Notice of Construction (NOC) Worksheet

PUGET SOUND
Clean Air Agency

Source: Boeing Commercial Airplane Auburn	**NOC Number:** 12441
Installation Address: 700 15th St SW | Auburn, WA 98002	**Registration Number:** 13117
Contact Name: Madeleine McDonald	**Contact Email:** Madeleine.McDonald@Boeing.com
Applied Date: 04/15/2024	**Contact Phone:** (253) 229-1271
Engineer: Maggie Corbin	**Inspector:** Manolo Zaldivar

A. DESCRIPTION

For the Order of Approval:

Modification of several Orders of Approval to update permit conditions for the following existing spray booths to allow for the use of interlock systems in lieu of reading and recording the pressure drop and to remove redundant conditions that require compliance with 40 CFR 63, Subpart GG since this regulation applies facility-wide:

- Two spray booths with two Bleeker Bros. Dry Filter Spray Coating Booths: one rated at 45,000 cfm (2 stacks at 22,500 cfm each) and one rated at 25,000 cfm, both equipped with 3-stage NESHAP compliant filters, both located in the 17-07 Building, used for primer and topcoat application on aerospace parts and components. [Order of Approval No. 7279, 2/24/1998]

- Four Haden designed Spray Booths equipped with Aerospace NESHAP compliant filter system plus HEPA, each rated at 38,000 cfm, used for painting and preparation of aerospace parts in the Finish Zone of Building 17-45. [Order of Approval No. 7302, 3/31/1998]

- One Dry Lubricant Spray Coating Booth rated at 14,445 cfm located in Building 17-68. [Order of Approval No. 7639, 12/15/1998]

- One Bleeker Brothers Dry Filter Spray Coating Booth with three-stage Aerospace NESHAP-compliant filters located in Building 17-45. [Order of Approval No. 7689, 4/9/1999]

- One Dry Filter Spray Coating Booth rated at 24,000 cfm with three-stage Aerospace NESHAP-compliant filters and HEPA filtration located near Column B-1 in the Mezzanine of Building 17-45. [Order of Approval No. 7941, 11/2/1999]

- One 29,000 cfm Spray booth with dry filters complying with 40 CFR 63.745(g)(2)(ii) of the Aerospace NESHAP at 17-45 building, and additional down-stream HEPA filters capable of 99.97% control. [Order of Approval No. 8747, 12/19/2002]

- One 16,000 cfm Spray booth at building 17-62 with filters complying with 40 CFR 63.745(g)(2)(ii)(A) of the Aerospace NESHAP. [Order of Approval No. 8835, 7/1/2003]

- One 2,600 cubic foot dry lubricant spray booth, with 20,000 cfm air flow, located in Bldg 17-68. [Order of Approval No. 10234, 1/11/2011]

- One spray booth, 16,000 cfm air flow and 1,408 cf internal volume, located in 17-45 Bldg, equipped with dry exhaust filters meeting 40 CFR 63.745(g)(2)(ii)(A) requirements; and one spray booth, 23,000 cfm air flow and 2,304 internal volume, located in 17-45 Bldg, equipped with dry exhaust filters meeting 40 CFR 63.745(g)(2)(ii)(A) requirements. [Order of Approval No. 10332, 7/14/2011]

- One Spray Booth, rated at 16,000 cfm and located in Building 17-45. The booth is to be equipped as a condition of this Order with three-stage, Purolator Supersorb III dry filtration system, or equivalent. [Order of Approval No. 10846, 10/23/2014]

Modification of Order of Approval No. 10298 dated 5/18/2011 for one spray gun cleaning operation at spray booth in Building 17-45 to remove a redundant condition.

Proposed Equipment/Activities

The applicant is proposing to modify several Orders of Approval (OA) to update the corresponding permit condition to include language for use of interlock systems in lieu of requirements to read and record the pressure drop for spray booths at the facility. The proposed interlock language for the NOCOA conditions is consistent with the Aerospace NESHAP (40 CFR 63, Subpart GG). For spray booths permitted prior to the 2015 NESHAP amendments, the language in the OA and existing operating permit conflicted with the NESHAP in that it did not allow the option to use the interlock system in lieu of recording the pressure drop on a routine basis. The interlock systems are already installed and operating on the spray booths.

Since the Agency is currently working on the AOP renewal for this facility, it is appropriate to review this requested modification concurrently with the AOP renewal process. If approved, this change would take effect on the same date the AOP renewal permit is issued.

The applicant proposed language to address individual permits, but the Agency has determined there should be consistency between these permits. This includes:

1. No change from the original BACT/tBACT determination, including the frequency of monitoring and recordkeeping. If no frequency was indicated for coatings that did not contain inorganic HAP, the condition requires a monthly check. Two booths are not used for NESHAP coatings with inorganic HAPs. Boeing Auburn has the option to utilize the installed interlock system.
2. Consistency with the language in the Aerospace NESHAP.
3. Since some conditions included recordkeeping requirements and corrective actions, this Order may cancel and supersede two OA conditions. This provides consistency for these units.

In addition to the proposed changes, the Agency has removed conditions that reference compliance with the Aerospace NESHAP under a high level citation of 40 CFR Part 63, Subpart 63. This reference is

unnecessary since the facility is a major source of HAP and is required to comply with the Aerospace NESHAP.

Based on additional information received by Boeing Auburn staff on April 18, 2024, the interlocks are installed and in use at all of the spray booths referenced in the application, as well as other production booths used to spray apply inorganic HAP. The facility plans to use the interlock system as a potential backup in case the existing differential pressure logging system fails. Over time, they may transition to relying on interlocks as the primary compliance monitoring system.

Based on experience to date, it is uncommon that the interlock system results in a shut down of operations (less than one time per year) since Boeing relies on a vendor to check differential pressure on a nightly basis and to make filter change outs as appropriate. When the interlocks have engaged, the supply air to the spray guns is shut off. Inspections to confirm operability of the interlocks would be part of the routine inspections.

The differential pressure gauge with the acceptable range will continue to be accessible to Boeing staff and Agency inspectors to verify operations are within the acceptable range.

The applicant has requested that the Orders use the language “specified pressure drop range” in place of “filter manufacturer’s recommended limit(s)” in order to match this language in recently issued AOP for other Boeing facilities. However, 40 CFR 63.745(g)(2)(iv)(C) specifies that the interlock system must automatically shut down the coating spray application system if the pressure drop exceeds or falls below the filter manufacturer’s recommended limit(s). This language has been incorporated into the Order since it is consistent with the NESHAP. The Agency requested additional information as part of this NOC permit review and the following compliance ranges were provided for all active spray booths and are based on the information the facility received from the filter manufacturer.

Building	MSS/ID	Primary Filter DP Range (" WC)	HEPA Filter DP Range (" WC)
17-06	A006765	0-1.6 DP	
17-06	A006766	0-1.6 DP	
17-07	A0012356	0-1.75 DP	
17-07	A0012355	0-1.75 DP	
17-45	A0055223	0-1.6 DP	
17-45	A0055225	0.12-2.50 DP	
17-45	A0014921	0-1.75 DP	
17-45	A0059822	0-1.75 DP	0.5-2.25 HEPA
17-45	A0019780	0.12-2.50 DP	
17-45	A0056105	0.12-2.50 DP	
17-45	A0010695	0-1.75 DP	0.5-2.25 HEPA
17-45	A0013305	0-1.75 DP	0.5-2.25 HEPA
17-45	A0013306	0-1.75 DP	0.5-2.25 HEPA
17-45	A0013307	0-1.75 DP	0.5-2.25 HEPA
17-45	A0013308	0-1.75 DP	0.5-2.25 HEPA
17-45	A0014720	0-1.75 DP	0.27-2.25 HEPA
17-45	A003806	0-1.75 DP	0.27-2.25 HEPA
17-45	A0055226	0-1.6 DP	
17-62	A006783	0-1.75 DP	0.45-2.4 HEPA
17-62	A0058303	0-1.6 DP	
17-62	A0058305	0-1.6 DP	
17-68	A0056541	0-1.6 DP	
17-68	A0010851	0.05-1.6	
17-68	A0056540	0-1.6 DP	
17-68	A0059271	0-1.6 DP	
17-68	A0025201	0.05-2 DP	

The Agency has reviewed individual permits and determined the following conditions need to be cancelled and superseded (yellow highlight) or cancelled as obsolete (blue highlight):

OA	Conditions	Conditions Cancelled and Superseded or Cancelled	Notes
7279, 2/24/98	3. Boeing (Auburn) shall install and maintain gauges to measure the pressure drop across the 3-stage dry filter system of each spray booth. Within 90 days after beginning operations, the acceptable ranges for the gauges shall be clearly marked on or nearby the gauges. 4. No later than September 1, 1998, once during each shift that the spray booths are used, Boeing (Auburn) shall determine and record if	4 and 5 cancelled and superseded by this Order. Condition 6 cancelled.	Two booths with a requirement to determine and record pressure drop across the filter system once during each shift as

OA	Conditions	Conditions Cancelled and Superseded or Cancelled	Notes
	the pressure drop across the 3-stage dry filter system is in the acceptable range. 5. If the pressure drop is not within the acceptable range, Boeing (Auburn) shall take corrective action as specified in the facility's Operation and Maintenance Plan. 6. Boeing (Auburn) shall comply with the Aerospace National Emission Standards for Hazardous Pollutants (NESHAP), 40 CFR 63 Subpart GG and the General Provisions of the NESHAP, 40 CFR Part 63 Subpart A by September 1, 1998. 7. The sum of the actual volatile organic compound (VOC) emissions from paint usage in the two booths combined shall not exceed 30 tons during any 12 consecutive months after the date of this Order. Boeing (Auburn) shall notify PSAPCA, in writing, within 30 days after the end of each 12-month period if, during that period, emissions of VOC exceed 27 tons. Boeing (Auburn) shall calculate VOC emissions monthly and retain a record of the calculations for a period of five years. The calculations shall be made available to PSAPCA upon request. 8. This Order of Approval hereby supersedes and cancels Order of Approval No. 2097 dated Jun 17, 1980.		part of BACT/tBACT determination.
7302, 3/31/98	3. Boeing shall install and maintain instrumentation to measure the pressure drop across the three-stage dry filter system of each spray booth. Within 90 days after beginning operations, the acceptable ranges for the pressure drop shall be clearly marked on or nearby the instrumentation. 4. On and after September 1, 1998, or upon start-up, whichever is later, once each shift that the spray booths are used, Boeing shall record the pressure drop during operation across the three-stage dry filter systems of each of the booths used during that shift. 5. If the pressure drop is not within the acceptable range, Boeing shall take corrective action as specified in the facility's Operation and Maintenance Plan. 6. Boeing shall install and maintain HEPA filters downstream of the three-stage aerospace NESHAP filters on each spray booth.	4 and 5 cancelled and superseded by this Order.	Four booths with a requirement to determine and record pressure drop across the filter system once during each shift as part of BACT/tBACT determination.
7639, 12/15/98	3. Boeing shall install and maintain a gauge to measure the pressure drop across the spray booth filters. Within 90 days after submitting the Notice of Completion, the acceptable range for the gauge shall be clearly marked on or nearby the gauge.	4 cancelled and superseded by this Order.	One booth with a requirement to determine and record pressure drop across the filter system monthly as part of

OA	Conditions	Conditions Cancelled and Superseded or Cancelled	Notes
	4. Once each month, Boeing shall determine if the pressure drop across the exhaust filters is in the acceptable range. If the pressure drop is not within the acceptable range, Boeing shall take corrective action as specified in the operation and maintenance plan.		BACT/tBACT determination. This is not a NESHAP booth (no inorganic HAPs sprayed in this booth).
7689, 4/9/99	3. Boeing shall install and maintain a gauge to measure the pressure drop across the spray booth exhaust filter systems. Within 90 days after beginning operations, the acceptable range for the gauge shall be clearly marked on or nearby the gauge. 4. Boeing shall log the pressure drop across the exhaust filter system once each shift that the spray booth is used for spraying primers or topcoats as defined in 40 CFR 63.742, unless the primers or topcoats have inorganic HAP concentrations of less than 0.1 percent for carcinogens and 1.0 percent for non-carcinogens. If the recorded pressure drop is not within the acceptable range, Boeing shall take applicable corrective action as specified in 40 CFR 63.745(g)(3). 5. This Order of Approval No. 7689, issued to amend Condition No. 4, hereby supersedes and cancels Order of Approval No. 7689 dated Mar 5, 1999.	4 cancelled and superseded by this Order.	One booth. BACT/tBACT determination did not require additional recordkeeping on pressure drop beyond NESHAP. Default in AOP is monthly.
7941, 11/2/99	3. Boeing shall install and maintain a gauge to measure the pressure drop across the spray booth exhaust filter systems. Within 90 days after beginning operations, the acceptable range for the gauge shall be clearly marked on or nearby the gauge. 4. Boeing shall log the pressure drop across the exhaust filter system once each shift that the spray booth is used for spraying primers or topcoats as defined in 40 CFR 63.742, unless the primers or topcoats have inorganic HAP concentrations of less than 0.1 percent for carcinogens and 1.0 percent for non-carcinogens. If the recorded pressure drop is not within the acceptable range, Boeing shall take applicable corrective action as specified in 40 CFR 63.745(g)(3).	4 cancelled and superseded by this Order.	One booth. BACT/tBACT determination did not require additional recordkeeping on pressure drop beyond NESHAP. Default in AOP is monthly.
8747, 12/19/02	3. Boeing shall install exhaust filters that meet the requirements of 40 CFR 63.745(g)(2)(ii). 4. Boeing shall comply with all applicable requirements of 40 CFR 63 Subpart GG. 5. The air exhausted from this spray booth shall be vented through HEPA filters with a control efficiency of 99.97% or greater. 6. Boeing shall install and maintain a gauge to measure the pressure drop across the exhaust filters of the spray booth. Within 90 days after	7 cancelled and superseded by this Order. Condition 6 cancelled.	One booth with a requirement to determine and record pressure drop across the filter system once during each shift as part of BACT/tBACT determination.

OA	Conditions	Conditions Cancelled and Superseded or Cancelled	Notes
	issuance of this Order of Approval, the acceptable range for the gauge shall be clearly marked on or nearby the gauge or on a pressure drop log. 7. Boeing shall read and record the pressure drop once each shift of operation on a log. If the pressure drop is not within the acceptable range, Boeing shall, as soon as practicable but within 24 hours of the initial observation either; correct the pressure drop or, alternatively, shut unit or activity until it can be repaired. 8. Boeing shall check the primary dry filter systems, where visible, for proper seating and complete coverage over the exhaust plenum, and shall record the results of this inspection. This inspection shall be conducted monthly or at time of use if booth is used less frequently than once per month. If filter coverage is acceptable for all inspections in a one year period, this inspection frequency may be reduced to once per calendar quarter. If coverage is unacceptable during quarterly inspections, monthly inspections shall be reinstated. If coverage is found to be unacceptable, Boeing shall, as soon as practicable but within 24 hours of the initial observation either; correct filter coverage or, alternatively, shut down the booth or activity until it can be repaired. 9. Boeing shall annually check that the exhaust filters installed at this booth meet the requirements of 40 CFR 63.745(g)(2)(ii). 10. Boeing shall check to see that the pressure gauge functions properly and the pressure drop range is labeled on the log sheets at least quarterly. 11. Boeing shall comply with the requirements of Puget Sound Clean Air Agency Regulation II Section 3.09.		
8835, 7/1/03	3. Boeing shall install exhaust filters that meet the requirements of 40 CFR 63.745(g)(2)(ii). 4. Boeing shall comply with all applicable requirements of 40 CFR 63 Subpart GG. 5. Boeing shall install and maintain a gauge to measure the pressure drop across the exhaust filters of the spray booth. The acceptable range for the gauge shall be clearly marked on or nearby the gauge or on a pressure drop log. 6. Boeing shall read and record the pressure drop once each shift of operation on a log. If the pressure drop is not within the acceptable range, Boeing shall, as soon as practicable but within 24 hours of the initial observation either; correct the pressure drop or, alternatively, shut unit or activity until it can be repaired.	6 cancelled and superseded by this Order. Condition 4 cancelled.	One booth with a requirement to determine and record pressure drop across the filter system once during each shift as part of BACT/tBACT determination.

OA	Conditions	Conditions Cancelled and Superseded or Cancelled	Notes
	7. Boeing shall check the primary dry filter systems, where visible, for proper seating and complete coverage over the exhaust plenum, and shall record the results of this inspection. This inspection shall be conducted monthly or at time of use if booth is used less frequently than once per month. If filter coverage is acceptable for all inspections in a one year period, this inspection frequency may be reduced to once per calendar quarter. If coverage is unacceptable during quarterly inspections, monthly inspections shall be reinstated. If coverage is found to be unacceptable, Boeing shall, as soon as practicable but within 24 hours of the initial observation either; correct filter coverage or, alternatively, shut down the booth or activity until it can be repaired. 8. Boeing shall annually check that the exhaust filters installed at this booth meet the requirements of 40 CFR 63.745(g)(2)(ii). 9. Boeing shall check to see that the pressure gauge functions properly and the pressure drop range is labeled on the log sheets at least quarterly. 10. Boeing shall comply with the requirements of Puget Sound Clean Air Agency Regulation II Section 3.09.		
10234, 1/11/11	3. Spray booth exhaust filters shall have a capture efficiency of 98% or greater, as demonstrated consistent with ASHRAE Method 52.1, or an equivalent filter accepted by the Agency, such as the Paint Pockets PP Series filter. 4. Boeing shall install and maintain a gauge to measure the pressure drop across the exhaust filters and mark the acceptable pressure drop range on or near the gauge, or on a pressure drop log. 5. Spray coating operations shall be conducted using high volume low pressure (HVLP) spray guns or other spray equipment with a transfer efficiency that is at least equivalent to HVLP. Documentation of equivalency for non-HVLP spray equipment shall be maintained on site. 6. Boeing shall record if the pressure drop across the exhaust filters is in the acceptable range at least weekly when the spray booth is used. 7. Boeing shall check the primary dry filter system, where visible, for complete coverage over the exhaust plenum and proper seating of the filters, and shall record the results of this inspection. This inspection shall be conducted weekly or at time of use if the booth is used less frequently than once per week. 8. If improperly seated filters, incomplete coverage over the exhaust plenum, or pressure drop outside of the acceptable range are observed, Boeing shall, as soon as practicable but within 24 hours of	6 cancelled and superseded by this Order.	One booth with a requirement to determine and record pressure drop across the filter system weekly as part of BACT/tBACT determination. This is not a NESHAP booth (no inorganic HAPs sprayed in this booth).

OA	Conditions	Conditions Cancelled and Superseded or Cancelled	Notes
	initial observation either; correct the problem or, alternatively, shut down the unit until it can be repaired. 9. Boeing shall not spray apply any coating or lubricant in this booth that contain cadmium, chromium or lead compounds. 10. VOC emissions from this spray booth shall not exceed 7.0 tons during any rolling 12 calendar month period. 11. Within 30 days of the end of each month, Boeing shall calculate the VOC emissions from the spray booth for the latest 12 calendar month period.		
10332, 7/14/11	3. The air from the spray booths shall exhaust through EPA Method 319 certified filters meeting the requirements of 40 CFR 63.745(g)(2)(ii)(A), such as Purolator Supersorb III filters, or other equivalent filters. 4. Boeing shall install and maintain gauges that measure the pressure drop across all exhaust filter banks of the spray booths and mark the acceptable pressure drop range on or near the gauge, or on a pressure drop log. 5. Boeing shall record the pressure drop across the exhaust filters of each spray booth at least once each shift. 6. If the pressure drop across the exhaust filters is not within the acceptable range, corrective actions shall be taken prior to resuming spray coating activities. 7. Boeing shall check the primary dry filter systems, where visible, for proper seating and complete coverage over the exhaust plenum, and shall record the results of this inspection. The inspection shall be conducted at least monthly or at time of use if a spray booth is used less frequently than once per month. 8. Boeing shall annually check to see if the correct filters are installed. 9. Spray coating operations shall be conducted using high volume low pressure (HVLP) spray equipment, or other equipment with a transfer efficiency that is at least equivalent to HVLP. Documentation of equivalency for non-HVLP spray equipment shall be maintained on site.	5 cancelled and superseded by this Order.	Two booths with a requirement to determine and record pressure drop across the filter system once during each shift as part of BACT/tBACT determination.
10846, 10/23/14	COATING USAGE LIMIT: 3. Boeing shall not use more than 575 gallons of primer that contains chromium compounds (including the catalyst or cure) in the spray booth during any consecutive 12-month period. Boeing shall track and	9 cancelled and superseded by this Order.	One booth with a requirement to determine and record pressure drop across

OA	Conditions	Conditions Cancelled and Superseded or Cancelled	Notes
	record the usage of primer that contains chromium compounds in the booth on a monthly and consecutive 12-month basis. VOC AND HAP LIMITS: 4. Organic HAP emissions from primers shall be limited to an organic HAP content level of no more than 2.9 pounds per gallon [350 g/l] of primer (less water) as applied. This does not include specialty coatings as defined in 40 CFR 63.742 or low-volume coatings as defined in 40 CFR 63.741(g). 5. VOC emissions from primers shall be limited to a VOC content level of no more than 2.9 pounds of VOC per gallon [350 g/l] of primer (less water and exempt solvents) as applied. This does not include specialty coatings as defined in 40 CFR 63.742 or low-volume coatings as defined in 40 CFR 63.741(g). 6. To demonstrate compliance with Condition Nos. 4 and 5 of this Order, Boeing shall keep records of the manufacturer's formulation or Method 24 data showing the total organic VOC content and total organic HAP content for each primer used in the spray booth (less water for organic HAP and less water and exempt solvents for VOC) as applied. SPRAY COATING OPERATIONS: 7. The booth shall be equipped with Purolator Supersorb III three-stage dry filters or a filtration system of equal or better filter efficiency across all overspray particle size ranges as determined by EPA Method 319. Documentation of efficiency shall be maintained on-site and made available for inspection upon request. This is a modification to an existing booth so the requirement to be equipped with these filters is applicable once the changes in the method of operation addressed in this Order have been implemented. Within 30 days of completing the modifications to this booth, Boeing shall submit a written notice that the modification has been completed (e-mail correspondence is acceptable). 8. Boeing shall maintain a pressure drop measurement device, such as a manometer or magnehelic, to measure the pressure drop across the exhaust filters for each spray booth. The upper and lower pressure drop that is acceptable for the effective operation of the filters shall be clearly marked on or nearby the gauge. The minimum pressure drop shall not be less than the pressure drop measured with a clean, properly installed filter. 9. Boeing shall record the pressure drop across the exhaust filters at least once during each month that the booth is in operation. If the pressure drop across the exhaust filters is not within the acceptable		the filter system monthly as part of BACT/tBACT determination. This is not a NESHAP booth (no inorganic HAPs sprayed in this booth). However, permitted for use with chromated paints so retained.

OA	Conditions	Conditions Cancelled and Superseded or Cancelled	Notes
	range, corrective action shall be taken to bring the pressure drop within the acceptable range prior to resuming spray coating activities. 10. Boeing shall check the dry filter systems for proper seating and complete coverage over the exhaust plenum, and shall record the results of this inspection. The inspection shall be conducted at least monthly or at time of use if a spray booth is used less frequently than once per month. If improperly seated filters or incomplete coverage over the exhaust plenum is observed, Boeing shall, as soon as practicable but within 24 hours of initial observation either; correct the problem or, alternatively, shut down the unit until it can be repaired. 11. Spray coating operations shall be conducted using high volume low pressure (HVLP) spray equipment, or other spray equipment with a transfer efficiency that is at least equivalent to HVLP. Documentation of equivalency for non-HVLP spray equipment shall be maintained on-site and available for inspection. RECORDKEEPING: 12. Boeing shall maintain records required by this Order of Approval for five years from the date of generation and made available to Puget Sound Clean Air Agency personnel upon request. GENERAL 13. This Order of Approval No. 10846 supersedes and cancels Order of Approval No. 8669 dated May 16, 2002.		

In addition, OA 10298 is being modified to remove the reference to 40 CFR 63, Subpart G:

OA	**Conditions**	**Conditions Cancelled**
10298, 5/18/11	3. Boeing Auburn shall meet the applicable requirements of 40 CFR 63 Subpart GG. 4. Spray gun cleaning shall be done using one of the methods described in 40 CFR 63.744(c) or a combination thereof: a. Enclosed system b. Nonatomized Cleaning c. Disassembled cleaning d. Atomized Cleaning. 5. At no time may solvent discharged from gun cleaning be atomized into the open air or through the exhaust filters.	Condition 3 cancelled.

OA	Conditions	Conditions Cancelled
	6. Organic solvents used for cleanup of equipment must be collected and returned to closed containers after every use.	

Permit History

These are existing spray booth that will remain permitted under their existing NOCOA. The only revision is to the condition in each NOCOA that requires Boeing Auburn to read and record the pressure drop across the filter bank.

B. DATABASE INFORMATION

No change since the booths will continue to be permitted under the same NOCOA. The single condition will be cancelled and superseded in this Order and this change will be reflected in the AOP renewal.

New NSPS due to this NOCOA?	**No**		
New NESHAP due to this NOCOA?	**Yes**	**Applicable NESHAP: GG**	**Delegated? Y**
New Synthetic Minor due to this NOCOA?	**No**		

As part of this review, the Agency will verify the updated condition is consistent with the NESHAP.

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	
Modification to Existing Permit Conditions exclusive to recordkeeping (10 @$650)	$6,500	
NESHAP	$1,050	
Filing received		$ 3,000 (5/15/2024)
Additional fee received		$7,550 (4/30/2024)
Total		**$10,550**

Registration Fees:
Registration fees are assessed to the facility on an annual basis. Fees are assessed in accordance with Regulation I, Section 7.07. There are no changes to the annual fee based on this revision.

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.

A new SEPA determination is not required because the potential impacts from this project were reviewed under SEPA by the Puget Sound Clean Air Agency and a DNS was issued by the Agency with the Order on the date of Order issuance. This includes the following NOCOAs:

- Order of Approval No. 7279, 2/24/1998
- Order of Approval No. 7302, 3/31/1998
- Order of Approval No. 7639, 12/15/1998
- Order of Approval No. 7941, 11/2/1999
- Order of Approval No. 7689, 4/9/1999
- Order of Approval No. 8747, 12/19/2002
- Order of Approval No. 8835, 7/1/2003
- Order of Approval No. 10234, 1/11/2011
- Order of Approval No. 10332, 7/14/2011
- Order of Approval No. 10846, 10/23/2014

A copy of this DNS is included below and is being relied upon for this project.


7279-dns.pdf


7941-dns.pdf


7302-dns.pdf


7689-dns.pdf


10846-dns.pdf


10234-dns.pdf


7639-dns.pdf

The determination for NOCOA 8747 is included in the electronic NOC folder but would not embed in this file.

The DNS for NOCOA 8835 is not in the file, but I verified a checklist was submitted and the DNS action was documented.

For NOCOA 10332, the Agency relied on SEPA determination issued under NOCOA 8029 since this was a modification to the spray booth and did not change the results of the SEPA determination.


8029-dns.pdf

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.

F. BEST AVAILABLE CONTROL TECHNOLOGY (BACT) REVIEW

Analysis

This is a change to the monitoring and does not impact source operations or increase emissions of any pollutants

G. EMISSION ESTIMATES

Proposed Project Emissions

Potential Emissions

No change in emissions

H. OPERATING PERMIT OR PSD

The facility is a Title V "**air operating permit source**" and conditions of this Order will be incorporated into the AOP renewal. The Agency is currently in the process of renewing the AOP. This action will occur concurrently with the AOP renewal.

I. AMBIENT TOXICS IMPACT ANALYSIS

No emission increases

J. APPLICABLE RULES & REGULATIONS

Federal

40 CFR 63, Subpart G Aerospace NESHAP

40 CFR 63.745(g) Inorganic HAP emissions

Except as provided in paragraph (g)(4) of this section, each owner or operator of a new or existing primer, topcoat, or specialty coating application operation subject to this subpart in which any of the coatings that are spray-applied (as defined in § 63.742) and contain inorganic HAP, shall comply with the applicable requirements in paragraphs (g)(1) through (3) of this section.

(1) Apply these coatings in a booth, hangar, or portable enclosure in which air flow is directed downward onto or across the part or assembly being coated and exhausted through one or more outlets.

(2) Control the air stream from this operation as follows:

<filter requirements for existing and new sources in i, ii, iii>

(iv) If a dry particulate filter system is used, the following requirements shall be met:

(A) Maintain the system in good working order;

(B) Install a differential pressure gauge across the filter banks;

(C) Continuously monitor the pressure drop across the filter and read and record the pressure drop once per shift, or install an interlock system that will automatically shut down the coating spray application system if the pressure drop exceeds or falls below the filter manufacturer's recommended limit(s); and

(D) Take corrective action when the pressure drop exceeds or falls below the filter manufacturer's recommended limit(s).

(v) *<requirements for waterwash system – not applicable to Boeing Auburn>*

(3) If the pressure drop across the dry particulate filter system, as recorded pursuant to §63.752(d)(1), is outside the limit(s) specified by the filter manufacturer or in locally prepared operating procedures, shut down the operation immediately and take corrective action… The operation shall not be resumed until the pressure drop or water flow rate is returned within the specified limit(s).

40 CFR 749 Compliance dates and determinations

40 CFR 749(e) Inorganic HAP emissions – primer, topcoat, and specialty coating application operations For each primer, topcoat, or specialty coating application operation that emits inorganic HAP, the operation is in compliance when:

(1) It is operated according to the requirements specified in § 63.745(g)(1) through (g)(3); and

(2) It is shut down immediately whenever the pressure drop or water flow rate is outside the limit(s) established for them and is not restarted until the pressure drop or water flow rate is returned within these limit(s), as required under § 63.745(g)(3).

40 CFR 63.751 Monitoring requirements

(c) ***Dry particulate filter, HEPA filter, and waterwash systems—primer, topcoat, and specialty coating application operations*.**

(1) Each owner or operator using a dry particulate filter system to meet the requirements of § 63.745(g)(2) shall, while primer, topcoat, and specialty coating application operations are occurring, continuously monitor the pressure drop across the system and read and record the pressure drop once per shift following the recordkeeping requirements of § 63.752(d), or install an interlock system as specified in § 63.745(g)(2)(iv)(C).

40 CFR 63.752 Recordkeeping requirements

(d) ***Primer, topcoat, and specialty coating application operations—inorganic HAP emissions*.**

(1) Each owner or operator complying with § 63.745(g) for the control of inorganic HAP emissions from primer, topcoat, and specialty coating application operations through the use of a dry particulate filter system or a HEPA filter system shall record the pressure drop across the operating system once each shift during which coating operations occur.

(2) …

(3) This log shall include the acceptable limit(s) of pressure drop, water flow rate, or for the pumpless waterwash booth, the booth manufacturer recommended parameter(s) that indicate the booth performance, as applicable, as specified by the filter or booth manufacturer or in locally prepared operating procedures.

40 CFR 63.753 Reporting requirements

(c) ***Primer, topcoat, and specialty coating application operations.*** Each owner or operator of a primer or topcoat application operation subject to this subpart shall submit the following information:

(1) Semiannual reports occurring every 6 months from the date of the notification of compliance status that identify:

(i) …

(ii) …

(iii) …

(iv) …

(v) …

(vi) All times when a primer or topcoat application operation was not immediately shut down when the pressure drop across a dry particulate filter or HEPA filter system, the water flow rate through a conventional waterwash system, or the recommended parameter(s) that indicate the booth performance for pumpless systems, as appropriate, was outside the limit(s) specified by the filter or booth manufacturer or in locally prepared operating procedures;

(vii)

(2) Annual reports beginning 12 months after the date of the notification of compliance status listing the number of times the pressure drop or water flow rate for each dry filter or waterwash system, as applicable, was outside the limit(s) specified by the filter or booth manufacturer or in locally prepared operating procedures.

K. PUBLIC NOTICE

This project does not meet the criteria for mandatory public notice under WAC 173-400-171(3). However, since this Order will impact specific conditions in the operating permit renewal, the Order will be included in the public notice with that renewal. The public comment period for this Order is May 10 through June 10, 2024.

In addition, 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
Boeing Commercial Airplane Auburn	700 15th St SW, Auburn, WA 98002	The applicant has requested the Agency update several permits for existing spray booths to include language for use of an interlock system to be used instead of reading and recording pressure drop across dry filters to be consistent with federal regulations.	4/16/24	Maggie Corbin

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. For spray booths permitted under Orders of Approval No. 7279 issued 2/24/1998, No. 7302 issues 3/31/1998, No. 8747 issued 12/19/02, No. 8835 issued 7/1/2003, No. 10332 issued 7/14/2011, the owner or operator shall read and record the pressure drop once per shift that the booth is in operation, or install an interlock system that will automatically shut down the coating spray application system if the pressure drop exceeds or falls below the filter manufacturer's recommended limit(s). If the pressure drop exceeds or falls below the acceptable pressure drop range, the owner or operator shall take corrective action as specified below:

   a. If spray applying any coating that contains inorganic HAP that is subject to 40 CFR 63.745(g)(2), shut down the operation immediately and take corrective action. The operation shall not be resumed until the pressure drop is returned within the acceptable range.
   b. If not spray applying any coating that contains inorganic HAP that is subject to 40 CFR 63.745(g)(2), take corrective action as soon as practicable but within 24 hours of the initial observation to correct the pressure drop or, alternatively, shut down the unit or activity until it can be repaired.

   Once each calendar quarter, the owner or operator shall check that the pressure gauge and interlock system (if applicable) functions properly and that the pressure drop range is either labeled on the pressure drop log sheets, or posted on or nearby the pressure drop gauge, or shown on an electronic display screen.

4. For spray booths permitted under Orders of Approval No. 7689 issued 4/9/1999, No. 7941 issued 11/2/1999, and No. 10846 issued 10/23/2014, the owner or operator shall read and record the

pressure drop once per shift that the booth is in operation unless all coatings spray applied during that shift have an inorganic HAP concentration of less than 0.1 percent for carcinogens and 1.0 percent for non-carcinogen. If all coatings spray applied during that shift have an inorganic HAP concentration of less than 0.1 percent for carcinogens and 1.0 percent for non-carcinogen, the owner or operator shall read and record the pressure drop once during each month that the booth is in operation. Reading and recording the pressure drop is not required if the owner of operator has installed an interlock system that will automatically shut down the coating spray application system if the pressure drop exceeds or falls below the filter manufacturer's recommended limit(s). If the pressure drop exceeds or falls below the acceptable pressure drop range, the owner or operator shall take corrective action as specified below:

a. If spray applying any coating that contains inorganic HAP that is subject to 40 CFR 63.745(g)(2), shut down the operation immediately and take corrective action. The operation shall not be resumed until the pressure drop is returned within the acceptable range.
b. If not spray applying any coating that contains inorganic HAP that is subject to 40 CFR 63.745(g)(2), take corrective action as soon as practicable but within 24 hours of the initial observation to correct the pressure drop or, alternatively, shut down the unit or activity until it can be repaired.

Once each calendar quarter, the owner or operator shall check that the pressure gauge and interlock system (if applicable) functions properly and that the pressure drop range is either labeled on the pressure drop log sheets, or posted on or nearby the pressure drop gauge, or shown on an electronic display screen.

5. For spray booths permitted under Orders of Approval No. 7639 issued 12/15/1998 and No. 10234 issued 1/11/2011, the owner or operator shall read and record the pressure drop once during each month that the booth is in operation. Reading and recording the pressure drop is not required if the owner of operator has installed an interlock system that will automatically shut down the coating spray application system if the pressure drop exceeds or falls below the filter manufacturer's recommended limit(s). If the pressure drop exceeds or falls below the acceptable pressure drop range, the owner or operator shall take corrective action as soon as practicable but within 24 hours of the initial observation to correct the pressure drop or, alternatively, shut down the unit or activity until it can be repaired.

   Once each calendar quarter, the owner or operator shall check that the pressure gauge and interlock system (if applicable) functions properly and that the pressure drop range is either labeled on the pressure drop log sheets, or posted on or nearby the pressure drop gauge, or shown on an electronic display screen.

6. Upon issuance, this Order of Approval cancels and supersedes Order of Approval No. 7279, Condition Nos. 4 and 5, dated 2/24/1998, Order of Approval No. 7302, Condition Nos. 4 and 5, dated 3/31/1998, Order of Approval No. 7639, Condition No. 4, dated 12/15/1998, Order of Approval No. 7689, Condition No. 4, dated 4/9/1999, Order of Approval No. 7941, Condition No. 4, dated 11/2/1999, Order of Approval No. 8747, Condition No. 7, dated 12/19/2002, Order of Approval No. 8835, Condition No. 6, dated 7/1/2003, Order of Approval No. 10234, Condition No. 6, dated 1/11/2011, Order of Approval No. 10332, Condition Nos. 5 and 6, dated 7/14/2011, and Order of Approval No. 10846, Condition No. 9, dated 10/23/2014.

7. Upon issuance, this Order of Approval cancels Order of Approval No. 7279, Condition No. 6, dated 2/24/1998, Order of Approval No. 8747, Condition No. 4, dated 12/19/2002, Order of Approval No.

8835, Condition No. 4, dated 7/1/2003, and Order of Approval No. 10298, Condition No. 3, dated 5/18/2011.

M. CORRESPONDENCE AND SUPPORTING DOCUMENTS

On April 17, 2024, I requested additional information on the proposed changes. Eric Daley responded on April 18, 2024 (responses in green). This e-mail has been saved to the electronic NOC folder and considered supplemental information:

Madeleine and Eric,

I'm looking at the NOC application for the updates to several Orders of Approval to allow for the use of an interlock system and I had a few questions:

1. I believe you said these booths have interlock systems installed already. The proposed language reads like the interlock system may or may not be installed/used. Please verify if the interlock system is installed on each booth and if it is in use already. Interlocks are installed and in use at all of our spray booths referenced in the application we submitted, as well as at other production booths where we spray apply coatings subject to the inorganic HAP filter standards of the Aerospace NESHAP. If / when the AOP and updated NOC language allows for interlocks as a method of compliance, we plan to rely on the interlock system as a potential backup in case the existing differential pressure logging system fails. Over time, we may transition to relying on interlocks as our primary compliance monitoring system.
2. If interlock system is in use already, how often are you finding the system is shutting down the spray application system? It is uncommon that the interlock system results in a shut down of operations – less than once a year in my experience. Boeing relies on a vendor to check filter differential pressure on a nightly basis, and to make filter change outs as appropriate. The goal is to not disrupt production.
3. How do you know that the interlock system is working properly? Is there routine maintenance to check that? I'm assuming the inspector would still be able to read the differential gauge during an on-site inspection, but are there records that they could review to determine the system is working properly? As described above, interlocks have engaged at times on booths resulting in supply air to spray guns being shut off. Inspections to confirm operability of the interlocks would be part of our compliance program. The pressure gauges would remain in place as our filter vendor relies on readings to determine anticipate upcoming filter replacements. It is important that we replace filters before differential pressure limits are met in order to avoid disruptions to production. They would be accessible to an agency inspector.

For the interlock system, the language in the permit condition should be consistent with the language in the Aerospace NESHAP – "…an interlock system that will automatically shut down the coating spray application system if the booth parameters are outside the parameter range in the manufacturer's recommendations."

parameters are outside the parameter range in the manufacturer's recommendations.

The language you cited is from 40 CFR 63.745(g)(2)(v), the interlock language that applies to water wash booths. Since all of our booths rely on dry particulate filter systems, it would be more appropriate to cite the language from 40 CFR 63.745(g)(2)(iv)(C):

"… an interlock system that will automatically shut down the coating spray application system if the pressure drop exceeds or falls below the filter manufacturer's recommended limit(s)"

In contrast to that language, our application includes the following language:

"… an interlock system that will automatically shut down the spray booth if the pressure drop falls below or above the specified pressure drop range"

I've underlined the three differences that I noted:

1. You are correct that the application should have used the term "coating spray application system" instead of "spray booth"
2. The application uses the term "falls below or above". To match the ANESHAP language, it would make sense to replace that term with "exceeds or falls below" from the ANESHAHP
3. The application uses "specified pressure drop range" in place of "filter manufacturer's recommended limit(s)" in order to match this language from the AOP

The acceptable pressure drop range shall be established using either the manufacturer's recommendations, specifications, or instruction; or shall be based on providing adequate air flow while maintaining filter integrity based on the specific design of the system. If the manufacturer's recommendations, specification, or instructions are not utilized, the low end of the range, with the exception of filter banks which have a clean filter pressure drop less than or equal to 0.03 inches of water, will be established at no less than 50 percent of the clean filter value. For filters with the clean pressure drop less than or equal to 0.03 inches of water, the low end of the range may be set at zero. The high end will be established based on operational experience to allow for adequate air flow in the specific paint booth or hangar, but no higher than the point at which the filter will fail.

The applicant submitted comments on May 3, 2024 which are included in the Agency EMS and the electronic NOC folder. Based on the comment, the booths have been broken into three different conditions depending on the following scenarios:

1. The BACT/tBACT determination originally required the owner or operator determine and record differential pressure across the filter bank system each shift (same as NESHAP) regardless of the type of coating spray applied in the booth (condition 3);
2. The BACT/tBACT determination only required monitoring when coatings contained inorganic HAP in which case the condition defaults to monthly reading and recording of differential pressure across the filter bank system (Condition 4); or
3. The BACT/tBACT determination only address booths that are not spray applying inorganic HAPs, but did include a requirement to read and record the differential pressure across the filter bank system (Condition 5).

For all these scenarios, Boeing Auburn has the option to use the interlock system instead of reading and recording pressure drop.

N. REVIEWS

Reviews	Name	Date
Engineer:	Maggie Corbin	4/24/2024
Inspector:	Chris Kitchen/Alasdair Graham	4/26/2024
Second Review:	John Dawson	4/25/2024
Applicant Name:	Madeleine McDonald	5/3/2024