 10 Operations

Product Used	Amount Used (tons/year)	Air Contaminant Emissions (tons/year)				Total VOCs
		Styrene	MMA	Silica	Other HAPs/TAPs	
Gel Coat	32	3.4	0.72	0.013	0	4.16
Tooling Gel Coat	0.4	0.067	0	0	0	0.07
Polyester Resin	133	5.1	0	0	0	5.12
Tooling Resin	1.7	0.074	0	0	0	0.07
Vinyl Ester Resin	15	0.58	0	0	0	0.58
Radius Putty	17	0.65	0	0	0	0.65
Initiator	4	0	0	0	0.2	0.2
Mold Release	0.03	0	0	0	0	0.03
Wood Stain	0.3	0	0	0	0	0.12
Spray Adhesive	0.3	0	0	0	0.1	0.12
3M Spray Adhesive	0.46	0	0	0	0.9	0.23
Total Emissions (tons/year)		9.9	0.72	0.013	1.2	11.35

Abbreviations:

HAP = hazardous air pollutant

MMA = methyl methacrylate

TAP = toxic air pollutant

Facility-wide Emissions

Actual Emissions

Fluid Motion is an existing reporting source. Historic actual emissions are tabulated below.

Pollutant	2018	2019	2020	2021	2022	2023
HAP	6.4	5.8	7.4	9.0	10.1	12.6

Pollutant	2018	2019	2020	2021	2022	2023
VOC	6.4	5.85	7.4	9.0	10.3	12.6

Note that Fluid Motion reported 2022 emissions as part of annual emission reporting under PSCAA Regulation I Article 5 as 40 tons styrene (styrene is both a HAP and a VOC) in error and provided corrected values as part of this Notice of Construction review process.

Potential Emissions

Styrene	Methyl methacrylate	Methyl ethyl ketone	Cyclohexane	Dimethyl ether	n-Hexane	Toluene	Silica/PM	VOC
(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)
69.5	5.04	1.40	0.90	0.42	0.10	0.03	0.09	77.8

H. OPERATING PERMIT OR PSD

The Title V Air Operating Permit (AOP) program applicability for the entire source has been reviewed.

The facility is a Title V “**air operating permit source**” and conditions of this Order will be incorporated into the AOP during the next AOP opening.

Emission increases associated with this project were reviewed for Prevention of Significant Deterioration (PSD) Program applicability. The facility is not an existing PSD major source and the increase in emissions from this permitting action is below PSD thresholds (project emissions are of VOC (styrene) are below 100 TPY and the facility-wide VOC PTE is less than 250 TPY).

I. AMBIENT TOXICS IMPACT ANALYSIS

The estimated potential toxic air pollutant (TAP) emissions at operating at 100% rated capacity and 6,240 hours of operation annual (facility-wide emission limit in NOC 12155). The emissions are also limited based on worst case daily styrene limits based on a limit of 16 employees per shift in Building 10, and an upper boat size production limit in Building 10 of 28’ boats. The table below includes estimated potential emissions of all TAP and compares those to the Small Quantity Emission Rates (SQER) in WAC 173-460-150.

Fluid Motion LLC					
Daily Styrene Emissions					
Hours worked per employee	8 hours/day				
Number of Shifts	3 shifts/day				
Lamination workers per shift	8 lamination workers/shift				
	Styrene Emissions	Production Time	Emission Factor*	Maximum Styrene Emissions	Styrene SQER
	Pounds/boat	Lamination worker-hours/boat	lb/lamination worker-hour	lb/day	lb/day
28' cutwater	99.2	240	0.516		
24' cutwater	90.6	210	0.539	103.5	65
* Emission Factors for styrene for each boat type include a 25% safety factor, consistent with the application for Fluid Motion Arlington NOC #12155					
Lb/hr = stack flow (scfh) x pollutant (ppmv) x 10-6 x MW/385					
Inlet concentration	0.972240572 ppm inlet				
Styrene MW	104.15 g/mol				
Exhaust flow	20,000 scfm				
	103.5 lb/day				
	0.54336586 grams/sec				

The applicant ran refined dispersion modeling (AERMOD v. 23132) for the two stacks, assuming all emissions out of each stack independently and then utilizing the worst case stack concentration and comparing to the styrene ASIL. The model utilized meteorological data from Arlington Municipal Airport with calm wind speed data substitution from Paine Field.

Table 8: AERMOD Modeling Results

Pollutant	Modeled Concentration Increase ($\mu\text{g}/\text{m}^3$)	ASIL ($\mu\text{g}/\text{m}^3$)	Less than ASIL?
Styrene	158	870	Yes

Abbreviations:

ASIL = Acceptable Source Impact Level

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

J. APPLICABLE RULES & REGULATIONS

Puget Sound Clean Air Agency Regulations

SECTION 7.09(a): (An emission report shall be required from each owner or operator of an operating permit source, listing those air contaminants emitted during the previous calendar year that equal or exceed the following (tons/year):

carbon monoxide (CO) emissions 25

facility combined total of all toxic air contaminant (TAC) emissions.....	6
any single toxic air contaminant (TAC) emissions (excluding lead, but including lead compounds).....	2
nitrogen oxide (NOx) emissions.....	25
particulate matter (PM10) emissions.....	25
particulate matter (PM2.5) emissions.....	25
sulfur oxide (SOx) emissions.....	25
volatile organic compounds (VOC) emissions.....	25
lead	0.5

Annual emission rates shall be reported to the nearest whole tons per year for only those air contaminants that equal or exceed the thresholds above, except lead which must be reported to the nearest tenth of a ton. The owner or operator of a source requiring a Title V operating permit under this Article shall maintain records of information necessary to document any reported emissions or to demonstrate that the emissions were less than the above amounts

SECTION 7.09(b): Operation and Maintenance Plan. Owners or operators of air contaminant sources subject to Article 7 of this regulation shall develop and implement an operation and maintenance plan to assure continuous compliance with Regulations I, II, and III. A copy of the plan shall be filed with the Control Officer upon request. The plan shall reflect good industrial practice and shall include, but not be limited to, the following: (1) Periodic inspection of all equipment and control equipment; (2) Monitoring and recording of equipment and control equipment performance; (3) Prompt repair of any defective equipment or control equipment; (4) Procedures for start up, shut down, and normal operation; 02/17 7-5 Regulation I (5) The control measures to be employed to assure compliance with Section 9.15 of this regulation; and (6) A record of all actions required by the plan. The plan shall be reviewed by the source owner or operator at least annually and updated to reflect any changes in good industrial practice.

SECTION 6.09: Within 30 days of completion of the installation or modification of a stationary source subject to the provisions of Article 6 of this regulation, the owner or operator or applicant shall file a Notice of Completion with the Agency. Each Notice of Completion shall be submitted on a form provided by the Agency, and shall specify the date upon which operation of the stationary source has commenced or will commence.

SECTION 9.03: (a) It shall be unlawful for any person to cause or allow the emission of any air contaminant for a period or periods aggregating more than 3 minutes in any 1 hour, which is:
(1) Darker in shade than that designated as No. 1 (20% density) on the Ringelmann Chart, as published by the United States Bureau of Mines; or
(2) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in Section 9.03(a)(1).
(b) The density or opacity of an air contaminant shall be measured at the point of its emission, except when the point of emission cannot be readily observed, it may be measured at an observable point of the plume nearest the point of emission.
(c) This section shall not apply when the presence of uncombined water is the only reason for the failure of the emission to meet the requirements of this section.

SECTION 9.09: General Particulate Matter (PM) Standard. It shall be unlawful for any person to cause or allow the emission of particulate matter in excess of the following concentrations:

Equipment Used in a Manufacturing Process: 0.05 gr/dscf

SECTION 9.11: It shall be unlawful for any person to cause or allow the emission of any air contaminant in sufficient quantities and of such characteristics and duration as is, or is likely to be, injurious to human health, plant or animal life, or property, or which unreasonably interferes with enjoyment of life and property.

SECTION 9.13: It shall be unlawful for any person to cause or allow the installation or use of any device or use of any means designed to mask the emission of an air contaminant which causes detriment to health, safety or welfare of any person.

SECTION 9.15: It shall be unlawful for any person to cause or allow visible emissions of fugitive dust unless reasonable precautions are employed to minimize the emissions. Reasonable precautions include, but are not limited to, the following:

- (1) The use of control equipment, enclosures, and wet (or chemical) suppression techniques, as practical, and curtailment during high winds;
- (2) Surfacing roadways and parking areas with asphalt, concrete, or gravel;
- (3) Treating temporary, low-traffic areas (e.g., construction sites) with water or chemical stabilizers, reducing vehicle speeds, constructing pavement or rip rap exit aprons, and cleaning vehicle undercarriages before they exit to prevent the track-out of mud or dirt onto paved public roadways; or
- (4) Covering or wetting truck loads or allowing adequate freeboard to prevent the escape of dust-bearing materials.

REGULATION I, SECTION 9.20(a): It shall be unlawful for any person to cause or allow the operation of any features, machines or devices constituting parts of or called for by plans, specifications, or other information submitted pursuant to Article 6 of Regulation I unless such features, machines or devices are maintained in good working order.

REGULATION II, Section 3.08 POLYESTER, VINYLESTER, GELCOAT, AND RESIN OPERATIONS:

- (a)** This section shall apply to manufacturing operations involving the use of polyester, vinylester, gelcoat, or resin in which the styrene monomer is a reactive monomer for the resin.
- (b)** It shall be unlawful for any person to cause or allow the application of polyester resin, vinylester resin, gelcoat, or any other resin unless the operation is conducted inside an enclosed area that is registered with the Agency. The exhaust from the operation shall be vented to the atmosphere through a vertical stack. For spray-coating applications of polyester resin, vinylester resin, gelcoat, or any other resin, the enclosed area shall incorporate a dry filter to control the overspray.
- (c)** It shall be unlawful for any person to use a chopper gun or spray gun to apply polyester resin, vinylester resin, gelcoat, or any other resin, unless the coating is applied by the use of one of the following methods:
 - (1) High volume, low pressure (0.1 to 10 psig air pressure for atomization) spray equipment,
 - (2) Electrostatic spray equipment,

- (3) (3) Airless spray equipment, or
- (4) (4) Air-assisted airless spray equipment.
- (d)** The provisions of Section 3.08(c) shall not apply to touchup and repair using a hand-held, air atomized spray gun that has a container for resin as part of the gun.
- (e)** It shall be unlawful for any person to use any VOC-containing material for the cleanup of spray equipment, including resin lines, unless equipment for collecting the VOC-containing material and minimizing the evaporation to the atmosphere is employed. All VOC-containing materials that are flushed through the spray equipment or lines during cleanup shall be collected in a closed container.
- (f)** It shall be unlawful for any person to use open containers for the storage or disposal of VOC-containing materials. Such containers and tanks shall be kept closed except when being cleaned or when materials are being added, mixed, or removed. Closed containers for solvent rag or paper disposal are required. Empty containers as defined in WAC 173-303-160 are exempt.

REGULATION I, SECTION 9.20(a): It shall be unlawful for any person to cause or allow the operation of any features, machines or devices constituting parts of or called for by plans, specifications, or other information submitted pursuant to Article 6 of Regulation I unless such features, machines or devices are maintained in good working order.

Washington State Administrative Code

WAC 173-400-040(3): Fallout. No person shall cause or allow the emission of particulate matter from any source to be deposited beyond the property under direct control of the owner or operator of the source in sufficient quantity to interfere unreasonably with the use and enjoyment of the property upon which the material is deposited.

WAC 173-400-040(4): Fugitive emissions. The owner or operator of any emissions unit engaging in materials handling, construction, demolition or other operation which is a source of fugitive emission:

- (a) If located in an attainment area and not impacting any nonattainment area, shall take reasonable precautions to prevent the release of air contaminants from the operation.

WAC173-400-111(7): Construction limitations.

- (a) Approval to construct or modify a stationary source becomes invalid if construction is not commenced within eighteen months after receipt of the approval, if construction is discontinued for a period of eighteen months or more, or if construction is not completed within a reasonable time. The permitting authority may extend the eighteen-month period upon a satisfactory showing by the permittee that an extension is justified.

WAC 173-401 Title V regulations apply to this facility as a major source.

Federal

40 CFR 63 Subpart VVVV continues to apply to this facility. Full applicable requirements found in the facility Title V permit.

K. PUBLIC NOTICE

Based on the emission increase of styrene (a hazardous air pollutant) at 9.9 ton/year, PSCAA has required that this minor NSR action be subject to a 30 day public comment period under WAC 173-400-171 3(n). A notice of application was posted on the Agency's website for 15 days. No requests or responses were received. A copy of the website posting is below:

New Construction Projects

Company	Address	Project Description	Date Posted	Contact Engineer
Fluid Motion LLC	<u>17939 59th Ave</u> <u>NE Bldg #4,</u> <u>Arlington, WA</u> <u>98223</u>	Expansion of fiberglass boat manufacturing at an existing facility to increase facility-wide production of boats. The boats are made by spraying resins containing styrene and methyl methacrylate into molds. The resins react chemically to harden and form a solid.	1/29/24	<u>Madeline</u> <u>McFerran</u>

PLACEHOLDER FOR SUMMARY OF COMMENT PERIOD

L. RECOMMENDED APPROVAL CONDITIONS

Standard Conditions:

1. Approval is hereby granted as provided in Article 6 of Regulation I of the Puget Sound Clean Air Agency to the applicant to install or establish the equipment, device or process described hereon at the installation address in accordance with the plans and specifications on file in the Engineering Division of the Puget Sound Clean Air Agency.
2. This approval does not relieve the applicant or owner of any requirement of any other governmental agency.

Specific Conditions:

3. During resin or gel-coat operations all doors, windows, and other openings in the active lamination building (except for exhaust stacks) shall be closed except to allow intermittent passage of personnel and equipment during resin application and gel coat application activities.
4. The fiberglass manufacturing spray rooms in Building 10 shall be equipped with a dry filtration system with minimum control efficiency of 98%. Compliance with this condition shall be demonstrated through use of manufacturer specifications or equivalent.

5. The dry filter systems serving the spraying rooms in Building 10 shall be equipped with a gauge (manometer or magnehelic) to measure pressure drop across the exhaust filters. The acceptable pressure drop range shall be clearly marked on or near the gauge. The minimum pressure drop shall not be less than the pressure drop measured with a clean, properly installed filter.
6. The lamination activities in Building 10 must meet the following operational limitations:
 - a. The facility must not operate for more than 6,240 hours per year. Compliance with this limitation may be demonstrated through operational logs.
 - b. Boats fabricated in Building 10 must not exceed 28 feet. Compliance with the limitation on the boat length may be demonstrated through production data.
 - c. Building 10 must not exceed 8 lamination workers per 8-hour shift. Compliance with this limitation may be demonstrated through employee schedules or other personnel documentation.
7. Gel coat and resins used for open molding operations in Building 10 shall not exceed the organic hazardous air pollutant (HAP) limits shown below. Compliance with this condition shall be demonstrated through Safety Data Sheets and a record of each materials used.

<u>Operation</u>	<u>Application Method</u>	<u>Total Organic HAP limit (% weight)</u>
Production resin operations	Non-atomized	35%
Pigmented gel coat operations	HVLP, electrostatic spray equipment, airless spray equipment, or nonatomizing methods	33%
Clear gel coat operations	HVLP, electrostatic spray equipment, airless spray equipment, or nonatomizing methods and applied with spray applicators not to exceed 1 quart capacity	48%
Tooling resin operations	Non-atomized	39%
Tooling gel coat operations	HVLP electrostatic spray equipment, airless spray equipment, or nonatomizing methods	40%

8. Adhesives shall not exceed the organic hazardous air pollutant (HAP) limits shown below. Compliance with this condition shall be demonstrated through Safety Data Sheets and a record of each materials used.

<u>Operation</u>	<u>Application Method</u>	<u>Total Organic HAP limit (% weight)</u>
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Adhesives	Non-atomized or hand-held aerosol spray cans (less than 1 quart capacity)	5%
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9. The amount of clear gel coat applied to each boat shall not exceed 1 gallon. The owner or operator shall track and record the amount of clear gel coat used on each boat.
10. The owner or operator shall use only nonatomizing methods for production and tooling resin application.
11. Gel coat shall only be applied with one of the following options: high-volume low-pressure (HVLP) spray equipment; electrostatic spray equipment; airless spray equipment, or nonatomizing methods.
12. The owner or operator shall visually inspect all HAP/VOC material containers at the facility at least once per week. The inspection should ensure that all containers have covers with no visible gaps between the cover and the container, or between the cover and equipment passing through the cover. If any visible gaps are noted, the owner or operator shall take immediate corrective action to close the cover over the container. The owner or operator shall keep contemporaneous record of the results of the inspection including a description of corrective actions taken. The record shall include, at minimum, the following information:
 - a. Operator's name;
 - b. Date & time of inspection;
 - c. Confirmation of closed containers; and
 - d. The description of corrective action taken, if any.
13. At least once each operating day, prior to conducting open molding operation in a given spray room, the owner or operator shall inspect the associated dry filter system to ensure that:
 - a. The pressure drop measurement device is operating;
 - b. The pressure drop across the exhaust filter is within acceptable range recommended by the manufacturer; and
 - c. The filter is properly installed, seated, and secured.
14. If requirements as described by Condition #13 are not met, the owner or operator shall discontinue the operations and take corrective action. The owner or operator shall only resume operation after the requirements as described by Condition #13 are met.
15. The owner or operator shall keep the Condition #13 dry filter system inspection records in a written log contemporaneously. The records shall at least include the following, but not limited to:
 - a. The date and time of the inspection;
 - b. The name of the person conducted the inspection;
 - c. The pressure drop;
 - d. Confirmation that the filter is not installed backwards, is properly seated and is tightly secured; and
 - e. The corrective action conducted, if any.

16. The owner or operator shall use cleaning solvent that does not contain any VOC or HAP for resin and gel coat application equipment cleaning. Compliance with this condition shall be demonstrated by manufacturers' records of the cleaning solvent content.
17. The owner or operator shall monitor and record quantities of all purchases of raw materials on a monthly basis. Raw materials include all products used at the facility that contribute to HAP and VOC emissions. The owner or operator shall maintain, on-site, safety data sheets or certified product data sheets for these products.
18. The owner or operator shall determine the organic HAP content for each material used in the open molding resin and gel coat operations, carpet and fabric adhesive operations by using information from the supplier or manufacturer of the material. If the organic HAP content is provided by the material supplier or manufacturer as a range, then the owner or operator shall use the upper limit of the range for determining compliance.
19. The owner or operator shall monitor the immediate area outside the building for detectable odors from their facility at least once every calendar week (Sunday through Saturday). For at least one hour immediately prior to monitoring, the person performing the monitoring must remain in an atmosphere free of organic HAP odor and may not be inside the facility. If any odors from the facility are detected at or beyond the building during the monitoring or at any other time, the owner or operator shall immediately initiate corrective action to minimize the odor. The owner or operator shall keep contemporaneous record of the results of the inspection including a description of corrective actions taken. The record shall include, at minimum, the following information:
 - a. Operator's name;
 - b. Date & time of inspection;
 - c. Presence or absence of organic HAP odors; and
 - d. The description of corrective action taken to minimize odors.
20. The following records shall be kept onsite and up-to-date for at least five years from the date of generation, and be made readily available to Agency personnel upon request:
 - a. Documentation of dry filter overspray efficiency for Building 10 as specified in Condition #4;
 - b. Documentation of the amount of clear gel coat applied to each boat as specified in Condition #9;
 - c. Documentation of transfer efficiency of any atomizing spray guns used for gel coat application as specified in Condition #11;
 - d. Safety data sheets demonstrating compliance with the organic HAP limits specified in Conditions #7 and #8 and with the cleaning solvent requirements specified in Condition #16
 - e. Results of inspections to determine compliance with HAP containment as required by Condition #12 and of inspections to determine compliance with the dry filter system as required by Condition #13 and of inspections to determine compliance with the odor monitoring as required by Condition #19; and
 - f. Product data and personnel data for Building 10 and documentation of facility-wide operating hours as required by Condition #6.

M. CORRESPONDENCE AND SUPPORTING DOCUMENTS

N. REVIEWS

Reviews	Name	Date
Engineer:	Madeline McFerran	5/30/24
Inspector:	Rain Yates	6/7/24
Second Review:	John Dawson	5/31/2024
Applicant Name:	Dennis Pearson, Annie Klinke	6/12/2024