Statement of Basis for
Boeing Commercial Airplane Group Frederickson
Operating Permit 17771, Renewal #1
Issuance Date TBD

List of Abbreviations

ANESHAP	National Emissions Standard for Aerospace Manufacturing and Rework Facilities
AOP	Air Operating Permit
CFR	Code of Federal Regulations
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
EU	Emission Unit
HAP	Hazardous Air Pollutants
NESHAP	National Emissions Standard for Hazardous Air Pollutants
NO_x	Oxides of Nitrogen
NOCOA	Notice of Construction Order of Approval
NSPS	New Source Performance Standard
O&M Plan	Operation and Maintenance Plan
OA	Order of Approval
PSCAA	Puget Sound Clean Air Agency
PSD	Prevention of Significant Deterioration
RCW	Revised Code of Washington
RICE	Reciprocating Internal Combustion Engine
SIP	State Implementation Plan
VOC	Volatile Organic Compounds
WAC	Washington Administrative Code

1 Purpose of the Statement of Basis

This document summarizes the legal and factual basis for the permit conditions in the Air Operating Permit (AOP) to be issued to the Boeing Commercial Airplane Group Frederickson (Boeing Frederickson) facility under the authority of the Washington Clean Air Act, Chapter 70.94 Revised Code of Washington (RCW), Chapter 173-401 of the Washington Administrative Code (WAC), and the Puget Sound Clean Air Agency (PSCAA) Regulation I, Article 7. Unlike the permit, this document is not legally enforceable. It includes references to the applicable statutory or regulatory provisions that relate to Boeing Frederickson's air emissions and provides a description of the activities taking place at Boeing Frederickson, including a compliance history.

2 Source Description

2.1 Why Boeing Frederickson is an AOP Source

An operating permit is required for any source with actual or potential emissions at or above the major source threshold for any "air pollutant". Boeing Frederickson qualifies as a major source and is required to obtain an operating permit because it emits more than 100 tons per year (tpy) of volatile organic compounds (VOCs), more than 25 tpy of total hazardous air pollutants (HAPs), and more than 10 tpy of certain specifics.

Boeing Frederickson submitted an updated analysis of potential emissions on July 18, 2019 as part of the operating permit renewal process. VOC and HAP emissions are from solvent cleaning, specialty coating use, and primer and topcoat operations. Emissions come from two buildings, also described as Manufacturing Business Units (MBU), namely the Composites Manufacturing Center (CMC) and Skin & Spar (S&S). Potential emissions of VOC and HAP are estimated based on the maximum capacity. Boeing Frederickson identified each limiting operation at each MBU. For CMC, the autoclaves operation is the limiting factor and for the S&S, the aluminum anodizing tankline is considered the limiting factor.

A summary of potential VOC and HAP emissions is provided below:

	VOC (tpy)	HAP (tpy)	Assumptions
CMC	13.91	3.79	Three autoclaves have a capacity to run 2737.5 loads per year (2.5 loads per day)
S&S	110.64	30.17	Maximum capacity of anoziding tankline is 6.7 batches per shift for total annual batches of 7336.
Total	124.55	33.96	

In addition, actual annual emissions of individual HAP toluene have exceeded the 10 ton per year threshold for a single HAP, so potential emissions would also exceed this threshold.

Potential emissions of particulate matter (PM_{10}) do not exceed the 100 tpy threshold. Sources of particulate matter are machining, sanding, deburring, drilling, routing, shot peening, and other forms of manufacturing support activities. Boeing estimated potential emissions of PM10 to be approximately 14 tpy.

Potential emissions of carbon monoxide (CO) and nitrogen oxides (NO_x) are also below major source thresholds. Both are generated mainly by combustion sources from boilers, autoclaves, furnaces, and building HVAC systems that use natural gas, and by emergency generators and non-road engines that combust diesel fuel. Boeing estimated that potential emissions of CO are 36 tons per year and NO_X are 47 tpy.

2.2 Emission Inventory

The following table summarizes the HAP, TAC, and VOC emissions from Boeing Frederickson over the last five years. The information is presented in tons per year. Other criteria pollutants were not reported to the Agency since emissions do not exceed our reporting thresholds.

Table 1. Emission inventory summary 2013-2017, tpy

Pollutant	2014	2015	2016	2017	2018
HAP	17.0	14.3	11.8	11.9	12.8
TAC	26.8	23.5	24.9	18.0	26.2
VOC	61.1	46.7	50.0	57.4	42.5

2.3 Process Description

Boeing Commercial Airplane's Frederickson facility is located at 18001 Canyon Road East, Puyallup, Washington. The Boeing Frederickson facility consists of two major manufacturing business units - composite manufacturing center and skin and spar. Composite manufacturing center is at building 24-50 and occupies approximately 432,000 square feet.

The Composites Manufacturing Center (CMC) MBU fabricates and assembles composite structures for Boeing commercial airplanes. Specifically vertical fins and horizontal stabilizers (empennage) for 777X and 787 model airplanes. Manufacturing processes include prepreg tape laying machines, bagging of preassembled skin panels and chords, autoclave curing, debagging of cured composite parts, cutting and cleaning of cured parts, application of primer and topcoat to skin panels, and final assembly of vertical fins and horizontal stabilizers, which are shipped to Boeing Everett for final airplane assembly.

Skin and spar is located at building 24-60 and occupies approximately 914,000 square feet. Skin and spar fabricates most of the major components of the aluminum material wing structures (skins and spars) for all commercial airplanes. Major processes at skin and spar include machining, deburring, hand finishing, forming, shot peening, chemical processing (penetrant inspection and aluminum anodizing), painting, and kitting of wing components to be shipped to Boeing Renton and Boeing Everett for final airplane assembly.

3 Review of Permit Application

3.1 Initial AOP

Initial AOP: The original AOP was issued on January 20, 2002, with an expiration date of June 20, 2007. In July 2002, Boeing submitted to the Pollution Control Hearings Board (PCHB) a Notice of Appeal and Request for Stay of Effectiveness of Challenged Provisions and a Motion for Stay of Proceedings (PCHB No. 02-084), pertaining to the AOP for Boeing Frederickson. PSCAA and Boeing entered into settlement discussions to resolve the concerns Boeing raised in its appeal. A settlement agreement was signed on January 5, 2003. As part of the settlement agreement PSCAA agreed to reopen the permit for cause under Section VI.F - Reopening for Cause (WAC 173-401-730), and propose agreed upon changes to address Boeing's concerns. A modified permit was issued on January 9, 2004.

Administrative Amendments: Administrative modifications were issued to change names of responsible officials and/or plant contacts. Requests for these changes were received by the Agency on April 28, 2004, February 25, 2011, and May 13, 2016. And administrative amendment received on September 3, 2019 was incorporated into this renewal (change in responsible official).

3.2 Renewal

A renewal application letter was received on June 20, 2006, and a completeness letter was issued on June 27, 2006. Boeing Frederickson has been operating under the application shield provision of WAC 173-400-705(2). Changes made to specific sections are described within the appropriate requirement descriptions below throughout this Statement of Basis.

3.3 Notice of Construction Orders of Approval

A Notice of Construction Order of Approval (NOCOA) is required of any new or modified air pollution source unless exempted in Regulation I, Section 6.03(b) and (c). Table 3 summarizes the NOCOAs issued since the original Boeing Frederickson operating permit was issued on January 20, 2002.

Table 3. NOCOA issued to Boeing Frederickson since June 20, 2002

NOCOA	Date Issued	Notes
10380	10/30/11	One Torit Model RFT Dust Collector, 8,400 cfm, controlling emissions from a Briquetter which collects, compacts, and recycles aluminum chips from aluminum milling operations in the 24-60 Building.
11792	11/20/19	One Dustex CJUD - 12500 Abrasive Dust Collector at 60,000 cfm to collect dust from the Sand/Fill Booth for Composite Parts, and one Detail Paint Booth at 102,000 cfm (75F), and one electric Detail Paint Cure Oven at 4,000 cfm (400F) all located in the Composites Building 24-50. This NOCOA cancels and supersedes NOCOA 4736 and was issued for a change of method of operation in the existing spray booth.

In addition, Boeing provided notification in accordance with Regulation I, Section 6.03(b)(7) for installation of two jet-pulse baghouses (1090N (1/12/17) and 1091N (1/12/17).

Changes made for AOP Renewal: The NOCOA and notifications were added to the AOP. Orders of Approval that have been cancelled and superseded or are obsolete have been removed from the permit.

4 Compliance History

Boeing Frederickson has been inspected at least annually by PSCAA since 1992. The compliance history for Boeing Frederickson since June 2002 is summarized below. Notices of Violation (NOVs) and Written Warnings (WWs) issued to the facility are listed in chronological order.

Table 4 NOVs and Written Warnings issued since previous permit issuance

WW or NOV #[1]	Violation Date	Issue Date	Closed by Agency?	Applicable Reg. or permit[3]	Comments
NOV 3-006308	1/1/06	4/4/13	Yes	Regulation I, Section 7.05. AOP 17771, II.A.2(d)(i)	Enclosed gun cleaner installed in January 2006 and no monthly inspections were performed until July 2011.
NOV 3-005604	4/26/10	1/6/11	Yes	Regulation I, Section 7.05. AOP 17771, I.B.2, EU 2.62, EU 2.69, EU 2.84 and V.Q.1(a) and (b)	Operating spay booth with pressure drop outside of acceptable range. Malfunction not reported to supervisor.
NOV 3-006316	6/10/13	9/11/13	Yes	Regulation I, Section 7.05. AOP 17771, EU 2.69 and II.A.2(h)(ii)	Failure to record spray booth pressure drop at booth MSS 60107
WW 2-010306	5/21/19	6/11/19	Yes	Regulation I, Section 7.05. AOP 17771, EU 1.2 and I.B.1.	Pressure gauges for two packed bed scrubbers were observed reading outside of the posted operational range.
NOV 4-043608	6/7/19	8/28/19	No	Reg III, Section 4.02(a)	Failed to complete an asbestos survey by an AHERA building inspector prior to work on a project.

Notes: [1] Written warnings are numbered with a 2- prefix; Notices of Violation have a 3- or a 4- prefix.
[2] Corrective actions were satisfactorily completed by Boeing
[3] Requirement number (EU No.) was current as of time of NOV or WW issuance, but may have been changed in subsequent permits.

5 Compliance Assurance Monitoring

The Compliance Assurance Monitoring (CAM) rule in 40 CFR Part 64 requires owners and operators to monitor the operation and maintenance of their control equipment so that they can evaluate the

performance of their control devices and report whether or not their facilities meet established emission standards. If owners and operators of these facilities find that their control equipment is not working properly, the CAM rule requires them to take action to correct any malfunctions and to report such instances to the appropriate enforcement agency (i.e., state and local environmental agencies). Additionally, the CAM rule provides some enforcement tools that allow state and local environmental agencies to require facilities to respond appropriately to the monitoring results and improve pollution control operations.

A CAM plan is required for each federally enforceable applicable standard for each emission unit that meets the following criteria:

1. The unit uses a control device to achieve compliance.
2. The potential pre-control emissions of the applicable pollutant from the unit are at least 100% of the major source amount (100 tpy).
3. The applicable requirement is not otherwise exempt by rule, such as by a New Source Performance Standard (NSPS) or National Emission Standard for Hazardous Air Pollutants (NESHAP) proposed after November 15, 1990, or stratospheric ozone requirements.

Boeing Frederickson submitted an updated CAM analysis on July 18, 2019 to support this operating permit renewal.

Table 5 was provided by Boeing Frederickson in their updated CAM analysis. The analysis included a review of the four chemical process tankline scrubbers, the two spray coating booths at the facility, particulate control equipment, and abrasive blasting operations. Fuel burning equipment are exempt from the CAM Plan requirements because they meet emission limits using low-polluting fuel (natural gas). The use of low-polluting fuel or feedstocks, or the use of combustion or other process design features or characteristics to control or limit emissions are exempt, drying and curing operations were reviewed but are not required to have a CAM Plan because they do not have control equipment.

Table 5. CAM applicability

Bldg.	Col./Dr.	MSS ID#	Source Description	Emission limitation or standard other than exempt limitations and standards for the applicable regulated air pollutant	Control device to achieve compliance with any such emission limitation or standard?	Does the unit have the potential pre-control device emissions > 100% of the tpy amount to be classified as a major source?
				40 CFR 64.2 (a)(1)	40 CFR 64.2(a)(2)	40 CFR 64.2(a)(3)
Chemical Process Tankline Operations						
24-60	M/N 1.7	59998	Penetrant	PM (0.05gr/dscf)	Scrubber	No
24-60	M/N 1.7	59999	Penetrant	PM (0.05gr/dscf)	Scrubber	No
24-60	M-N4.8	60100	Boric-Sulfuric Anodize	PM (0.05gr/dscf)	Scrubber	No
24-60	M-N4.8	60101	Boric-Sulfuric Anodize	PM (0.05gr/dscf)	Scrubber	No

Bldg.	Col./Dr.	MSS ID#	Source Description	Emission limitation or standard other than exempt limitations and standards for the applicable regulated air pollutant	Control device to achieve compliance with any such emission limitation or standard?	Does the unit have the potential pre-control device emissions > 100% of the tpy amount to be classified as a major source?
				40 CFR 64.2 (a)(1)	40 CFR 64.2(a)(2)	40 CFR 64.2(a)(3)
Coating, Cleaning, and Depainting Operations						
24-50	C.5/3.5	59279	ANESHAP - Spray Booth	PM (0.05gr/dscf)	Dry Filter	No
24-60	M/N 5.7	60107	ANESAHP – Spray Boot	PM (0.05gr/dscf)	Dry Filter	No

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				40 CFR 64.2 (a)(1)	40 CFR 64.2(a)(2)	40 CFR 64.2(a)(3)
Fuel Burning Equipment						
24-40	Central Plant	58919	Boiler #2, 27 MMBtu/hr, gas fired	PM (0.05gr/dscf), NOx 0.1lb/MMBtu, SO_2 1000ppmv	No	N/A
24-40	Central Plant	58920	Boiler #1, 27 MMBtu/hr, gas fired	PM (0.05gr/dscf), NOx 0.1lb/MMBtu, SO_2 1000ppmv	No	N/A
24-40	Central Plant	62026	Boiler #3, 27 MMBtu/hr, gas fired	PM (0.05gr/dscf), NOx 0.1lb/MMBtu, SO_2 1000ppmv	No	N/A

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				40 CFR 64.2 (a)(1)	**40 CFR 64.2(a)(2)**	**40 CFR 64.2(a)(3)**
Fuel Burning Equipment (non-NSPS)						
24-50	A4, B4	61401	Autoclave,35.2 MMBtu/hr,gas fired	PM (0.05gr/dscf), NOx 0.1lb/MMBtu, SO_2 1000ppmv	No	N/A
24-50	A4, B4	61402	Autoclave,35.2 MMBtu/hr,gas fired	PM (0.05gr/dscf), NOx 0.1lb/MMBtu, SO_2 1000ppmv	No	N/A
24-50	C4	61403	Autoclave,15.3 MMBtu/hr,gas fired	PM (0.05gr/dscf), NOx 0.1lb/MMBtu, SO_2 1000ppmv	No	N/A

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				40 CFR 64.2 (a)(1)	40 CFR 64.2(a)(2)	40 CFR 64.2(a)(3)
Cyclones, Baghouses, and Other Particulate Control Operations						
24-50	A4.3 O/S	4473	Sand fill booth	PM (0.05gr/dscf)	Baghouse	No
24-60	C-E/1 O/S	59176	Spar Mill	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	D.9/1	59177	Floor Sweep #3	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	C-E/1 O/S	59179	Spar Mill	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	C-E/1 O/S	59181	Spar Mill	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	E.9/1	59183	Floor Sweep #4	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	C-E/1 O/S	59186	Spar Mill	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	C-E/1 O/S	59188	Spar Mill	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	G.9/1	59189	Floor Sweep #5	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	J2	59199	Spar Deburring	PM (0.05gr/dscf)	Baghouse	No
24-60	Col K2	59201	Shot Peening	PM (0.05gr/dscf)	Baghouse	No
24-60	D.3/8	59206	Floor Sweep #2S	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	C8	59217	Floor Sweep #1S	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	M/N 2.3	4457	Penetrant Developer	PM (0.05gr/dscf)	Baghouse	No
24-60	O/S L7.5, 7.3	59247	Shot Peening	PM (0.05gr/dscf)	Baghouse	No
24-60	O/S L7.5, 7.3	59248	Shot Peening	PM (0.05gr/dscf)	Baghouse	No
24-60	O/S L7.5, 7.3	59249	Shot Peening	PM (0.05gr/dscf)	Baghouse	No
24-60	O/S L7.5, 7.3	59250	Shot Peening (Edge)	PM (0.05gr/dscf)	Baghouse	No
24-60	W Of A3	20262	Briquetter N Surge Bin	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	W Of A3	20263	Briquetter C Surge Bin	PM (0.05gr/dscf)	No – Material Handling	N/A

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				40 CFR 64.2 (a)(1)	40 CFR 64.2(a)(2)	40 CFR 64.2(a)(3)
Cyclones, Baghouses, and Other Particulate Control Operations						
24-60	W Of A3	20264	Briquetter S Surge Bin	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	W Of A3	20253	Briquetter #4 Surge Bin	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	O/S G-H.1	13435	Spar Mill	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	O/S C.5/.8	13437	Spar Mill	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	O/S K2	59192	Drill Router #2	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	O/S K2	59196	Drill Router #4	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	O/S K2	59198	Drill Router #3	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	0/S B.9-D.1/8	59207	Skin Mill #5	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	0/S B.9-D.1/8	59209	Skin Mill #6	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	0/S B.9-D.1/8	59211	Skin Mill #4	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	0/S B.9-D.1/8	59213	Skin Mill #3	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	0/S B.9-D.1/8	59215	Skin Mill #1	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	0/S B.9-D.1/8	59220	Skin Mill #2	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	West Of A3	60723	Shredder/Briquetter	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	West Of A3	60727	Shredder/Briquetter	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	Dr. W4	59166	Pull Thru spar Mill W-1	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	O/S,C-E/1	59157	Spar Mill	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	O/S, C-E/1	59162	Spar Mill	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	O/S, C-E/1	59170	Spar Mill	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	O/S, C-E/1	59164	Spar Mill	PM (0.05gr/dscf)	No – Material Handling	N/A

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				40 CFR 64.2 (a)(1)	40 CFR 64.2(a)(2)	40 CFR 64.2(a)(3)
Cyclones, Baghouses, and Other Particulate Control Operations						
24-60	O/S, C-E/1	59173	Spar Mill	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	O/S, C-E/1	59174	Spar Mill	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	B.8/1	59159	Floor Sweep #1	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	D.1/1	59168	Floor Sweep #2	PM (0.05gr/dscf)	No – Material Handling	N/A
24-50	O/S E	62075	Composite Vac System	PM (0.05gr/dscf)	Baghouse/Cyclone	No
24-50	Dr. E9	19396	Composite Vac System	PM (0.05gr/dscf)	Baghouse	No
24-50	O/S E	62077	Composite Vac System	PM (0.05gr/dscf)	Wet Particulate Scrubber	No
24-50	O/S E	62078	Composite Vac System	PM (0.05gr/dscf)	Baghouse	No
24-50	O/S N	20288	Composite Vac System	PM (0.05gr/dscf)	Baghouse/Cyclone	No
24-50	O/S E	20372	Composite Vac System	PM (0.05gr/dscf)	Baghouse/Cyclone	No
24-50	O/S E	20373	Composite Vac System	PM (0.05gr/dscf)	Baghouse/Cyclone	No
24-50	O/S E	62081	Composite Vac System	PM (0.05gr/dscf)	Baghouse	No
24-50	O/S E	62082	Composite Vac System	PM (0.05gr/dscf)	Baghouse	No
24-50	O/S W	62083	Composite Vac System	PM (0.05gr/dscf)	Baghouse	No
24-50	O/S W	62084	Composite Vac System	PM (0.05gr/dscf)	Baghouse	No
24-50	O/S W	62085	Composite Vac System	PM (0.05gr/dscf)	Baghouse	No

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				40 CFR 64.2 (a)(1)	40 CFR 64.2(a)(2)	40 CFR 64.2(a)(3)
Cyclones, Baghouses, and Other Particulate Control Operations						
24-60	M-7	64932	Load Bar Abrasive Blasting	PM (0.05gr/dscf)	Baghouse	No
24-60	E 5/7	60169	High Velocity Vac System	PM (0.05gr/dscf)	Baghouse	No
24-60	East side	19027	Double plus Chord	PM (0.05gr/dscf)	Mist collector	No
24-60	East side	19028	Double Plus Chord	PM (0.05gr/dscf)	Mist collector	No
24-60	K-2	19167	Shot Peening	PM (0.05gr/dscf)	Baghouse	No
24-60	O/S S9	17713	Skin Mill #7	PM (0.05gr/dscf)	Baghouse	No
24-60	O/S, Dr. E-9	60219	Shot Peening	PM (0.05gr/dscf)	Baghouse/Cyclone	No
24-60	O/S NW	19067	High Speed Spar Mill #1	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	O/S NW	19138	High Speed Spar Mill #2	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	O/S NW	19249	High Speed Spar Mill #3	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	O/S West Side	19178	High Speed Plate Mill	PM (0.05gr/dscf)	No – Material Handling	N/A
24-60	Dr. W-3	19356	Chords Milling	PM (0.05gr/dscf)	Cyclone/Mist Eliminator	No
24-60	O/S W	20287	High Speed Plate Mill #8	PM (0.05gr/dscf)	Baghouse	No
24-60	Dr. E7	20376	Double Plus Shot Peening	PM (0.05gr/dscf)	Baghouse	No
24-60	Dr. W3	22163	Double Plus Mill #4	PM (0.05gr/dscf)	Baghouse	No
24-60	Dr. W3	20433	Makino Chords Mills	PM (0.05gr/dscf)	Baghouse	No

6 Explanation of Applicable Requirements

Applicable requirements are listed in several sections of this operating permit as outlined below. The permit only lists the requirements that PSCAA has determined to be within the scope of the definition of "applicable requirements" under the operating permit program. Boeing Frederickson is legally responsible for complying with all applicable requirements of the operating permit as well as other requirements that do not fit the definition of "applicable requirements" found in Chapter 173-401 Washington Administrative Code (WAC).

6.1 Applicable Requirements

Boeing Frederickson is subject to all the requirements listed in all the tables contained in Section I of the permit.

6.2 Section I.A.1 (PSCAA and Ecology Facility-Wide Applicable Requirements)

Section I.A.1 contains PSCAA and Washington Department of Ecology (Ecology) requirements that apply facility-wide. The table in Section I.A.1 contains the citation and adoption or effective date for each requirement, along with a paraphrased description of the requirement, monitoring, maintenance and recordkeeping requirements, and any applicable reference test method.

The requirement number in the first column and the requirement paraphrase in the third column are for information only and are not enforceable. In the event of conflict or omission between the information contained in the third column and the actual statute or regulation cited in the second column, the requirements and language of the actual statute or regulation cited shall govern. For more information regarding any of the requirements cited in the second column, refer to the actual requirements cited.

The actual enforceable requirement and adoption or effective date(s) are in the second column. In some cases, the effective dates of the "Federally Enforceable" requirement and the "*State only*" requirement are different because either the state (or local authority) has not submitted the regulation to the Environmental Protection Agency (EPA) for approval into the State Implementation Plan (SIP), or the state (or local authority) has submitted it and the EPA has not yet approved it. "*State only*" adoption dates are in italicized font, and shall be understood to include the Ecology and PSCAA. When the EPA does approve the new requirement into the SIP, the old requirement will be replaced and superseded by the new requirement. This replacement will take place automatically, with no changes being made to the permit until the permit is renewed. The new requirement will be enforceable by the EPA as well as PSCAA from the date that it is adopted into the SIP, and the old requirement will no longer be an applicable requirement.

The fourth column, "Monitoring, Maintenance & Recordkeeping Method," identifies the methods described in Section II of the permit. Following these methods is an enforceable requirement of this permit.

The fifth column, "Reference Test Method," identifies the reference method associated with an applicable emission limit that is to be used if and when a source test is required. Unless otherwise specified in the rules or permit condition, the averaging period for the test method is specified in Section VIII.A. PSCAA Regulation I, Section 3.07(a) states that testing for compliance must follow the current EPA approved methods unless specific methods have been adopted by the PSCAA Board. WAC 173-400-105(4) allows either EPA 40 CFR 60 Appendix A or procedures in Ecology's *"Source Test Manual – Procedures for Compliance Testing" as of July 12, 1990.* These three requirements may conflict if the current method is not listed in the permit. However, EPA seldom significantly changes the Reference Methods and the current method could be used as credible evidence of an emission violation. Finally, major changes in the Reference Test Method may necessitate reopening the permit.

In some cases, monitoring, maintenance and recordkeeping methods have been established under WAC 173-401-615(1)(b) which specifies, "Where the applicable requirement does not require periodic testing or instrumental or noninstrumental monitoring (which may consist of recordkeeping designed to serve as monitoring), periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit, as reported pursuant to subsection (3) of this section. Such monitoring requirements shall assure use of terms, test methods, units, averaging periods, and other statistical conventions consistent with the applicable requirement. Recordkeeping provisions may be sufficient to meet the requirements of this paragraph." The Agency refers to this as "gap-filling". Gap-filling or other monitoring, reporting or recordkeeping added to assure compliance with the terms and conditions of the permit in accordance with WAC 173-401-630(1) are identified in

this document. In determining appropriate gap-filling or sufficiency monitoring, the Agency has evaluated the current state of compliance, the variability of process and emissions, the environmental impacts of problems and other technical considerations.

The requirements included in this table and the associated monitoring, maintenance and recordkeeping methods have not been significantly revised from the existing operating permit. The original basis and any changes are summarized below:

- For several requirements in the table, the permit explicitly states that once EPA deletes the version of an older version of a WAC from the PSCAA SIP, only the PSCAA rule will apply. The current version of the WAC is not included in the permit since WAC 173-400-020(1) states the provisions in this chapter shall apply statewide except where a local authority (in this case, PSCAA) has adopted and implemented corresponding local rules that apply only to sources in the local jurisdiction. This includes the 9/23/93 version of WAC 173-400-040(1)(a) and (b), (5). (6), and (8), and the 3/22/91 version of WAC 173-400-060, Until that time, these WAC requirements are included in the permit since they are in the PSCAA SIP.

- Opacity Requirements: Opacity requirements are included in I.A.1.1. The monitoring, maintenance and recordkeeping requirements have not been changed from the existing operating permit and require quarterly inspections of the facility and response to complaints (gap-filling provisions). The original basis was that most emission units would not normally generate visible emissions so the margin of compliance is large. Additional monitoring requirements apply to specific emission units such as boilers and baghouses that are more likely to generate visible emissions. If Boeing observes visible emissions, the monitoring method allows them to perform corrective action or conduct a Method 9A observation. However, if the Agency conducted a Method 9A observation that demonstrated an exceedance of the standard, that would be a violation of the standard.

  There are specific monitoring provisions for emergency generators used for backup electricity and fire suppression. Emergency generators and generators for fire suppression pumps often have visible emissions, but seldom have visible emissions greater than 20% opacity. If Boeing Frederickson observes visible emissions from an emergency generator or generator for fire suppression pumps, Boeing Frederickson shall check to make sure that the generator is operated and maintained properly and either shut it down within 3 hours or observe visible emissions using Ecology Method 9A within 30 days. Three hours was chosen because these units are usually tested once a month for less than three hours. If they have visible emissions and operate for more than three hours, the permit requires Boeing Frederickson to either determine the opacity during that test or some other test within 30 days. It is not the agency's intention that Boeing Frederickson would have to startup a generator, solely for the purpose of determining opacity.

- Particulate Matter: Particulate matter requirements are included in I.A.1.2 through I.A.1.5. The monitoring, maintenance and recordkeeping requirements have not been changed from the existing operating permit and require quarterly inspections of the facility and response to complaints (gap-filling provisions). Opacity monitoring is used as a surrogate to performing an EPA or PSCAA Method 5, with Boeing Frederickson taking corrective action if any visible emissions are noted. Taking corrective action does not relieve Boeing Frederickson from the obligation to comply with the particulate matter standard itself. If Method 5 testing conducted

by Boeing or the Agency showed an exceedance of the standard, that would be a deviation of the standard regardless of opacity monitoring results.

- For the requirement to maintain equipment in good working order in I.A.1.10, the monitoring method has been revised to refer to facility-wide monitoring and the facility Operation & Maintenance (O&M) Plan requirements. The facility-wide inspections provide monitoring of the general effectiveness of Boeing Frederickson's O&M Plan. This general monitoring and compliance with the O&M Plan provides sufficient monitoring criteria to certify that the equipment has been maintained in good working order. However, PSCAA reserves the right to evaluate the maintenance of each piece of equipment to determine if it has been maintained in good working order.

- SO_2 Requirements: SO_2 requirements are contained in Requirement I.A.1.6. Boeing Frederickson combusts only pipeline grade natural gas in all combustion units except for the emergency generators. The Washington Utilities and Transportation Commission defines pipeline natural gas to contain less than 2000 grains of sulfur per million cubic feet which is equivalent to approximately 3.4 parts of sulfur per million cubic feet of natural gas. Calculations show that based on this sulfur content, the estimated emissions would be significantly below the 1000 ppm limits. For emergency generators, Boeing Frederickson must maintain records demonstrating only low sulfur diesel is used.

- Nuisance Requirements: General nuisance requirements are contained in Requirements I.A.1.7 and I.A.1.12. The monitoring, maintenance and recordkeeping requirements have not been changed from the existing operating permit and require quarterly inspections of the facility and response to complaints (gap-filling provisions). This monitoring was based on Agency staff observations made during inspections that Boeing was generally in compliance with these requirements, and no complaints had been recorded regarding dust or odor emissions from the facility. Quarterly checks and responding to complainants as necessary provides a sufficient margin of compliance. Receiving complaints does not necessarily mean Boeing is in violation of this requirement, but Boeing has a responsibility to investigate complaints and take corrective action if necessary. Failure to take timely corrective action, as defined by the monitoring method, is a deviation of the specific permit term. Taking corrective action does not relieve Boeing from the obligation to comply with the nuisance requirement itself.

- Fugitive Dust Requirements: Fugitive dust requirements are contained in Requirements I.A.1.8 and I.A.1.9. The monitoring, maintenance and recordkeeping requirements have not been changed from the existing operating permit and require quarterly inspections of the facility and response to complaints (gap-filling provisions). For known sources of potential fugitive dust, the buildings at Boeing are enclosed and all of the roadways and parking lots are paved and reasonably maintained. All the significant air pollution generating equipment has air pollution control devices and is inspected by Boeing periodically and maintained on a regular basis. Hence, the margin of compliance is considered large enough to warrant quarterly and as needed inspections.

- Good Working Order: Requirements to maintain equipment that does not have an NOCOA in good working order are contained in Requirement I.A.1.10. For equipment that does have an NOCOA, the requirement to maintain the equipment in good work order is included in the specific emission unit requirements. The monitoring, maintenance and recordkeeping requirements have not been changed from the existing operating permit and require quarterly

inspections of the facility and O&M Plan requirements (gap-filling provisions). Section II of the permit specifies the minimum monitoring, maintenance and recordkeeping requirements for maintaining the equipment in good working order. In addition, the facility-wide inspections provide monitoring of the general effectiveness of Boeing's O&M Plan. Although this provides sufficient monitoring criteria for Boeing Frederickson to certify that equipment has been maintained in good working order, the Agency staff has the right to evaluate the maintenance of each piece of equipment to determine if it has been maintained in good working order.

- O&M Plan Requirements: For the O&M Plan requirement in I.A.1.11, Boeing Frederickson is required to develop and implement an O&M Plan to assure continuous compliance with PSCAA Regulations I, II, and III. The requirement specifies that the plan shall reflect good industrial practice, but does not define how to determine good industrial practice. To clarify the requirement, PSCAA added that, in most instances, following the manufacturer's operations manual or equipment operational schedule, minimizing emissions until the repairs can be completed and taking measures to prevent recurrence of the problem may be considered good industrial practice. This language is consistent with Ecology requirement in WAC 173-400-101(4). The PSCAA also added language establishing criteria for determining if good industrial practice is being used. These include monitoring results, opacity observations, review of operations and maintenance procedures, and inspections of the emission unit or equipment. The PSCAA added this wording in response to Washington State court decision, Longview Fibre Co. v. DOE, 89 Wn. App. 627 (1998), which held that similar wording was not vague and gave sufficient notice of the prohibited conduct.

  PSCAA Regulation I, Section 7.09(b) also requires Boeing Frederickson to promptly correct any defective equipment. However, the underlying requirement in most instances does not define "promptly"; hence for significant emission units and applicable requirements that Boeing Frederickson has a reasonable possibility of violating or that a violation would cause an air quality problem, PSCAA added clarification that "promptly" usually means within 24 hours. For many insignificant emission units and equipment not listed in the permit, "promptly" cannot be defined because the emission sources and suitable pollution control techniques vary widely, depending on the contaminant sources and the pollution control technology employed. However, the permit identifies a means by which to identify if Boeing Frederickson is following good industrial practice.

  Boeing Frederickson must report to PSCAA any instances where it failed to promptly repair any defective equipment, both equipment that received approval from the Agency and that which did not. In addition, Boeing Frederickson has the right to claim certain problems were a result of an emergency or unavoidable.

  Following these requirements demonstrates that Boeing Frederickson has properly implemented the O&M Plan, but it does not prohibit PSCAA or EPA from taking any necessary enforcement action to address violations of the underlying applicable requirements after proper investigation. However, not following its own O&M Plan is an indication that Boeing Frederickson was not using good industrial practice.

- RCW 70.94.040 has been deleted from facility-wide applicable requirements. The provisions of RCW 70.94 RCW, or the ordinances, resolutions, rules or regulations adopted thereunder are included in the permit as applicable requirements

6.3 Section I.A.2 (US EPA NSPS General Provisions)

Section I.A.2 was added to the operating permit as part of the renewal process. The requirements in section I.A.2 are the general provisions of the federal NSPS. The enforceable requirement is listed in the second column of the table. The requirement number in the first column and the requirement paraphrase in the 3rd column are for information only. In the event of conflict or omission between the information contained in the third column and the actual regulation cited in the second column, the requirements and language of the regulation cited shall govern. For more information regarding any of the requirements cited in the second column, refer to the actual requirements cited.

These requirements apply only to NSPS affected facilities identified in the permit at the time of issuance. In this case, Boeing Frederickson has three boilers subject to 40 CFR Part 60, Subpart Dc. All internal combustion engines identified by the applicant at the time of review are existing engines subject to 40 CFR Part 63, Subpart ZZZZ but not subject to the NSPS requirements in 40 CFR Part 60, Subpart IIII. The affected facilities covered by these Subparts are subject to the enforceable requirements listed in column 2 (for example, Subpart Dc). These Subparts are identified in the fourth column of the table. Section I.A.3 (US EPA NESHAP General Provisions).

Construction (including reconstruction) or modification of an affected facility after the date of permit issuance is subject to all applicable requirements in 40 CFR Part 60, Subpart A.

6.4 Section I.A.3 (US EPA NESHAP General Provisions)

Section I.A.3 was added to the operating permit as part of the renewal process. The requirements in section I.A.3 are the general provisions of the federal NESHAP. The enforceable requirement is listed in the second column of the table. The requirement number in the first column and the requirement paraphrase in the 3rd column are for information only. In the event of conflict or omission between the information contained in the third column and the actual regulation cited in the second column, the requirements and language of the regulation cited shall govern. For more information regarding any of the requirements cited in the second column, refer to the actual requirements cited.

These requirements apply only to NESHAP affected sources identified in the permit at the time of issuance. For most of these requirements, the permit identifies which 40 CFR 63 Subparts this includes (for example, Subparts GG, ZZZZ, DDDDD). These are identified in the fourth column of the table.

Applicability of General Provisions for Emergency RICE: 40 CFR 63.6665 specifies that for reciprocating internal combustion engines (RICE) that meet specific criteria listed in the section of the rule, the facility does not need to comply with any of the requirements of the General Provisions specified in Table 8 of 40 CFR Part 63, Subpart ZZZZ. Boeing Frederickson has two engines that meet this criteria: existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP. Two other existing emergency stationary RICE have a site rating less than 500 brake HP so are subject to the General Provisions. However, 40 CFR 63.6645 specifies that notification requirements in 40 CFR 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), and 63.9(b) through (e), and (g) and (h) do not apply to existing stationary emergency RICE.

New affected sources that have an initial startup after the date of permit issuance are subject to all applicable requirements in 40 CFR Part 63, Subpart A.

6.5 Section I.B. (Emission Unit Specific Applicable Requirements)

Section I.B. of the permit lists applicable requirements that are specific to an emission unit or activity. The PSCAA did not repeat the facility-wide requirements listed in Section I.A in Section I.B unless the

monitoring method was specific to the listed emission unit. If a requirement in Section I.A. is repeated in Section I.B, then the monitoring, maintenance, and recordkeeping method specified in that section supersedes the monitoring, maintenance, and recordkeeping method specified in Section I.A.

Following the name of each emission unit is a brief description of the emission unit or activity and some identifying information such as location and installation date. Due to the size of Boeing Frederickson and its complexity, the information is provided as an aid in understanding the permit and as an aid to locate a specific emission point or activity. Following the description are the actual applicable requirement or compliance requirements.

The Generally Applicable Requirements of Section I.A. apply to all the emission units listed in Section I.B. and are not repeated in this section. Monitoring Methods and Reference Methods are also identified if they are different or in addition to those listed in Section I.A.

Changes made for AOP Renewal: Some emission units listed in the existing permit have been removed during the renewal process since these operations no longer take place at the facility. This includes composite processing operations and wood furniture coating operations. Some have been combined with other emission units or renumbered to be consistent with other Boeing facility permits. Chemical Process Tankline operations were moved from Emission Unit 1 to Emission Unit 5. Abrasive blasting operations were moved to Emission Unit 3 and combined with Cyclones, Baghouses and Other Particulate Control Equipment. All external combustion units are now included in Emission Unit 2, and NESHAP requirements that apply to RICE have been added (Emission Unit 4). Drying and curing operations have been removed as a specific emission unit, but autoclaves are listed with external combustion units.

There are five sections that are identified as "RESERVED" in order to maintain consistency in numbering in Section I.B. The intent of this renumbering is to standardize the organization of the Boeing AOPs. The reserved sections refer to motor vehicle fueling operations, storage tanks, furniture operations, site remediation and waste water treatment operations. These emission unit activities do not occur at Boeing Frederickson.

6.5.1 Coating, Cleaning, and Depainting Operations

This section includes all activities and equipment associated with surface coating, cleaning, and depainting operations that have specific applicable requirements other than the general requirements in Section I.A.1. These operations may include coating mixing, application, drying, and curing; spray gun cleaning; solvent wipe and solvent flush cleaning; depainting; and material and waste handling. Examples of equipment involved in these activities may include spray booths, paint hangars, and gun cleaning units.

This table does not necessarily include all activities and equipment that may be subject to the requirements of this section; activities and equipment that have not received an NOCOA or were not previously registered with PSCAA may not be included in the table. The last column in the table indicates whether Aerospace NESHAP (ANESHAP)-regulated coatings containing inorganic HAPs may be sprayed at the equipment at the time of permit issuance. In this case, both booths are designated as having ANESHAP coatings with inorganic HAP used in the booth. Section II.B.1(b) is marked "RESERVED" as a placeholder for non-ANESHAP Dry Filter Spray Booth Pressure Drop Monitoring and Recordkeeping Procedure that applies at other Boeing facilities.

Section II.B.1(h) is marked "RESERVED" as a placeholder for ANESHAP Depainting Operations that applies at other Boeing facilities.

6.5.1.1 ANESHAP

Boeing Frederickson conducts several activities that are subject to the ANESHAP. These include the following:

- Applicability and Exemptions are listed in I.B.1.1 through I.B.1.14 (required monitoring in Section II).
- Applicable requirements for ANESHAP cleaning are listed in I.B.1.15 through I.B.1.32 (required monitoring in Section II).
- Applicable requirements for ANESHAP coatings are listed in I.B.1.33 through I.B.1.52 (required monitoring in Section II).
- Applicable requirements for ANESHAP primer, topcoat and specialty coating inorganic HAP application operations are listed in I.B.1.53 through I.B.1.63 (required monitoring in Section II).
- Applicable requirements for ANESHAP waste handling operations are listed in I.B.1.64 through I.B.1.65 (required monitoring in Section II).
- The Boeing Frederickson facility does not depaint completed aircraft. Requirements that apply specifically to depainting are not included in the permit.

Although chemical milling maskant application and depainting of completed aircraft are regulated in the ANESHAP, Boeing Frederickson does not conduct chemical milling maskant application or depainting of completed aircraft so it is not included in the list of general activities and the standards specific to these operations are not included in the permit. Chemical milling maskant application is included in the regulatory paraphrases in Requirements I.B.1.3 , I.B.1.4 (exemptions), I.B.1.9 (averaging provisions), and I.B.1.64 (waste handling) since this language will be consistent for all Boeing facilities. Similarly, depainting is included in the description of Emission Unit 1, I.B.1.5 (exemptions), I.B.1.11 (exemptions), and I.B.1.64 (waste handling) It is not intended to imply that Boeing Frederickson is permitted to conduct chemical milling maskant application operations or depainting operations without complying with the requirements in the NESHAP.

Changes made for AOP Renewal: The permit has been updated to reflect revisions to the ANESHAP. This includes the following:

- Added new requirements that apply to specialty coatings. This is considered an existing operation at Boeing Frederickson so new requirements do not apply until December 11, 2018.
- Updated the exemption list per 40 CFR 63.741.
- Added general duty clause in revised 40 CFR 63.743(e) to replace reference to general provisions.
- Updated paraphrasing to more accurately reflect language in rule.
- Deleted the requirement for Boeing Frederickson to prepare and implement a startup, shutdown and malfunction plan for spray booths since this requirement has been removed from the NESHAP.
- Added the option to use an interlock system to automatically shut down the coating spray application if pressure drop outside of manufacturer's recommendations since this option was added to the NESHAP.

- Updated language pertaining to HAP-containing wastes to be consistent with revised NESHAP. (Note that the compliance date for these requirements is December 11, 2018, per 51114 Federal Register / Vol. 81, No. 149 / Wednesday, August 3, 2016).

Averaging Provisions: 40 CFR 63.743(d) allows Boeing to use averaging provisions specified in 63.743(d)(1) through (d)(6) instead of complying with individual coating limits in 40 CFR 63.745. At time of issuance, Boeing Frederickson is not using these averaging provisions. This citations are included in the operating permit, and the averaging scheme consistent with the regulations is included in the Title V operation permit.

EPA ANESHAP Determinations: The Agency specified in Requirement I.B.1.43 that Preval hand-held aerosol cans with a non-refillable pressurized portion qualify for the exemption under 40 CFR 63.745(f)(3)(v). This is based on an applicability determination by EPA Region 10 on October 14, 1998.

EPA issued a guidance document in fall of 2016 regarding the standards for handling and storage of waste in Section 40 CFR 63.748(a)(2). The document provides guidance only and does not impose legally-binding requirements on the EPA, state regulators or the regulated industry. 40 CFR 63.748(a)(2) states all waste that contains organic HAP should be stored in closed containers. According to the guidance, the requirement to store waste in closed containers is only intended for HAP-containing waste that is not subject to the Resource Conservation and Recovery Act (RCRA) requirements in 40 CFR parts 260 through 268. Once a waste is determined to be a RCRA waste, it is not then or subsequently subject to the requirements in the ANESHAP. This appears to be consistent with the requirements in the rule that states the requirements of this section do not apply to spent wastes that contain organic HAP that are subject to and handled and stored in compliance with 40 CFR parts 262 through 268. The guidance also specifies a waste does not contain organic HAP if it meets the criteria of non-HAP material in 63.742 (i.e., waste that contains no more than 0.1 percent by mass of any individual organic HAP that is an Occupational Safety and Health Administration (OSHA)-defined carcinogen as specified in 29 CFR §1910.1200(d)(4) (2011) (currently codified at Appendix A to 29 CFR §1910.1200—Health Hazard Criteria (Mandatory), §A.6.4), and no more than 1.0 percent by mass for any other individual HAP). Note that Section 63.742 of the regulations incorrectly specifies 29 CFR 1200(d)(4), a citation that will be updated in a future technical correction.

A material is not a waste requiring disposal in closed containers:

- If it does not contain “free liquids” (as defined in 40 CFR 260.10)
- If it’s within containers or liners rendered “empty” (as defined in 40 CFR 261.7) such as residues remaining in tubes, bottles, cups etc.
- Until such time that it is no longer suitable for its intended purpose. For example, a tube of adhesive that is partially used but has now set up to the point it is no longer useable.

Local Requirements: Changes made during the operating permit renewal process include the following:

- PSCAA Regulation I, Section 9.16 has been updated. Both the 7/12/01 and 10/28/10 versions of the regulation are included in the permit since the 7/12/01 version of the rule is the version in the SIP. Aerospace coating operations subject to the ANESHAP are exempt from the provisions of Regulation I, Section 9.16(c), (d) and (e). Boeing Frederickson does not conduct mobile spray-coating operations under Section 9.16(e).
- Added new NOCOA 11792 pertaining to spray coating operations and applicable conditions.

Requirements Included in Original AOP: PSCAA Regulation II, Section 3:09(b) specifies the VOC content for some aerospace primers and topcoats. The monitoring requirement specifies that Boeing Frederickson maintain manufacturer's information demonstrating compliance with these requirements and initiate appropriate corrective action if a noncompliant situation is observed. PSCAA Regulation II, Section 3.09 also specifies work practice standards including acceptable application methods, cleanup, and storage of VOC-containing material. The ANESHAP has similar requirements; however, it does not require any periodic monitoring of those housekeeping requirements. After considering the compliance history of Boeing Frederickson for this type of housekeeping requirement, PSCAA has determined that periodic, quarterly, work practice inspections by Boeing Frederickson are sufficient to assure continued compliance.

NOCOA 7746 issued on May 5, 1999 approved an alternative means of compliance with Regulation II, Section 3.09(b) in accordance with Regulation I, Section 3.23. Based on an e-mail received on September 11, 2019, the Aerosol Temporary Protective Coating has not been used for some time at Frederickson. It was replaced by a plastic film which is applied to reworked damaged areas of the leading edge of the empennage parts. However, they requested this alternative means of compliance remain in place since this operation may happen in the future. Based on a review of the technical supporting worksheet and the Final Order, additional monitoring and recordkeeping requirements have been added to the operating permit (gap-filling). Regulation II, Section 3.09(b) limits the VOC content of temporary protective coatings to 250 grams per liter of coating. At the time of approval of NOCOA 7746, no temporary protective coating formulation meeting the VOC limit was available in aerosol cans. The Order allows for application of a higher VOC coating if applied with aerosol cans since that would be a lower volume then using HVLP spray equipment. Monitoring and recordkeeping that have been added require tracking of TPC usage and verification that application is with aerosol cans. The review estimated actual usage to be 2-3 aerosol cans per year. The operation is exempt from the ANESHAP (touch-up operation).

Besides coating aerospace parts in spray booths, Boeing Frederickson sometimes coats parts for motor vehicles and mobile equipment. When Boeing Frederickson conducts such activity, Regulation II, Section 3.04, which sets limits on the VOC content of the coatings, would apply. The monitoring method requires Boeing Frederickson to keep records of the VOC content of each motor vehicle coating and verify that the coatings being applied meet the requirements. In a June 30, 2001 letter, the Agency provided concurrence that mobile equipment as it relates to Boeing facilities is intended to mean equipment that is licensed or likely to be licensed to operate on a public roadway. Jigs and carts used to move parts and equipment in and around buildings at Boeing facilities would not be mobile equipment. However, trucks and trailers the move parts between Boeing facilities would be subject to the requirements of the rule. The VOC limits in Regulation II, Section 3.04(a) apply to original equipment manufacturers so would not apply to this facility. Typical operations are touch ups of rusted areas in the trailer repair shop using spray cans for smaller areas and rollers/brushers for larger areas.

The spray booth filter monitoring in Section II.B.1(a) has been modified to require at least a monthly check of filter coverage. In the existing permit, the frequency can be reduced to quarterly if Boeing demonstrates compliance after one year of monthly monitoring. The Agency has determined that monthly monitoring of the two spray booths is not an unreasonable burden and that the adequacy of filter coverage could substantially change over a three month period. Monthly monitoring is a minimum frequency for determining that the filter coverage is acceptable and we would anticipate that the operators conduct more frequent checks outside of this permit requirement.

6.5.2 External Combustion

This section includes all boilers and heaters that have specific applicable requirements other than the facility-wide applicable requirements in Section I.A. This includes the 3 autoclaves with natural gas burners.

6.5.2.1 Boiler NESHAP (40 CFR Part 63, Subpart DDDDD)

Boeing Frederickson presently has three boilers that are subject to Subpart DDDDD of 40 CFR 63.

Each of the boilers and heaters listed are "Units designed to burn gas 1" under 40 CFR Part 63, Subpart DDDDD. All boilers are gas-fired with no liquid fuel backup. Boilers and process heaters designed to burn gas 1 fuels are not subject to emission limits or operating limits in Subpart DDDDD. They are still required to have tune-ups every 5 years since the boilers have a continuous oxygen trim system. The one-time energy assessment was required by January 31, 2016. Boeing Frederickson has conducted the one-time energy assessment, so this is not an ongoing requirement. The facility did not submit the energy assessment to the Agency, but certified the assessment was completed in their February 23, 2016 Notification of Compliance Status. Boeing Frederickson is required to maintain a record of the energy assessment in Section II.B.2.b.ii.

6.5.2.2 NSPS Subpart Dc - Applicability

The NSPS in 40 CFR 60 subpart Dc apply to steam generating units that commenced construction after June 9, 1989 and have a heat input rate of 100 million Btu/hr or less, but 10 million Btu/hour or greater. The three boilers at Boeing Frederickson are subject to the NSPS and the requirements that apply to this unit are included in the permit. The applicability of the General Provisions in 40 CFR 60, Subpart A as they apply have been moved to Section A.2 of the operating permit.

40 CFR 60.42c lists various sulfur dioxide emission requirements for subject boilers that burn coal or oil. The boilers that operate at Boeing Frederickson are not capable of burning such fuel and would require an NOCOA to do so. Therefore, 40 CFR 60.42c does not apply to these boilers. Similarly, particulate matter and opacity requirements in 40 CFR 60.43c apply only to subject boilers that are capable of burning coal, oil or wood so do not apply to the boilers that operate at Boeing Frederickson. Compliance, performance and monitoring test methods and procedures included in 40 CFR 60.44c, 60.45c, 60.46c and 60.47 do not apply since the boilers are not subject to emission standards in 40 CFR 60.42c or 60.43c and have not been included in the renewal permit. Similarly, reporting and recordkeeping requirements in 40 CFR 60.48c(b), (c), (d), (e) and (f) are not included since they only apply to boilers that burn coal, oil or wood. 40 CFR 60.48c(h) specifies requirements for facilities with federally enforceable requirements limiting the annual capacity factor. These are not included since these boilers have no such requirements. Finally, 40 CFR 60.48c(j) establishes the reporting period for reports required by 40 CFR Part 60, Subpart Dc, but no reports are required for these boilers.

40 CFR 60.48c(g) requires affected facilities to maintain records of the amount of fuel combusted each day. In November 2000, Boeing Frederickson requested that the recordkeeping frequency be reduced from daily to monthly. This request was based on a letter written by Doug Hardesty, EPA Region 10, to Joseph Williams, Washington, Ecology, stating that a reduction of the recordkeeping frequency from daily to monthly for natural gas fired NSPS Dc boilers could be granted on a case-by-case basis. Doug Hardesty's letter outlined the steps that would need to be taken to achieve this reduction in the recordkeeping frequency. As outlined in Doug Hardesty's letter, PSCAA sent a letter on April 3, 2001 to EPA Region 10 asking if the EPA had any comments regarding reducing the recordkeeping frequency for the Boeing Frederickson natural gas boilers subject to NSPS Dc. No comments were received. On April

24, 2001, PSCAA sent a letter to Boeing stating that it would approve a reduction in the recordkeeping frequency, but that the best way to make the recordkeeping reduction enforceable was to modify the original Orders of Approval for the boilers. On May 21, 2001, PSCAA received a letter from Boeing asking that the Orders of Approval No. 4382 and, No. 4658 which permit the operation of the natural gas NSPS Dc Boilers, be modified to include the recordkeeping reduction and PSCAA approved the change on June 12, 2001. This is reflected in Condition #4 of NOCOA 4382 and Condition #3 of NOCOA 4658. The monitoring method reflects the approved reduction in recordkeeping frequency.

6.5.2.3 Local Regulations

Both Regulation I, Section 9.03 and WAC 173-400-040(1)(a) and (b) opacity standards apply. The 9/20/93 version of the WAC is included in the permit since that is the version included in the PSCAA SIP. The 4/1/11 version of the WAC is not included in the permit since WAC 173-400-020(1) states the provisions in this chapter shall apply statewide except where a local authority (in this case, PSCAA) has adopted and implemented corresponding local rules that apply only to sources in the local jurisdiction. Once EPA deletes the 9/20/93 version of the WAC from the PSCAA SIP, only Regulation I, Section 9.03 will apply in Requirement I.B.2.14. The fuel burning equipment at Boeing Frederickson can only burn natural gas. The monitoring method has not been significantly revised from monitoring requirements in the existing operating permit. The frequency of monitoring is based on margin of compliance which is large for boilers since they only burn natural gas and the potential environmental impacts of an exceedance which are low because fuel burning activities at Boeing Frederickson typically do not generate significant quantities of particulate matter. The steam and heat demand of these boilers fluctuates throughout the day and from season-to-season, causing variations in load on the equipment. These boilers are only shut down completely for annual maintenance or if a problem occurs where more frequent maintenance is required. Typically, one boiler is in operation while the other two are in "hot stand-by" mode, meaning the unit is still under pressure and the burner modulates to maintain a set pressure level. Once per year, the boilers are taken down to undergo pressure vessel testing. However, the demand is very predictable and seldom changes quickly.

Regulation I, Section 9.08(a) and Revised Code of Washington, RCW Section 70.94.610 (1991) fuel standards apply to these units is included for consistency with other Boeing facilities, but since the boilers do not use fuel oil as a backup, no monitoring is required.

6.5.2.4 NOCOA Conditions

NOCOA 4382 was approved in 2001 and applies to Boilers #1 and #2. The Order contains an emission limit for NO_x, but no monitoring requirements. The Agency has gap-filled and is requiring each boiler be tested once during the permit term. The most recent compliance test was conducted in 2001 and demonstrated compliance with the emission limit at that time. However, periodic testing to demonstrate compliance with the NO_x limit in the NOCOA will provide adequate assurance the boilers are capable of being maintained in a manner consistent with low NO_x emissions. Testing can be conducted using either a hand-held analyzer or EPA Reference Test Method 7E The boilers must be operated consistent with key parameters measured during the test. The monitoring method also includes a requirement to inspect each boiler annually for proper fuel and air ratios and fuel air mixing. Although the Boiler NESHAP requires a similar inspection, that requirement is only required once every 5 years. This annual check provides a check that the boilers continue to be operated in good working order.

NOCOA 4658 was issued in 2001 and applies to Boiler #3. The Order does not contain an emission limit for NO_x.

As noted above, both Orders allow Boeing Frederickson to reduce fuel usage recordkeeping frequency from daily to monthly (NSPS requirement). Condition #5 of NOCOA 4382 and Condition #4 of NOCOA have been removed from the operating permit renewal since they are obsolete. The monitoring method in the operating permit reflects the approved reduction in recordkeeping frequency.

6.5.3 Abrasive Blasting, Cyclones, Baghouses, and Other Particulate Control Operations

This section has been modified to include all activities and equipment with particulate emissions controlled by cyclones, baghouses, and other control equipment. Activities and equipment with particulate control devices include abrasive blasting operations on production parts, tooling or equipment, carpentry, machining of metal or nonmetal parts, housecleaning, and wood shredding operations.

Many of these are permitted under a specific NOCOA, but do not have associated equipment specific conditions. Instead, the requirement is to install or establish the equipment in accordance with the plans and specifications on file and comply with Agency regulations. Many of the units were installed in 1992. For some newer units, a NOCOA was not required. Only three units have NOCOA with specific operating conditions. Replacement or substantial alteration of any of the baghouses or other particulate control operations would require Boeing Frederickson to file a notice of construction application in accordance with WAC 173-400-114. It is the facility's responsibility to verify and certify compliance with this requirement on an annual basis.

The only new requirements included in this renewal are conditions in NOCOA 10380. The monitoring methods for equipment permitted before issuance of the last operating permit and equipment not requiring an NOCOA have not been significantly revised from monitoring requirements in the existing operating permit.

6.5.4 Stationary Internal Combustion Engines

This section includes all stationary RICE that are affected sources subject to the NSPS requirements in 40 CFR Part 60, Subpart IIII for Stationary Compression Ignition Internal Combustion Engines, and to the NESHAP requirements in 40 CFR 63, Subpart ZZZZ for Stationary Reciprocating Internal Combustion Engines. For Boeing Frederickson, there are no RICE subject to the NSPS at time of permit issuance. All RICE are existing emergency engines subject to 40 CFR Part 63, Subpart ZZZZ.

Changes made for AOP Renewal: The permit has been updated to reflect the following:

- NESHAP requirements for Stationary RICE in 40 CFR Part 63, Subpart ZZZZ. The NESHAP applies to existing, new, and reconstructed stationary RICE. The regulatory language in the permit is based on the January 30, 2013 regulatory language. However, 40 CFR 63.6640(f)(2)(ii)&(iii) (1/30/13) have been vacated per *Delaware v. EPA* 785 F.3d 1 (D.C. Cir 2015). An emergency stationary RICE may not be operated for the purposes specified in 40 CFR 63.6640(f)(2)(ii)&(iii) (1/30/13) unless it meets the applicable requirements for a non-emergency engine. The permit language reflects this vacature. All engines are emergency engines as defined in the NESHAP.

6.5.5 Wood Furniture Operations

This section was removed in the permit renewal. Boeing Frederickson does not conduct wood furniture manufacturing activities that have specific applicable requirements other than the general requirements

in Section I.A, including activities subject to the requirements 40 CFR Part 63, Subpart JJ - National Emission Standards For Wood Furniture Manufacturing Operations. Note that in 1995, EPA issued guidance which established the "once in, always in" policy that determined any facility subject to major source standards would always remain subject to those standards, even if production processes changed or controls were implemented that reduced the facility's potential to emit. The EPA has since issued guidance withdrawing the "once in, always in" policy and there is draft rulemaking in place that would codify this withdrawal. In this case, Boeing Frederickson no longer conducts any wood furniture manufacturing activities. Therefore, this NESHAP would not apply at the facility.

6.5.6 Composite Processing Operations

This section was deleted during the operating permit renewal. The only product that contains the styrene monomer as a reactive monomer for the resin used at Boeing Frederickson in recent years is a putty used on non-production parts. This use would not be considered to be manufacturing operations. Therefore, the Agency determined that this activity did not meet the applicability criteria in Regulation II Section 3.08(a), and therefore that regulation does not apply. Boeing Frederickson had previously obtained a NOCOA for non-spray application of styrene resins based on the assumption that Regulation II, Section 3.08 did apply. Based on our determination, this NOCOA No. 7726 issued on 5/28/99 does not apply to operations at the facility and has been removed from the permit. No other composite processing operations that occur at Boeing Frederickson use resins that contain styrene and therefore the site is not subject to Regulation II, Section 3.08.

6.5.7 Chemical Process Tankline Operations

This section includes activities and equipment associated with chemical process tankline operations for quality assurance (Penetrant testing) and aluminum anodizing that have specific applicable requirements. This includes the tanklines and the packed bed scrubbers that control emissions from the operations. These were approved under Order of Approval No. 3909. This Order does not include specific conditions that apply to these operations. Instead, the requirement is to install or establish the equipment in accordance with the plans and specifications on file and comply with Agency regulations. Replacement or substantial alteration of any of the scrubbers would require Boeing Frederickson to file a notice of construction application in accordance with WAC 173-400-114. It is the facility's responsibility to verify and certify compliance with this requirement on an annual basis.

The monitoring method requires monthly inspections of each scrubber for proper scrubber pump operation and acceptable scrubber recirculation fluid pH. In addition, a check for nozzle pluggage and visible emissions from each scrubber must be completed on a quarterly basis. The renewal does update the monitoring method to require the check of fluid pH on a monthly basis instead of quarterly and to reduce the range to between 8 and 11. The lower pH of 7 would not be acceptable because the scrubbers would not adequately control emission with a neutral recirculating fluid. The required monitoring is necessary to verify the scrubbers are maintained and operated in good working order. The acceptable scrubber fluid pH range must be between 8 and 11. As noted in the original Statement of Basis, the most likely failures of the scrubbers would be pump failure and nozzle pluggage. Also, pH would change only if there was a fundamental change in the process or failure of the pH control system. Therefore, monthly inspections at a minimum are justified for assuring proper operation and maintenance. If Boeing determines during inspections that corrective action must be taken, the corrective action must be taken within 24 hours or the operation can be shut down until corrective action is taken to address any concerns identified in the inspection.

7 Monitoring, Maintenance and Recordkeeping Procedures

Emission testing conducted to determine compliance with an emission standard must comply with the requirements in Section V.N of the permit. However, Boeing Frederickson is not required to provide PSCAA with advance notification of an Ecology Method 9A test if the testing is conducted as part of the facility-wide opacity monitoring method in Section II.A.1(a), the External Combustion Visible Emission Monitoring in Section II.A.2(a), or Chemical Process Tankline Operations, Scrubber Inspections in Section V.A.2 of the permit, For example, if Boeing Frederickson observed visible emissions and then performed a Method 9A observation, the results of that observation can be used to demonstrate compliance, even if Boeing Frederickson did not notify the Agency.

Boeing Frederickson must follow the procedures contained in Section II of the permit, Monitoring, Maintenance and Recordkeeping Procedures. Failure to follow a requirement in Section II may not necessarily be a deviation of the underlying applicable emission standard in Section I. However, not following a requirement of Section II is a deviation of Section II and Boeing Frederickson must report such deviations, as well as deviations from any other permit condition, as a deviation under Section V.Q.1 of the permit. In addition, all information collected as a result of implementing Section II can be used as credible evidence under Section V.N.2 of the permit. Reporting a permit deviation and taking corrective action does not relieve Boeing Frederickson from its obligation to comply with the underlying applicable requirement.

Changes made for AOP Renewal: Regulation citations were updated and the following changes were made:

- The section was reformatted.
- The section has been updated to reflect any new or modified monitoring, recordkeeping and reporting requirements since issuance of the 2002 permit.

7.1 Standard Approval Conditions

A standard PSCAA NOCOA condition, Condition No. 1, requires that the equipment, device or process be installed according to plans and specifications submitted to PSCAA. Once the equipment is installed, PSCAA requires certification by the applicant that the installation was as approved; this is usually done with a Notice of Completion. Normally within six months to a year after receiving a Notice of Completion, a PSCAA inspector verifies by inspection that the equipment was installed as specified and in accordance with the Approval Order. While the Notice of Completion is a one-time requirement that Boeing Frederickson has complied with, Boeing Frederickson cannot change the approved equipment in such a manner that requires an NOCOA without first obtaining an NOCOA which is addressed in Section IV.A of the permit.

Another standard approval condition on some of the NOCOAs requires the applicant to development and implement an O&M Plan for the equipment approved in the NOCOA. The Clean Air Agency considers that condition obsolete and superseded it with Regulation I, Section 7.09(b) which requires development of an O&M Plan for all equipment.

A third standard approval condition informs the applicant that the approval does not relieve the applicant from complying with other applicable requirements. This is for information purposes only and no monitoring is required, hence the approval condition is not listed in the permit.

7.2 Monitoring Frequency

In determining the appropriate monitoring frequency, PSCAA considered several factors including the following:

- Boeing Frederickson's compliance history and the likelihood of violating the applicable requirement;
- The complexity of the emission unit including the variability of emissions over time;
- The likelihood that the monitoring would detect a compliance problem;
- The likely environmental impacts of a deviation;
- Whether add-on controls are necessary for the unit to meet the emission limit;
- Other measures that Boeing Frederickson may have in place to identify problems;
- The type of monitoring, process, maintenance, or control equipment data already available for the emissions unit;
- The technical and economic considerations associated with the range of possible monitoring methods; and
- The kind of monitoring found on similar emissions units.

8 Prohibited Activities

Some of the requirements Boeing Frederickson identified in the operating permit application are included in Section III as prohibited activities. Since these activities are prohibited, routine monitoring of parameters is not appropriate. Instead, PSCAA has listed these activities in this section to highlight that they cannot occur at the facility. Personnel that perform the facility inspections, required in Section II of the permit, should be aware of these requirements and if they find any evidence that any of these activities are being conducted, they should take appropriate action to investigate them and take corrective action if necessary.

Changes made for AOP Renewal: Regulation citations were updated and requirement paraphrasing was modified to be more consistent with the cited regulation. Concealment and masking requirements in the WAC and PSCAA regulations were combined under one section, but the Part 61 concealment provision was moved to its own section. Provisions that apply to tampering in WAC 173-400-105(8) and false statements in WAC 173-400-105(6) were also included in this section, but are not federally enforceable. A statement was added specifying compliance with applicable requirements shall be monitored through "Documentation on File" and "Facility Inspections".

9 Activities Requiring Additional Approval

Some of the requirements Boeing Frederickson identified in the operating permit application are included in Section IV as activities that require additional approval.

Changes made for AOP Renewal: Regulation citations were updated and requirement paraphrasing was modified to be more consistent with the cited regulation. Sections to address new source notification requirements and Notices of Completion were added. PSD permitting requirements were also added since this is an applicable requirement although it is implemented through Ecology. The requirements for spray coating in PSCAA Regulation I, Section 9.16 were moved to the emission unit specific requirements. Requirements that apply to nonroad engines in Article 15 were also added to this section.

As part of the renewal process, the Agency reviewed these requirements to verify all met the definition of applicable requirement in WAC 173-401-200. A statement was added specifying compliance with applicable requirements shall be monitored through “Documentation on File” and “Facility Inspections”.

9.1 New Source Review

For new source review, the Agency has adopted by reference in Regulation I, Section 6.01(a) requirements in WAC 173-400 and WAC 173-460 that apply in our jurisdiction. This includes PSD requirements, but Regulation I, Section 6.03(b) clarifies that Ecology is the permitting agency for the PSD program. Similarly, the Washington State Department of Health is the permitting agency for radionuclides under chapter 246-247 WAC.

PSCAA Regulation I, 6.03(b), notifications and 6.03(c), exemptions, lists sources for which a Notice of Construction application and NOCOA are not required. For purposes of complying with the recordkeeping requirement in Regulation I, 6.03(c) for exemptions, Boeing Frederickson shall provide in a timely manner, upon request by the Agency, any information reasonably necessary to document the exemption. Boeing Frederickson currently maintains a log of all determinations of categorically exempt equipment listed in Regulation I, Section 6.03(c). However, physical evidence of the emission unit or activity itself can often fully document the applicability of the exemption. For example, the nameplate on an emission unit can document its rated capacity. Similarly, simply observing an emission unit, such as hand held sanding equipment, can fully demonstrate the applicability of an exemption.

In addition, Boeing Frederickson can request the Agency review a source not otherwise exempt under Regulation I, Section 6.03(c) to determine if an Order of Approval is warranted. In accordance with Regulation I, Section 6.03(b)(10), the Agency has determined the following sources to be exempt through review of a Notice of Construction application because the source has a de minimus impact on air quality and does not pose a threat to human health or the environment:

- A heated ultrasonic cleaner located in Building 24-60. The 39 gallon cleaning tank used Brulins’ Formula 815 GD liquid cleaner which contains less than 10% sodium tripolyphosphate to clean cutting tools. It was determined that emissions of VOC would be less than 1 pounds per year, and that emissions and impacts would be insignificant. The Agency sent a letter to Boeing Frederickson documenting the (b)(10) exemption on May 8, 2007.
- A closed-loop solvent recovery system with refrigerated or water-cooled condensors used for recovery of waste solvent generated on-site. This unit did not meet the categorical exemption since it has an air cooled condenser. The Agency sent a letter to Boeing Frederickson documenting the (b)(10) exemption on September 3, 2014.
- A small five beam plasma treatment system for the adhesive bonding of stringers to the skin. The plasma beams consist of ionized air particles that clean the surface by vaporization of contaminant residues activating the surface to improve the adhesion process. The technology operates at atmospheric conditions. The Agency sent a letter to Boeing Frederickson documenting the (b)(10) exemption on August 25, 2016.

9.2 Nonroad Engines

This new section IV.F. sets forth requirements of WAC 173-400-035 and PSCAA Regulation I, Article 15 concerning internal combustion engines that are classified as nonroad engines. These meet the requirements of applicable requirement as defined in WAC 173-401-200 which include rules adopted under Chapter 70.94 as they apply to emission units in a chapter 401 source. “Emissions unit" means

any part or activity of a stationary source that emits or has the potential to emit any regulated air pollutant or any pollutant listed under section 112(b) of the FCAA.

Reg. I: 15.01 defines a "nonroad engine" as any internal combustion engine that, by itself or in or on a piece of equipment, is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform. An internal combustion engine is not a nonroad engine if:

(1) The engine is used to propel a motor vehicle or a vehicle used solely for competition, or is subject to standards promulgated under section 202 of the Federal Clean Air Act (FCAA); or

(2) The engine is regulated by a NSPS promulgated under section 111 of the Federal Clean Air Act (FCAA); or

(3) The engine remains or will remain at a location for more than twelve consecutive months or a shorter period of time for an engine located at a seasonal source. A location is any single site at a building, structure, facility, or installation. Any engine that replaces an engine at a location and that is intended to perform the same or similar function as the engine replaced will be included in calculating the consecutive time period. An engine located at a seasonal source is an engine that remains at a seasonal source during the full annual operating period of the seasonal source. A seasonal source is a stationary source that remains in a single location on a permanent basis (i.e., at least two years) and that operates at that single location approximately three months (or more) each year. This paragraph does not apply to an engine after the engine is removed from the location.

10 Standard Terms and Conditions

Some of the requirements Boeing Frederickson identified in the operating permit application are included in Section V, Standard Terms and Conditions. This section also contains the standard terms and conditions specifically listed in WAC 173-401-620.

Changes made for AOP Renewal: Regulation citations were updated and requirement paraphrasing was modified to be more consistent with the cited regulation. The regulatory language for compliance determinations in Section V.N.1 was updated to be consistent with the 3/23/06 regulation. The language in V.O. General Recordkeeping was updated and NESHAP and NSPS recordkeeping requirements were moved into Sections I or II, as appropriate.

The data recovery section in Section V.P was updated to be more consistent with other operating permits issued by the Agency and other agencies within the State. Boeing Frederickson shall recovery valid monitoring and recordkeeping for each parameter according to specific monitoring and recordkeeping identified in Section II of this permit. However, if the requirements are silent on data recovery provisions, data recovery is assumed to be 100%. In the previous permit, data recovery applied to monitoring for spray booths, cyclones, baghouses, and abrasive blast booths, and scrubbers where monitoring was included as a gap-filling measured and not specifically required by a regulation or NOCOA. For monthly or less frequently, but not daily, Boeing needed to collect at least nine out of ten of the required records. Similar language was included in the Boeing Renton operating permit. For Boeing Frederickson, there are no daily monitoring or recordkeeping requirements included as gap-filling measures. A summary of the gap-filling monitoring to which the data recovery requirements previously applied is provided below:

Spray Booth Filter Monitoring and Maintenance	Unless specified in the NOCOA or underlying regulatory requirement, monthly
Abrasive blasting, cyclones, baghouses and other particulate control equipment	Unless specified in the NOCOA or underlying regulatory requirement, monthly
Chemical Process Tankline Operations	Unless specified in the NOCOA or underlying regulatory requirement, monthly or quarterly

The Agency has determined that monthly monitoring is a required minimum for monitoring of this equipment, and an important component in verifying equipment is maintained and operated in good working order. If Boeing Frederickson fails to conduct this monthly monitoring, it would be a deviation of the permit. However, the permit does specifically state that the occasional and unintentional loss or omission of required records shall not constitute a reportable permit deviation provided Boeing Frederickson is able to reconstruct the required information from other verified data sources.

The Agency has updated Section V.S of the permit which addresses excess emissions to be consistent with Ecology's updated regulations. On August 16, 2018, Ecology amended WAC 173-400 to remove exceptions for emissions during startup, shutdown, and malfunction to comply with EPA's direction in the startup, shutdown, and malfunction SIP call. WAC 173-400-107 (Excess Emissions) is currently in effect and was approved in the SIP on September 20, 1993. The requirements of WAC 173-400-107 are included in the AOP. WAC 173-400-107 and these permit conditions will remain in effect until the effective date of EPA's removal of the September 20, 1993 version of this section from the SIP.
Upon the effective date of EPA's removal of the September 20, 1993 version of WAC 173-400-107 from the SIP, WAC 173-400-108 (Excess Emissions Reporting) and WAC 173-400-109 (Unavoidable Excess Emissions) will take effect.

Section V.W of the permit pertaining to risk management programs has been updated to be consistent with the 12/3/18 version of the regulation.

10.1 Reporting

Section V.Q of the AOP lists the reports that Boeing Frederickson must submit, and the responsible official must certify the report.

Changes made for AOP Renewal: The reports listed in this section have been updated. The requirement to report emissions of greenhouse gases to Ecology has been added. The reporting requirement in 40 CFR 63.9(j) has been moved to Section I.A.3, NESHAP General Provisions. Obsolete reporting requirements have been removed. Reporting requirements for the Aerospace, Boiler and RICE NESHAPs have been updated to reflect the regulation at time of permit issuance. The requirement for submitting compliance reports in electronic format in accordance with Regulation I, Section 7.09(c) was added.

The language in Section V.Q.1.c, Certification by Responsible Official, has been updated to reflect the language in WAC 173-401-520. In addition, the applications forms, reports, and compliance certifications that must be certified upon submittal are listed. The only change made to this list as part of the renewal process was to add the Permit Renewal (WAC 173-401-710) and the Boiler NESHAP compliance report (40 CFR 63.7550) since these reports need to be certified upon submittal. For all other application forms, reports and compliance reports, the responsible official's certification needs only to be submitted once

every six months, covering all required reporting since the date of the last certification, provided that the certification specifically identifies all documents subject to the certification. This is consistent with the language in WAC 173-401-615(3) and (3)(a) which requires the permit incorporate all applicable reporting requirements and submittal of any required reports at least once every six months.

To clarify which submittals need to be certified by a responsible official, the table in Section V.Q.3. was updated. The determination of which submittals need to be certified by the responsible official was based on WAC 173-401-520 and WAC 173-401-600(1). WAC 173-401-520 requires that, "Any application form, report, or compliance certification submitted pursuant to this chapter shall contain certification by a responsible official of truth, accuracy and completeness." WAC 173-401-600(1) requires that "each permit shall contain terms and conditions that assure compliance with all applicable requirements at the time of permit issuance." The permit contains all terms and conditions required by WAC 173-401-600(1), including requirements to submit application forms, reports and compliance certifications. Because these application forms, reports and compliance certifications are required to be submitted by WAC 173-401-600(1), the requirement to certify these submittals in WAC 173-401-520 applies. Therefore, all application forms, reports and compliance certifications submitted pursuant to this permit as specified in Section V.Q.3. must be certified by a responsible official.

The table in Section V.Q.3 also identifies which reports must be submitted in electronic format in accordance with Regulation I Section 7.09(c). Boeing Frederickson is required to submit complete copies of all required compliance reports in electronic format as an attachment to an e-mail message, in addition to the original written document. The date the document is received by e-mail is considered the submitted date of the report.

The language providing Boeing Frederickson with an option to report problems identified but not corrected within 24 hours that is associated with gap filling measures has been retained. However, an identification of noncompliance with the permit would have to be reported in accordance with the deviation reporting requirements in Section V.Q.1.b. If Boeing Frederickson does not take corrective action as specified in the monitoring method (including shutting down the equipment or activity), the submittal of the report would satisfy the monitoring requirement only. The deviation would pertain to the noncompliance issue, but would not be considered noncompliance with the monitoring method itself.

11 Unconstrained Activities

Certain activities that occur at Boeing Frederickson do not lend themselves to be clearly identified as "administrative changes", "off permit changes", "changes not requiring a permit modification", or "minor/major modifications" as defined in WAC 173-401. These activities may be considered "unconstrained". The term "unconstrained activities" comes from the 1994 preamble to 40 CFR Part 70, which states that 40 CFR Part 70 "is not concerned with changes in those activities that have no bearing on regulated air pollutant emissions. Such activities do not give rise to permit terms, and thus changes to those activities cannot require a revision of permit terms. Examples of such 'unconstrained activities' could include moving process equipment and conducting routine maintenance activities. Changes to activities that only insignificantly affect regulated air emissions are also not at issue here."

The following activities that have occurred at Boeing Frederickson fit into the unconstrained activities category. These activities are just examples of the types of activities that could be considered unconstrained. The world of unconstrained activities is broad and can include many other activities besides those listed below.

- Moving a spray booth without making changes to the booth itself or to the activities taking place in the booth
- Adding or replacing stackers at one of the paint hangars
- Adding or replacing tools used to hold aircraft parts in place during the manufacturing process
- Adding, replacing, or removing equipment used for mechanical cutting, drilling, or machining of metal, wood, composite, or plastic parts. (Note: If there is existing control equipment on these units, these actions may trigger a review under WAC 173-400-114.)
- Adding or replacing small unheated cups or cans of non-chlorinated solvents used for cleaning
- Removing emission units from the Boeing Frederickson site such as paint booths, boilers, or dust collectors. (Note: If there is existing control equipment on these units, these actions may trigger a review under WAC 173-400-114.)

It should be noted that there is no discussion of unconstrained activities in the AOP.

12 Permit Shield

The permit shield applies to all requirements contained in Sections I through VI of the permit, including a monitoring, maintenance, recordkeeping, and reporting requirements.

13 Attachments in Previous Statement of Basis

Agency staff reviewed all the attachments in the original Statement of Basis. Many of the attachments included in the previous Statement of Basis were made when the operating permit program and ANESHAP were first implemented so Agency clarification was appropriate. Because most of these attachments are over ten years old, the Agency determined clarification or interpretation in these attachments is no longer needed either because the permit specifically addresses or the regulations have been amended making the attachment obsolete. The exclusion of these attachments does not preclude the attachment from being used in a later interpretation by the Agency. A discussion of each attachment is provided below:

- Attachment A: The March 29, 2002 emission report was included in the Statement of Basis. This included the 2000 Air Contaminant Emission Summary. This has been replaced with the information in Section 2.2.
- Attachment B: A letter from Boeing sent to Rick Hess clarifying the contents of the O&M Manual and the Agency's response (2001) was not included. The Agency will defer to Regulation I, Section 7.09(b) regarding what needs to be addressed in the O&M Plan. These requirements are specific to equipment and control equipment and control measures to be employed to assure compliance with Regulation I, Section 9.15.
- Attachment C: A letter from the Agency to Barbara Thompson, Director of Environmental Affairs (May 1, 2002) noting that systematic problems identified or brought to the attention of Agency inspectors, will result in a request to review procedures and documentation addressing work practice to determine if a system is in place, as well as where it appeared to have failed. It was noted that the process may involve interviewing employees. We do not believe this letter is relevant to the current operating permit.

- Attachment D: An e-mail from Steve Van Slyke to Barbara Thompson (September 14, 2001) pertaining to documentation requirements with respect to Regulation I, Section 6.03. The information in this attachment is included in Section 9.1 above. Inclusion of the attachment is unnecessary.

Similarly, attachments included in the previous AOP were reviewed:

- Attachment 1: Letter from Neal Shulman to David Moore (January 15, 1998). Agency determination for determining solvent composition limits. The Agency believes language in the rule is clear and the attachment has been deleted.
- Attachment 2: A letter from James Nolan to Robin Bennett (November 30, 1999) regarding monitoring, maintenance and recordkeeping requirements for work practices regulation under 40 CFR 63.744(a). This letter is obsolete.
- Attachment 3: A letter from Jay Willenberg to Edward Cierebiej (September 21, 1999) providing comment on a draft semiannual compliance report. This letter is obsolete.
- Attachment 4: EPA Region 10 applicability determination made in 1998. Since the requirement specifically states Preval hand-held aerosol cans are exempt, this attachment is unnecessary and has been deleted.
- Attachment 5: A 1999 determination clarifying manufacturer's representations in MSDS. This is outdated and has not been added. The Agency will use the language in the regulations.
- Attachment 6: EPA concurrence of the 1999 determination clarifying manufacturer's representations in MSDS. This is outdated and has not been added. The Agency will use the language in the regulations.
- Attachment 7 (1/9/98) and Attachment 12 (10/10/01): The Agency clarified in the 1/9/98 letter that a NOCOA is required for major changes in control technology or changes that increase emissions. Major changes include changing control technology from waterwash to dry filters and increasing airflow by more than 10 or 15% over originally permitted levels as it pertained to spray booth. This criteria was extended to scrubbers and baghouses in 10/10/01 letter provided the alteration does not expand or increase the emission generation activity which the control equipment is supporting. Minor changes include adding an additional stage to a dry filter to meet the ANESHAP and moving an existing booth to a new location within the same facility and conducting the same activity. These attachments were not included. The Agency would review these modifications on a case-by-case basis in making this determination for future modifications.
- Attachment 8: May 8, 1995 determination regarding rule applicability for cold solvent cleaners. This regulation is no longer in place so this applicability determination is obsolete.
- Attachment 9: Agency concurrence of definitions of mobile equipment (2001). This was consistent with regulatory definition of mobile equipment in Regulation II, Section 1.05 (6/13/91). The definition was removed in the 7/24/03 revision to the regulation since it was considered unnecessary, but the original language has been added to the emission unit description in the operating permit. Jigs and cars used to move parts and equipment in and around buildings at Boeing facilities would not be mobile equipment. However, trucks and trailers the move parts between Boeing facilities would be subject to the requirements of the

rule. The attachment has been removed, but this exclusion does not imply that the determination made is not valid.

- Attachment 10: On February 27, 1996, the Agency granted an exemption request for an adhesive coating operation conducted in the 24-50 building from Regulation I, Section 9.16. This letter is no longer valid.
- Attachment 11: New source requirements for spray gun cleaning operations dated 1/18/02. The Agency has not required spray gun cleaning operations to obtain a separate NOCOA, although we would expect solvents used to be included in emission estimates with spray operations that are permitted by the Agency. This attachment has not been included.
- Attachment 13: January 16, 2002 letter regarding applicability or Regulation III, Section 3.05. This regulation is no longer in place. This determination is obsolete.

14 Public Comments and Responses

<insert after public comment period>