Regulatory Order – Synthetic Minor Worksheet

PUGET SOUND
Clean Air Agency

Source: Primus - University Swaging	**NOC Number:** 12469
Installation Address: 6525 240th St SE, Bldg A | Woodinville, WA 98072	**Registration Number:** 29275
Contact Name: Tufan Yasar	**Contact Email:** tufan.yasar@pccairframe.com
Applied Date: 07/03/2024	**Contact Phone:** (206) 423-6821
Engineer: Maggie Corbin	**Inspector:** Phil Kilner

A. DESCRIPTION

For the General Order:

Facility-wide synthetic minor emission limit of 1-Bromopropane (CAS Number 106-94-5) emissions.

Additional Information:

EPA designated 1-Bromopropane (n-Propyl Bromide, nPB), CAS Number 106-94-5) as a hazardous air pollutant (HAP) on February 4, 2022. Prior to this time, Primus – University Swaging was considered a natural minor source for purposes of the Title V program. However, Primus – University Swaging uses 1-bromopropane in their vapor degreaser which has an emission control system consisting of both equipment and work practices as required in Order of Approval No. 10067 issued November 21, 2013. Potential emissions of 1-bromopropane are above 10 tons per year (tpy), but at the time of permit issuance, 1-bromopropane was not a HAP. It is a volatile organic compound (VOC), but facility-wide potential emissions are well below the major source threshold for VOCs of 100 tpy.

This review is for a regulatory order under PSCAA Reg I 3.03(f):

"When an applicant requests a federally enforceable regulatory order to limit the potential to emit any air contaminant or contaminants pursuant to WAC 173-400-091, or requests a modification to such an order, the Control Officer or a duly authorized representative may issue such order consistent with the requirements of WAC 173-400-091 and 173-400-171 and Section 3.03(e) above. Regulatory orders issued pursuant to this section are effective the day the Control Officer or representative approves the order and may be appealed to the Pollution Control Hearings Board pursuant to Section 3.17 of Regulation I and RCW 43.21B.310."

Primus – University Swaging submitted this synthetic minor permit application and processing fee under Reg I 3.03(e).

Facility

Primus - University Swaging is a machining, swaging, and assembly center providing the structural and kinematic control rod assemblies, flight control mechanisms, and swaged cable assemblies.

Proposed Emission Limitations

The applicant is requesting facility-wide emission limits:

- 9.5 tons of a single HAP during any consecutive 12 month period; and
- 24.5 tons of combined HAP during any consecutive 12-month period; and
- 49.5 tons of volatile organic compounds (VOC) as defined in 40 CFR Part 51.100

The limits are discussed in Section G.

Permit History

In addition to this facility-wide limit of this Order, the following Notice of Construction Orders of Approval have been issued to the facility. All Orders except Order of Approval 10067 have been cancelled and superseded by more recent orders and this existing Order of Approval 10067 will not be affected by this permitting action:

NOC	Issue Date	Description
10004	4/28/2009	One n-propyl bromide vapor degreaser with a 35.75 square foot surface area and one 12,600 cfm aerospace spray booth controlled by dry exhaust filters complying with 40 CFR 63.745(g)(2)(ii)(A), and a 640 cf prep area. This Order was cancelled and superseded by Order 10580 issued 2/12/2013.
10338	9/29/2011	One 2,800 cubic foot spray booth, 12,600 cfm, controlled by a 3-stage MACT 319 certified filtration system; and one nitric acid/sodium dichromate passivation line consisting of four 419 gallon tanks. This Order was cancelled and superseded by Order 10667 issued 11/21/2013
10580	2/12/2013	For the modification of Order of Approval No.10004 to install the Dralle 3-stage XFT 6000 filter system at Colmet Brand MD 140290 spray booth and to increase the usage rate of the coating that contains chromium compound. Order of Approval No. 10004 was issued for installation of one n-propyl bromide vapor degreaser and one 12,600 cfm aerospace spray booth. This Order was cancelled and superseded by Order 10667 issued 11/21/2013
10667	11/21/2013	To modify the Order of Approval No. 10338 and No. 10580 to allow for an increase in chromate paint usage rate.

B. DATABASE INFORMATION

No new equipment will be added under this Order.

No federal EPA emission standards apply to this facility including New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAPs).

C. REGULATORY ORDER FEES AND ANNUAL REGISTRATION FEES

Regulatory Order Fees:

Fees have been assessed in accordance with PSCAA Regulation I, 3.03(e) for Regulatory Orders: per Regulation I 3.03(e): "When a regulatory order is requested by an applicant, the Agency shall assess a fee of $4,000 to cover the costs of processing and issuing a regulatory order under this section. The Agency shall also assess a fee equal to the cost of providing public notice in accordance with Section 3.03(b) of this regulation. These fees shall be due and payable within 30 days of the date of the invoice and shall be deemed delinquent if not fully paid within 90 days of the invoice."

Fee Description	Cost	Amount Received (Date)
Reg I 3.03(e)	$ 4,000	
Public Notice Fees*	TBD	
Fee received		$ 3,000 (7/3/2024)
Fee Due		$1,000 (8/6/2024)
Total		

*Publication fees to be invoiced following public comment period
Invoice sent 7/9/2024

Registration Fees:
Registration fees are assessed to the facility on an annual basis. Fees are assessed in accordance with Regulation I, Section 5.07. Current fees for 2023 are shown below:

Invoice for Year 2024 Registration Fees

Bill To:
Primus - University Swaging **6525 240th St SE, Bldg A** **Woodinville, WA 98072** **Attention: Accounts Payable**

Invoice Date:	Invoice #:
November 18, 2023	20240633
Due Date:	**Terms:**
January 02, 2024	Net 45 Days
Facility ID (Registration #):	
29275	

Site Address: ***Primus - University Swaging***
6525 240th St SE, Bldg A, Woodinville, WA 98072

The annual registration fee is required by Washington State law and Puget Sound Clean Air Agency's Regulation I.

Facility Fees and Applicable Regulations	Charges
Base Fee for Registered Sources. Reg I, 5.07(c)	$ 1,350.00
Reg I, 5.03(a)(4)(M) - Facilities with aerospace coating operations	
Fee Totals	
TOTAL REGISTRATION FEE	**$ 1,350.00**
The Total Registration Fee is due by January 02, 2024. If unpaid after January 02, 2024, the facility may be subject to enforcement action with civil penalties (Reg I, 5.07(b)).	

Additional fees in Reg I 5.07(c)(2) will apply since the source will be subject to a federally enforceable limit in Regulation I 5.03(a)(2) (updated to emission capped in database). In addition, fees in Reg I 5.07(c)(3) will apply to emissions reported under Section 5.05(b).

D. STATE ENVIRONMENTAL POLICY ACT (SEPA) REVIEW

State Environmental Policy Act (SEPA) review was not conducted for the issuance of this Regulatory Order. In this case, the Regulatory Order does not include the establishment of any new source of emissions.

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. A SEPA determination was made for actions that triggered a Notice of Construction permit.

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.

This project does not meet any of the criteria for consultation listed in Section II.A of the Agency's Interim Tribal Consultation Policy. This order does not authorize an increase in emissions or new equipment. The intent of this Order is to establish a federally enforceable limit on potential emissions.

F. EMISSION ESTIMATES

Facility-wide Emissions

Actual emissions of 1-bromopropane are tracked and recorded by the facility personnel. The air emission calculations for 2022 and 2023 from vapor degreaser operations were initially submitted by e-mail from the applicant on May 3, 2024 using the following methodology:

The operating volume of the vapor degreaser tank is 330 gallons. Periodically chemical additions are made to the vapor degreaser tank to replenish the chemicals used (these chemical additions are recorded on the vapor degreaser additions log). In order to calculate the air emissions quantities, the waste shipped offsite in CY2022 was deducted from the total quantities of chemical additions. Additionally, EnSolv 5408 contains >93% n-Propyl Bromide per the product safety data sheet and 96.5% was used for the emission calculations. The gallon weight of the EnSolv 5408 was calculated using the specific gravity listed in the product safety data sheet.

Using this methodology, the actual emissions of 1-bromopropane were estimated to be 3.0 tons in 2023 and 2.9 tons in 2022 which is well below the requested limit.

Based on the review of Notice of Construction (NOC) 10004, potential emissions of 1-bromopropane were calculated to be 12.3 tons/year. However, that was based on pro-rating production activities from 2600 hr/year to 8760 hours/year which may not adequately reflect potential emissions. Using EPA's AP-42 emission factor of 0.15 lb/hr/ft^2 for uncontrolled organic emissions, PTE could be as high as 23.5 tpy. However, normal operations integrate equipment and work practice standards to minimize the loss of the high cost solvents. The degreaser is currently operating under NOC Order 10667, but more recent NOC application reviews have been focused on the spray coating operations and it does not look like the degreaser has been modified since NOC Order of Approval 10004 was issued.

Based on current operations, the solvent used in the degreaser is the only source of 1-bromopropane emissions. However, Primus – University Swaging is required to track and record all emissions of 1-bromopropane if new products were introduced that contained 1-bromopropane. In addition, there are other processes at the facility that may emit HAPs and VOC. The applicant submitted a review of potential sources of HAP in their application and this information is summarized below:

<u>Other VOC Emissions:</u> Spray coating at this facility was evaluated under several NOCs but currently is operating under NOC Order 10067.

- One spray booth was evaluated under NOC 10004 and potential emissions of VOCs were determined to be 15 tpy based on prorating of emissions. Potential HAP emissions were less than 1 ton per year. Total usage for this booth was estimated to be 250 gallons per year with an additional 50 gallons of methyl ethyl ketone (MEK) per year (MEK is not a HAP but is a VOC) and

50 gallons of toluene (toluene is a HAP and a VOC). A production limit of 140 gallons on coatings that contained chromium was placed on this booth.

- A second booth was permitted under NOC Order of Approval 10338 and potential emissions of VOCs were determined to be 4 tpy based on prorating of emissions. Potential HAP emissions were less than 100 pounds per year. A production limit of 490 gallons on coatings that contained chromium was placed on this booth. Total usage was estimated to be below 750 gallons/year with an additional 260 gallons of MEK used for cleaning (MEK is not a HAP but is a VOC).

- The original booth was upgraded in 2013 with improved filters to allow a higher usage of coatings with chromium (NOC 10580). Potential emissions of VOCs were determined to be 2 tpy based on prorating of emissions. Potential HAP emissions were less than 400 pounds per year. A production limit of 490 gallons on coatings that contained chromium was placed on this booth. Total usage was estimated to be below 600 gallons/year with an additional 50 gallons of MEK used for cleaning (MEK is not a HAP but is a VOC).

- Both booths were combined under NOC Order of Approval 10667. Potential emissions of VOCs were determined to be 4.5 tpy based on a 1,600 gallon/year limit in the permit. Potential HAP emissions were less than 1 ton/year. It was assumed that all coatings contained chromium so the production limit of 1600 gallons on coatings that contained chromium was placed on operations in both booths. Total usage was estimated to be below 600 gallons/year with an additional 50 gallons of MEK used for cleaning (MEK is not a HAP but is a VOC).

Although the production limit in the permit is specific to coatings that contained chromium, it appears that the applications supported that the 1,600 reflected all coating usage with the exception of MEK and isopropyl alcohol (IPA) as a cleaning and thinning solvent. Based on a review of actual usage in 2023, the facility reported using 3347 pounds of coating which is well below the 1,600 gallon assumption reviewed in the NOC. Solvent cleaning with MEK and IPA was reported at 934 gallons in 2023 but neither of those products contribute to HAP emissions.

Since the coatings are aerospace coatings, we know from experience reviewing the coatings that the VOC content will be low. The most recent application showed an estimated VOC content of 2.9 lb/gallon. But if we assume a higher 3.5 lb/gallon for 1,600 gallons of coating, this will only result in 2.8 tons of VOCs being emitted. Based on the most recent emission report, cleaning is limited to MEK. Actual usage of MEK resulted in another 3.3 tons/year of VOC. Combined, these are well below the major source threshold of 100 tons per year. The facility would have to significantly increase usage which would trigger additional NOC permitting review to exceed major source thresholds.

Other HAP Emissions: The facility installed a nitric acid/sodium dichromate passivation line under NOC 10338. Potential emissions of nitric acid and chromium are insignificant.

Summary: Based on a review of all the emissions activities, limiting potential emissions of 1-bromopropane to less than 9.5 tons during any 12-month period will adequately assure the facility

remains below major source thresholds. Potential emissions of VOCs are below 100 tons/year and potential emissions of total HAP are below 25 tons/year.

The facility is required to monitor all emissions sources and report to the Agency if emissions are above the reporting thresholds in Regulation I, Section 5.05(b):

> The owner or operator of a source requiring registration under Section 5.03 of this regulation shall submit a report by June 30th of each year, listing the emissions of those air contaminants emitted during the previous calendar year that equaled or exceeded:
>
> (1) 2.50 tons of any single hazardous air pollutant (HAP);
>
> (2) 6.25 tons of total hazardous air pollutants (HAP);
>
> (3) 25.0 tons of carbon monoxide (CO), nitrogen oxides (NO_x), particulate matter ($PM_{2.5}$ or PM_{10}), sulfur oxides (SO_x), or volatile organic compounds (VOC); or
>
> (4) 0.5 tons of lead.

The facility has not reported emissions since they were below reporting thresholds. For 2023, the facility was required to report emissions of 1-bromopropane since it is now a HAP. Actual emissions of VOC were reported at 7.8 tons/year in 2023 and actual emissions of HAP were reported at 3.2 tons/year. This included 3 tons/year of 1-bromopropane which is a HAP and a VOC.

Reporting of emissions allows the Agency to monitor actual emissions and if emissions of other HAP or criteria pollutants exceed 25% of major source thresholds, the potential emissions would be reevaluated to determine if above major thresholds. In addition, new emission units would be required to obtain a Notice of Construction permit in accordance with Regulation I, Article 6 and facility-wide potential emissions would be reevaluated at that time.

G. LIMIT EVALUATION

The federally enforceable limits for this regulatory order must meet the requirements of WAC 173-400-091. WAC 173-400-091(3) requires that any order issued include monitoring, recordkeeping and reporting requirements sufficient to ensure that the source or stationary source complies with the conditions of the order.

EPA has provided guidance for federally enforceable permit limits in several documents which were utilized in the development of the limits, compliance demonstration, monitoring recordkeeping and reporting requirements of this Order (PDF copies are located in the "NOC Worksheet References" sub-folder of this project folder).

- Options for Limiting the Potential to Emit (PTE) of a Stationary Source Under Section 112 and Title V of the Clean Air Act (Act), 1/25/1995
- Guidance on Enforceability Requirements for Limiting Potential to Emit through SIP and §112 Rules and General Permits, 1/25/1995

- Approaches to Creating Federally-Enforceable Emissions Limits, 11/3/1993
- EPA comments on Lockwood Regional Landfill March 29, 2011

Limits
The applicant requested the limit on 1-bromopropane be set at 9.5 tons/year which is 95% of the major source threshold of 10 tons for any single HAP. Per EPA guidance (example from EPA comments on Lockwood Regional Landfill March 29, 2011 which can be found in the project folder file "March 29 2011 Lockwood Landfill" PDF) "EPA encourages a 5-10% buffer between the permitted emission limits and the federal threshold". A 5% buffer (9.5 ton/12 month rolling period) will be used for this synthetic minor emission limit because compliance is to be determined on a monthly basis (12-month rolling) calculated using the material balance method to calculate emissions. While this monitoring structure does not determine compliance as frequently as other monitoring systems (e.g. continuous emission monitoring system), a 5% buffer is determined to be sufficient to ensure that the facility remains below Title V permitting thresholds.

Recordkeeping and Reporting
The facility will track solvent additions and deletions to the vapor degreaser and the 1-bromopropane contents of the solvent based on manufacturer's supplied data such as a safety data sheet, product data sheet or technical data sheet. Emissions of 1-bromopropane from solvent removed from the degreaser in waste may also be subtracted from usage if the solvent composition has been determined through waste analysis (sampling of each waste drum disposed of off-site).

Currently, the degreaser solvent is the only emission source of 1-bromopropane. However, Condition 2(c) does require Primus – University Swaging to include emissions from other sources and include those in the calculations. This will account for changes in the operation that may incorporate additional sources of 1-bromopropane.

Within 30 days of the end of each month, the owner or operator shall calculate the facility-wide emissions 1-bromopropane for the previous month and the previous consecutive 12-month period.

H. OPERATING PERMIT OR PSD

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

The facility is not a Title V air operating permit source because post project PTE remains below Title V applicability thresholds and criteria due to federally enforceable limits of this Order 12469. The source is considered a "**synthetic minor**".

I. APPLICABLE RULES & REGULATIONS

Puget Sound Clean Air Agency Regulations

SECTION 3.03 GENERAL REGULATORY ORDERS
(f) When an applicant requests a federally enforceable regulatory order to limit the potential to emit any air contaminant or contaminants pursuant to WAC 173-400-091, or requests a modification to such an order, the Control Officer or a duly authorized representative may issue such order

consistent with the requirements of WAC 173-400-091 and 173-400-171 and Section 3.03(e) above. Regulatory orders issued pursuant to this section are effective the day the Control Officer or representative approves the order and may be appealed to the Pollution Control Hearings Board pursuant to Section 3.17 of Regulation I and RCW 43.21B.310.

Washington State Administrative Code

WAC 173:400-091: Voluntary limits on emissions.

(1) Upon request by the owner or operator of a new or existing source or stationary source, the permitting authority with jurisdiction over the source shall issue a regulatory order that limits the potential to emit any air contaminant or contaminants to a level agreed to by the owner or operator and the permitting authority with jurisdiction.

(2) A condition contained in an order issued under this section shall be less than the source's or stationary source's otherwise allowable annual emissions of a particular contaminant under all applicable requirements of the chapter **70.94** RCW and the FCAA, including any standard or other requirement provided for in the Washington state implementation plan. The term "condition" refers to limits on production or other limitations, in addition to emission limitations.

(3) Any order issued under this section shall include monitoring, recordkeeping and reporting requirements sufficient to ensure that the source or stationary source complies with any condition established under this section. Monitoring requirements shall use terms, test methods, units, averaging periods, and other statistical conventions consistent with the requirements of WAC **173-400-105**.

(4) Any order issued under this section must comply with WAC **173-400-171**.

(5) The terms and conditions of a regulatory order issued under this section are enforceable. Any proposed deviation from a condition contained in an order issued under this section shall require revision or revocation of the order.

J. PUBLIC NOTICE

This project meets the criteria for mandatory public notice under WAC 173-400-171(3)(k) for establishing a voluntary limit on emissions. This is due to requesting a voluntary limit on emissions for VOCs and HAP. A 30-day public comment period shall be held from August 26, 2024 through September 26, 2024. Notices that the draft materials were open to comment were published in the Everett Times on August 27, 2024 and Daily Journal of Commerce on August 26, 2024. The Agency posted the application and the draft worksheet on the Agency's website during the comment period.

K. RECOMMENDED APPROVAL CONDITIONS

1. The owner or operator shall limit facility-wide emissions of 1-bromopropane (CAS number 106-94-5) to 9.5 tons during any consecutive 12-month period.

Compliance Demonstration:

2. In order to demonstrate compliance with the emission limit in Condition 1, the owner or operator shall:
    a. Maintain a log of solvent additions and deletions from the vapor degreaser;

b. Within 30 days of the month, calculate and record emissions of 1-bromopropane during the previous 1 month period and the previous consecutive 12-month period. Emissions must be based on solvent additions and deletions to the vapor degreaser and the 1-bromopropane contents of the solvent based on manufacturer's supplied data such as a safety data sheet, product data sheet or technical data sheet. Emissions of 1-bromopropane from solvent removed from the degreaser in waste may also be subtracted from usage if the solvent composition has been determined through waste analysis from the specific waste drum or based on a representative sample of waste. A representative sample may be used if the amount subtracted is based on the lowest concentration of 1-bromopropane measured in three waste samples collected from different waste drums. If a representative sample is used, an updated waste analysis on a waste drum must be obtained at least once every 24 months; and

c. Emissions of 1-bromopropane from other activities at the facility (if applicable) shall be included with emissions calculated for the previous 1 month period and the previous consecutive 12-month period in Condition 2(b). The material balance method shall be used to calculate emissions from other activities at the facility.

General Recordkeeping and Reporting

3. The owner or operator shall provide a notification to the Puget Sound Clean Air Agency within 45 days after the end of any consecutive 12-month period if, during that period, facility-wide emissions of 1-bromopropane exceeded 9.5 tons. The permittee shall submit the notification in electronic format as an attachment to an e-mail message to facilitysubmittal@pscleanair.gov or any other e-mail identified by the Agency. The report shall include a summary of the total 12-month emissions, including the supporting emission calculations for the reported emissions.

4. All records maintained by this Order of Approval must be maintained for five years (in hard copy or electronic format) and must be made available to Puget Sound Clean Air Agency personnel upon request.

5. This Order shall expire upon Puget Sound Clean Air Agency's determination that the owner or operator has submitted a complete application for an operating permit under Article 7 of Puget Sound Clean Air Agency Regulation I or if the owner or operator submits written notice to the Agency that the use of 1-Bromopropane at the facility has been discontinued.

L. CORRESPONDENCE AND SUPPORTING DOCUMENTS

Additional correspondence submitted by e-mail regarding emissions included in electronic NOC folder and Agency EMS system.

M. REVIEWS

Reviews	Name	Date
Engineer:	Maggie Corbin	8/1/2024
Inspector:	Phil Kilner	8/2/2024
Second Review:	John Dawson	8/2/2024
Applicant Name:	Tufan Yasar	8/15/2024

Mr. Yasar submitted a comment on August 9, 2024 requesting a change to one of the conditions:

- *On page 8, the worksheet mentions "Emissions of 1-bromopropane from solvent removed from the degreaser in waste may also be subtracted from usage if the solvent composition has been determined through waste analysis (sampling of each waste drum disposed of off-site)."*

Would it be possible to use the lab analysis data from a representative sample of the waste instead of analyzing each waste drum individually? I believe that the variance in 1-Bromopropane concentration is likely to be minimal, and sampling each drum may add unnecessary time and cost to the disposal process.

I modified Condition 2b to allow for a representative sample since actual emissions are well below the cap and this will provide a worst-case emissions by requiring use of the lowest percentage of 1-bromopropane to be subtracted when estimating emissions.