TECHNICAL SUPPORT DOCUMENT

Air Discharge Permit 25-3691
Air Discharge Permit Application CL-3287

Issued: March 10, 2025

Novolex Bagcraft

SWCAA ID – 1560

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ABBREVIATIONS

List of Acronyms

ADP ..... Air Discharge Permit
AP-42 ..... Compilation of Emission Factors, AP-42, 5th Edition, Volume 1, Stationary Point and Area Sources – published by EPA
ASIL..... Acceptable Source Impact Level
BACT..... Best available control technology
BART ..... Best Available Retrofit Technology
CAM ..... Compliance Assurance Monitoring
CAS#..... Chemical Abstracts Service registry number
CFR..... Code of Federal Regulations
EPA..... U.S. Environmental Protection Agency
LAER..... Lowest achievable emission rate
NOV..... Notice of Violation/
PSD..... Prevention of Significant Deterioration
RACT..... Reasonably Available Control Technology
RCW ..... Revised Code of Washington
SDS ..... Safety Data Sheet
SQER ..... Small Quantity Emission Rate listed in WAC 173-460
Standard ..... Standard conditions at a temperature of 68°F (20°C) and a pressure of 29.92 in Hg (760 mm Hg)
SWCAA ..... Southwest Clean Air Agency
T-BACT ..... Best Available Control Technology for toxic air pollutants
WAC ..... Washington Administrative Code

List of Units and Measures

µg/m³..... Micrograms per cubic meter
µm ..... Micrometer (10^{-6} meter)
acfm ..... Actual cubic foot per minute
dscfm..... Dry Standard cubic foot per minute
g/dscm..... Grams per dry Standard cubic meter
gr/dscf ..... Grain per dry standard cubic foot
MMBtu..... Million British thermal unit
MMcf.....Million cubic feet
ppm.....Parts per million
ppmv.....Parts per million by volume
ppmvd.....Parts per million by volume, dry
ppmw.....Parts per million by weight
scfm .....Standard cubic foot per minute
tph.....Ton per hour
tpy.....Tons per year

List of Chemical Symbols, Formulas, and Pollutants

C_3H_8 ..... Propane
CH_4..... Methane
CO..... Carbon monoxide
CO_2..... Carbon dioxide
CO_2e..... Carbon dioxide equivalent
H_2S ..... Hydrogen sulfide
HAP ..... Hazardous air pollutant listed pursuant to Section 112 of the Federal Clean Air Act
Hg..... Mercury
NO_2 ..... Nitrogen dioxide
NO_x ..... Nitrogen oxides
O_2 ..... Oxygen
O_3 .....Ozone
PM .....Particulate Matter with an aerodynamic diameter 100 µm or less
PM_{10}.....PM with an aerodynamic diameter 10 µm or less
$PM_{2.5}$ .....PM with an aerodynamic diameter 2.5 µm or less
SO_2.....Sulfur dioxide
SO_x.....Sulfur oxides
TAP.....Toxic air pollutant pursuant to Chapter 173-460 WAC
TSP .....Total Suspended Particulate
VOC.....Volatile organic compound

Terms not otherwise defined have the meaning assigned to them in the referenced regulations or the dictionary definition, as appropriate.

1. FACILITY IDENTIFICATION

Applicant Name:	Novolex Bagcraft
Applicant Address:	6416 NW Whitney Road, Vancouver, Washington 98665
Facility Name:	Novolex Bagcraft
Facility Address:	6416 NW Whitney Road, Vancouver, Washington 98665
SWCAA Identification:	1560
Contact Person:	Ryan Cooley
Primary Process:	Paper converting and printing onto paper products
SIC/NAICS Code:	2679: Converted Paper and Paperboard Products 322299: All Other Converted Paper Product Manufacturing
Facility Latitude and Longitude:	45°40'8.71" N 122°41'38.61" W
Facility Classification:	Natural Minor

2. FACILITY DESCRIPTION

Novolex Bagcraft processes paper (rewinding, slitting, sheeting, embossing, etc.) and prints onto paper products.

3. CURRENT PERMITTING ACTION

This permitting action is in response to Air Discharge Permit (ADP) application number CL-3287 dated January 30, 2025. Novolex Bagcraft submitted ADP application CL-3287 requesting the following:

- Installation and operation of one new Garant bag machine with an inline Garant flexographic printer.
- Removal of grocery bag line 604. It never was installed at the facility.

ADP 25-3691 will supersede ADP 21-3451 in its entirety.

4. PROCESS DESCRIPTION

Novolex Bagcraft manufactures coffee sleeves, counter rolls, industrial rolls, industrial sheets, shopper bags, and food wrap. Some of these products are only cut and resized and no emissions are created during their manufacture.

The coffee sleeves are produced using kraft liner board. They are normally printed as they are run

through one of the folder gluers, although a small portion of production (jobs requiring more than 2 colors) consists of preprinting rolls on a flexographic printing press.

The counter rolls (e.g., freezer paper or butcher paper) are often already printed. Novolex Bagcraft simply slits these 72" rolls into smaller rolls (e.g., 18-36" rolls) and winds them to a 7-10" diameter using a small rewinder.

The industrial sheets (e.g., pallet sheets) are produced on the sheeters. Some are cut into smaller sizes by the trimmer. No printing is involved.

The food wrap (e.g., paper that lines a hamburger basket, pizza liners) is made from grease-resistant sheets. The facility prints on the paper using the sleeter, which also slits the roll into several lanes of 10-12" width which are further cut into squares. The pizza liners are embossed and cut into squares on the embosser.

Pear wrap (food wrap) is produced on equipment (installed in 2017) in a separate room maintained at a humidity of 45%. The paper is prepared by applying a mineral oil and paraffin wax or a mineral oil and ethoxyquin mixture. The pear wrap goes through a high-speed printer using water-based ink on a thin tissue of paper. The paper is rewound and moved to the new sheeter where it is cut into squares.

Grocery Bags are made on one bag machine (Line 603), with a flat paper handle unit and an inline printer. The bag machine produces folded flat paper handles and attaches these handles to the bag after bag formation. Line 603 has an inline flexographic printer.

Shopper Bags are made on three bag machines (Lines 605, 606, and 607), medium and large, each with a twisted cord (twine-fed) handle unit and an inline four-color printer.

5. EQUIPMENT/ACTIVITY IDENTIFICATION

5.a. #1 Fruit Press (*existing*). The #1 Fruit Press is also known as the #1 Sleeter. Water-based ink is used for printing. No heaters are involved in the printing process for curing or drying. Specific press information is detailed below.

Make:	Strachan Henshaw
Model:	Custom
Serial Number:	4307/1
Roll Width:	30" to 66"
Roll Diameter:	30" to 40"
Throughput Rating:	450 feet per minute
Basis Weight:	11 pounds to 50 pounds
Number of Ribbons:	1 or 2
Border Weight at Cutoff:	48 pounds to 300 pounds
Ventilation:	Emissions vent to ambient air through wall fans on building

5.b. #2 Fruit Press (*existing*). The #2 Fruit Press is also known as the #2 Sleeter. Water-based ink is used for printing. No heaters are involved in the printing process for curing or drying. Specific press information is detailed below.

Make:	Strachan Henshaw
Model:	Custom
Serial Number:	4380/1
Roll Width:	30" to 66"
Roll Diameter:	30" to 40"
Throughput Rating:	450 feet per minute
Basis Weight:	11 pounds to 50 pounds
Number of Ribbons:	1 or 2
Border Weight at Cutoff:	48 pounds to 300 pounds
Ventilation:	Emissions vent to ambient air through wall fans on building

5.c. #3 Fruit Press (*existing*). The #3 Fruit Press is also known as the #3 Sleeter. Water-based ink is used for printing. No heaters are involved in the printing process for curing or drying. Specific press information is detailed below.

Make:	Strachan Henshaw
Model:	Custom
Serial Number:	4380/2
Roll Width:	30" to 66"
Roll Diameter:	30" to 40"
Throughput Rating:	450 feet per minute
Basis Weight:	11 pounds to 50 pounds
Number of Ribbons:	1 or 2
Border Weight at Cutoff:	48 pounds to 300 pounds
Ventilation:	Emissions vent to ambient air through wall fans on building

5.d. Wolverine Press (*existing*). The Wolverine press is a flexographic 3-color printing press and was installed November 2001. Water-based ink is used for printing. No heaters are involved in the printing process for curing or drying. Specific press information is detailed below.

Make:	Wolverine Flexographic Manufacturing Company
Model:	Hydroline Flexographic Printing Press
Serial Number:	HLRE-768
Roll Width:	30" to 60"
Roll Diameter:	30" to 60"
Throughput Rating:	400 feet per minute
Basis Weight:	15 pounds to 90 pounds
Number of Ribbons:	1
Ventilation:	Emissions vent to ambient air through wall fans on building

5.e. Hudson Sharp Press (*existing*). The Hudson Sharp press is a flexographic 4-color printing press. Water-based ink is used for printing. A single 1.0 MMBtu/hr natural gas dryer is used to dry coatings that are applied by the press. Specific press information is detailed below.

Make:	Hudson Sharp
Model:	A7
Serial Number:	3088
Roll Width:	48"
Roll Diameter:	58"
Throughput Rating:	400 feet per minute
Ventilation:	Emissions ventilated to ambient air through ceiling duct
Dryer Burner Make:	Maxon
Dryer Burner Rating:	1.0 MMBtu/hr

5.f. Pear Wrap Coating Station (*existing*). One Faustell coating station (with a Lenox sheeter) that consists of a printer, coater, and a separate sleeter. Additional manufacturer's information is not available. The paper is printed with "Pear Blue" ink or comes pre-printed. One of two coatings is rolled onto the food wrap depending on pear type: a mineral oil/paraffin wax or mineral oil/ethoxyquin. The coatings are kept in four Metler-Toledo tanks, one of which (the wax tank) is heated by an electric water heater. The mineral oil and wax are kept at approximately 150 ºF and the ethoxyquin at 68 ºF (ambient temperature). Emissions from the tanks are negligible.

Paraffin wax fume (CAS# 8002-74-2, SQER 175lbs) has a flashpoint of 390 ºF and a melting point of 115 ºF. The material is not sprayed. Emissions of paraffin wax fume are assumed to be negligible.

The area has two roof vents each with an 8" diameter, 5' above roof line exhausts at 1,900 cfm.

5.g. Shopper Bag Making Machines (*existing*). Two Newlong Industrial model 127T+H606 bag making machines are capable of producing bags with dimensional ranges of 9.5-19.5" in length, 7-14" in width, and 2.75-8.25" in bottom width. Each machine has a maximum output of 140 bags per minute and is able to cut, glue, fold, and make the bag handles.

Each bag making machine has an inline flexographic printing press with four print stations. Specific printing press information is detailed below.

Make:	Holweg Weber
Model:	IF-526
Serial Number:	IF-4/4-2522-20261 & IF-4/4-2523-20262
Max Width:	43.3"
Throughput Rating:	400 feet per minute
Ventilation:	Emissions ventilated to ambient air through ceiling duct
Dryers:	Electric

Ventilation:	Emissions vent to ambient air through wall fans on building

5.h. Folder Gluer 1 and 2 (*existing*). Folder Gluers 1 and 2 produce coffee sleeves. They have the following inline printers.

Folder Gluer 1 inline printer information is detailed below.

Make:	Wolverine
Model:	Cub 2-color CPN-Standard
Serial Number:	CP-308
Max Width:	30"
Throughput Rating:	310 feet per minute
Ventilation:	Emissions vent to ambient air through wall fans on building

Folder Gluer 2 inline printer information is detailed below.

Make:	Wolverine
Model:	Cub 2-color CPN-Standard
Serial Number:	CPN-2660
Max Width:	30"
Throughput Rating:	310 feet per minute
Ventilation:	Emissions vent to ambient air through wall fans on building

5.i. Grocery Bag Making Machine Line 603 (*existing*). One single size grocery bag machine. The machine is capable of producing folded flat paper handles and gluing these handles to the bag after bag formation. The paper is sent through the printer, and the ink is dried with an electric dryer. Water-based ink is used for printing. Then the bag is formed and the handle is made and attached using an adhesive. The bags are bundled in the bundler and the bundle is wrapped, using a small amount of hot glue to close the wrap. Line 604 was originally permitted but never installed at the facility.

Bag Making Machine 603 information is detailed below.

Make:	H.G. Weber
Model:	833A
Serial Number:	80040
Throughput Rating:	400 bags per minute
Ventilation:	Emissions vent to ambient air through wall fans on building

Bag Making Machine 603 inline printer information is detailed below.

Make:	Holweg Weber
Model:	IF-526
Serial Number:	25061-14E
Max Width:	43.3"
Print Stations:	4 with double blade assemblies

Throughput Rating:	980 feet per minute
Ventilation:	Emissions vent to ambient air through wall fans on building

The flexographic printer has electrically heated dryers following each ink application roller.

5.j. Garant Shopper Bag Making Machines Lines 605 and 606 (*existing*). Two single-size bag machines, medium and large. Each machine is able to produce twisted cord handles and glue these handles to the bag after bag formation. The paper is sent through the printer, and the ink is dried with an electric dryer. Water-based ink is used for printing. Then the bag is formed and the handle is made and attached using an adhesive. The bags are bundled in the bundler and the bundle is wrapped, using a small amount of hot glue to close the wrap.

Shopper Bag Machine 605 (Medium) information is detailed below.

Make:	Garant Triumph
Model:	2T8 SK
Serial Number:	9715G
Throughput Rating:	250 bags per minute
Ventilation:	Emissions vent to ambient air through wall fans on building

Shopper Bag Making Machine 605 inline printer information is detailed below.

Make:	Garant Mashinen
Model:	Linaflex NL 04-900
Serial Number:	189A-G
Max Width:	35.4"
Print Stations:	4
Ventilation:	Emissions vent to ambient air through wall fans on building

The flexographic printer has electrically heated dryers following each ink application roller.

Specific information is detailed below for the Shopper Bag Machine 606 (Large).

Make:	Garant Triumph
Model:	5-F6/SK
Serial Number:	9766G
Throughput Rating:	200 bags per minute
Ventilation:	Emissions vent to ambient air through wall fans on building

Shopper Bag Making Machine 606 inline printer information is detailed below.

Make:	Garant Mashinen
Model:	Linaflex NL 04-1400

Serial Number:	129A-G
Max Width:	55"
Print Stations:	4
Ventilation:	Emissions vent to ambient air through wall fans on building

The flexographic printer has electrically heated dryers following each ink application roller.

5.k. Garant Shopper Bag Making Machines Line 607 (*new*). One single-size bag machine. The machine can produce twisted cord handles and glue these handles to the bag after bag formation. The paper is sent through the printer, and the ink is dried with an electric dryer. Water-based ink is used for printing. Then the bag is formed and the handle is made and attached using an adhesive. The bags are bundled in the bundler and the bundle is wrapped, using a small amount of hot glue to close the wrap.

Shopper Bag Machine 607 information is detailed below.

Make:	Garant Triumph
Model:	5-F6/SK
Serial Number:	Not built yet
Throughput Rating:	200 bags per minute
Ventilation:	Emissions vent to ambient air through wall fans on building

Shopper Bag Making Machine 607 inline printer information is detailed below.

Make:	Garant Mashinen
Model:	Linaflex NL 04-1200
Serial Number:	Not built yet
Max Width:	44.3"
Print Stations:	4
Max Speed:	980 ft/min
Ventilation:	Emissions vent to ambient air through wall fans on building

The flexographic printer has electrically heated dryers following each ink application roller.

5.l. Space Heaters. 17 natural gas-fired Reznor ITT model XL-200-3, each rated at 200,000 Btu/hr are used to heat the printing and warehouse area.

5.m. Equipment/Activity Summary.

ID No.	Equipment/Activity	Control Equipment/Measure
1	#1 Fruit Press (Strachan Henshaw SN 4307/1)	Low-VOC Ink
2	#2 Fruit Press (Strachan Henshaw SN 4380/1)	Low-VOC Ink
3	#3 Fruit Press (Strachan Henshaw SN 4380/2)	Low-VOC Ink
4	Wolverine Press (SN HLRE-768)	Low-VOC Ink
5	Hudson Sharpe Press (SN 3088) with Maxon Dryer	Low-VOC Ink, Low Sulfur Fuel (natural gas)
6	Pear Wrap Press/Coater (Faustell)	Low-VOC Ink
7	Two Shopper Bag Making Machines (Newlong)	Low-VOC Ink
8	Two Folder Gluers (Wolverine Cub)	Low-VOC Ink
9	Two Grocery Bag Making Machines (Weber) with presses / Lines 603	Low-VOC Ink
10	Two Shopper Bag Making Machines (Garant) with presses / Lines 605 and 606	Low-VOC Ink
11	Shopper Bag Making Machines (Garant) with press / Line 607	Low-VOC Ink
12	Seventeen Space Heaters (3.4 MMBtu/hr total)	Low Sulfur Fuel (natural gas)

6. EMISSIONS DETERMINATION

Unless otherwise specified by SWCAA, actual emissions must be determined using the specified input parameter listed for each emission unit and the following hierarchy of methodologies:

(a) Continuous emissions monitoring system (CEMS) data;
(b) Source emissions test data (EPA reference method). When source emissions test data conflicts with CEMS data for the time period of a source test, source test data must be used;
(c) Source emissions test data (other test method); and
(d) Emission factors or methodology provided in this TSD.

Nothing precludes the use, including the exclusive use of any credible evidence or information relevant to identifying or quantifying emissions if methods identified above, in the ADP, or elsewhere in this TSD have not provided adequate quantification of actual emissions.

6.a. Printing and Gluing Operations. VOC, TAP, and HAP emissions from printing and gluing operations are calculated using Safety Data Sheet (SDS) information for individual inks and glues, estimated material consumption, and a material balance methodology. It was assumed that 100 percent of the volatile material from the ink, glues, and printing products are emitted to the ambient air. Wherever SDS information indicated a range of potential pollutant concentrations for a material, the average concentration was used to calculate annual emissions. Emissions of particulate matter were assumed to be zero because there are no spraying activities. Solvents (such as ethyl acetate) may be used to clean the press plates.

A list of the products in use, the SDS or TDS, was collected from the 2023 emissions inventory. It is recognized that the actual usage and types of products will vary.

The addition of the new Garant Shopper Bag Making Machines Line 607 is expected to use similar inks and the same adhesives as the rest of the facility. Therefore, emissions can be scaled based on the anticipated increase in throughput at the facility. The following PTE emissions were determined for printing and gluing operations.

Pollutant	Emissions
VOC	6.37 tpy
TAP	3.71 tpy
HAP	0.29 tpy

Though the facility currently does not use previously reviewed or approved inks/solvents that contain higher VOCs (mainly soy-based inks), they have requested to maintain the VOC limit for printing and adhesion operations of 11.79 tpy in case they ever need to switch back to those inks/solvents.

The following notes have also been made for the facility. Novolex Bagcraft no longer uses soy-based ink and now uses water-based ink containing much lower VOC levels. Current SDS show an average VOC content of 0.30 percent. Clarification from Henkel Corporation confirmed the acetaldehyde emissions from the Aquence BG 096A glue are 0.005 percent. Blended Waxes, Inc. said paraffin wax fume from the use of paraffin wax is zero percent (0%) as long as the wax is not heated to above 300 ºF.

6.b. Hudson Press Maxon Burner. Potential annual emissions from the combustion of natural gas in the Hudson Press Maxon burner were calculated with the assumption that the equipment will operate at full rated capacity for 8,760 hours per year. Emissions of NO_X, CO, VOC, SO_2, $PM/PM_{10}/PM_{2.5}$, formaldehyde, and benzene were calculated using emission factors from AP-42 Section 1.4 (7/98). Greenhouse gas emissions were calculated using the procedures specified in 40 CFR 98. All PM is assumed to be $PM_{10}/PM_{2.5}$.

Hudson Press Maxon Burner

Heat Rate =	1.000 MMBtu/hr
Natural Gas Heat Value =	1,020 Btu/scf for AP-42 emission factors
Natural Gas Heat Value =	1,026 Btu/scf for 40 CFR 98 GHG emission factors
Fuel Consumption =	8.588 MMscf/yr

Pollutant	Emission Factor lb/MMscf	Emission Factor lb/MMBtu	Emissions lb/hr	Emissions tpy	Emission Factor Source
NO_X	100	0.0980	0.10	0.43	AP-42 Sec. 1.4 (7/98)
CO	84	0.0824	0.082	0.36	AP-42 Sec. 1.4 (7/98)
VOC	5.5	0.0054	0.0054	0.024	AP-42 Sec. 1.4 (7/98)
SO_X as SO_2	0.6	0.0006	5.88E-04	0.0026	AP-42 Sec. 1.4 (7/98)
PM	7.6	0.0075	0.0075	0.033	AP-42 Sec. 1.4 (7/98)
PM_{10}	7.6	0.0075	0.0075	0.033	AP-42 Sec. 1.4 (7/98)
$PM_{2.5}$	7.6	0.0075	0.0075	0.033	AP-42 Sec. 1.4 (7/98)
Benzene	0.0021	2.06E-06	2.06E-06	9.02E-06	AP-42 Sec. 1.4 (7/98)
Formaldehyde	0.075	7.35E-05	7.35E-05	3.22E-04	AP-42 Sec. 1.4 (7/98)

Greenhouse Gases	kg/MMBtu	GWP	CO_2e lb/MMBtu	CO_2e lb/MMscf	tpy, CO_2e	Emission Factor Source
CO_2	53.06	1	116.98	120,019	512.4	40 CFR 98
CH_4	0.001	25	0.055	56.55	0.2	40 CFR 98
N_2O	0.0001	298	0.066	67.41	0.3	40 CFR 98
Total GHG - CO_2e			117.098	120,143	512.9	

6.c. Space Heaters. Potential annual emissions from the combustion of natural gas in the Reznor space heaters were calculated with the assumption that the equipment will operate at full rated capacity for 8,760 hours per year. Emissions of NO_X, CO, VOC, SO_2, $PM/PM_{10}/PM_{2.5}$, formaldehyde, and benzene were calculated using emission factors from AP-42 Section 1.4 (7/98). Greenhouse gas emissions were calculated using the procedures specified in 40 CFR 98. All PM is assumed to be $PM_{10}/PM_{2.5}$.

Reznor Space Heaters

Heat Rate =	3.400	MMBtu/hr (combined)
Natural Gas Heat Value =	1,020	Btu/scf for AP-42 emission factors
Natural Gas Heat Value =	1,026	Btu/scf for 40 CFR 98 GHG emission factors
Fuel Consumption =	29.200	MMscf/yr

Pollutant	Emission Factor lb/MMscf	Emission Factor lb/MMBtu	Emissions lb/hr	Emissions tpy	Emission Factor Source
NO_X	100	0.0980	0.33	1.46	AP-42 Sec. 1.4 (7/98)
CO	84	0.0824	0.28	1.23	AP-42 Sec. 1.4 (7/98)
VOC	5.5	0.0054	0.018	0.080	AP-42 Sec. 1.4 (7/98)
SO_X as SO_2	0.6	0.0006	2.00E-03	0.0088	AP-42 Sec. 1.4 (7/98)
PM	7.6	0.0075	0.025	0.11	AP-42 Sec. 1.4 (7/98)
PM_{10}	7.6	0.0075	0.025	0.11	AP-42 Sec. 1.4 (7/98)
$PM_{2.5}$	7.6	0.0075	0.025	0.11	AP-42 Sec. 1.4 (7/98)
Benzene	0.0021	2.06E-06	7.00E-06	3.07E-05	AP-42 Sec. 1.4 (7/98)
Formaldehyde	0.075	7.35E-05	2.50E-04	1.10E-03	AP-42 Sec. 1.4 (7/98)

Greenhouse Gases	kg/MMBtu	GWP	CO_2e lb/MMBtu	CO_2e lb/MMscf	tpy, CO_2e	Emission Factor Source
CO_2	53.06	1	117.0	120,019	1,742	40 CFR 98
CH_4	0.001	25	0.055	56.55	0.8	40 CFR 98
N_2O	0.0001	298	0.066	67.41	1.0	40 CFR 98
Total GHG - CO_2e			117.1	120,143	1,744	

6.d. Emissions Summary

Air Pollutant	Potential to Emit (tpy)	Project Impact (tpy)
NO_x	1.89	+0.00
CO	1.59	+0.00
VOC	11.8	+0.19
SO_2	0.01	+0.00
PM	0.14	+0.00
PM_{10}	0.14	+0.00

Air Pollutant	Potential to Emit (tpy)	Project Impact (tpy)
$PM_{2.5}$	0.14	+0.00
Toxic Air Pollutants	3.71	+0.11
Hazardous Air Pollutants	0.29	+0.11
CO_2/CO_2e	2,257	+0.00

Each toxic air pollutant's potential to emit will vary year by year based on the composition and quantity of materials used.

7. REGULATIONS AND EMISSION STANDARDS

Regulations have been established for the control of emissions of air pollutants to the ambient air. Regulations applicable to the proposed facility that have been used to evaluate the acceptability of the proposed facility and establish emission limits and control requirements include, but are not limited to, the following regulations, codes, or requirements. These items establish maximum emissions limits that could be allowed and are not to be exceeded for new or existing facilities. More stringent limits are established in this Permit consistent with implementation of Best Available Control Technology (BACT):

7.a. Revised Code of Washington (RCW) 70A.15.2040 empowers any activated air pollution control authority to prepare and develop a comprehensive plan or plans for the prevention, abatement and control of air pollution within its jurisdiction. An air pollution control authority may issue such orders as may be necessary to effectuate the purposes of the Washington Clean Air Act (RCW 70A.15) and enforce the same by all appropriate administrative and judicial proceedings subject to the rights of appeal as provided in Chapter 62, Laws of 1970 ex. sess. This law applies to the facility.

7.b. RCW 70A.15.2210 provides for the inclusion of conditions of operation as are reasonably necessary to assure the maintenance of compliance with the applicable ordinances, resolutions, rules and regulations when issuing an ADP for installation and establishment of an air contaminant source. This law applies to the facility.

7.c. WAC 173-401 "Operating Permit Regulation" requires all major sources and other sources as defined in WAC 173-401-300 to obtain an operating permit. This regulation is not applicable because this source is not a potential major source and does not meet the applicability criteria set forth in WAC 173-401-300. The facility does not emit any criteria pollutants or HAP above major thresholds; therefore, this regulation does not apply to the facility.

7.d. WAC 173-460 "Controls for New Sources of Toxic Air Pollutants" requires BACT for toxic air pollutants (T-BACT), identification and quantification of emissions of toxic air pollutants, and demonstration of protection of human health and safety. The facility emits TAPs; therefore, this regulation applies to the facility.

7.e. WAC 173-476 "Ambient Air Quality Standards" establishes ambient air quality standards for PM_{10}, $PM_{2.5}$, lead, SO_2, NO_x, ozone, and CO in the ambient air, which must not be exceeded. The facility emits PM_{10}, $PM_{2.5}$, SO_x, NO_x, and CO; therefore, certain sections of this regulation apply. The facility does not emit lead; therefore, the lead regulation section does not apply.

7.f. WAC 173-490-204 "Graphic arts systems" requires printing operations that use more than 90 tpy of VOC in the printing process to meet specified control provisions. This facility is not subject to this standard because they do not consume more than 100 tons of VOCs per year.

7.g. SWCAA 400-040 "General Standards for Maximum Emissions" requires all new and existing sources and emission units to meet certain performance standards with respect to Reasonably Available Control Technology (RACT), visible emissions, fallout, fugitive emissions, odors, emissions detrimental to persons or property, SO_2, concealment and masking, and fugitive dust. This regulation applies to the facility.

7.h. SWCAA 400-040(1) "Visible Emissions" requires that emissions of an air contaminant from any emissions unit must not exceed twenty percent opacity for more than three minutes in any one hour at the emission point, or within a reasonable distance of the emission point. This regulation applies to the facility.

7.i. SWCAA 400-040(2) "Fallout" requires that emissions of PM from any source must not be deposited beyond the property under direct control of the owner(s) or operator(s) of the source in sufficient quantity to interfere unreasonably with the use and enjoyment of the property upon which the material is deposited. This regulation applies to the facility.

7.j. SWCAA 400-040(3) "Fugitive Emissions" requires that reasonable precautions be taken to prevent the fugitive release of air contaminants to the atmosphere. This regulation applies to the facility.

7.k. SWCAA 400-040(4) "Odors" requires any source which generates odors that may unreasonably interfere with any other property owner's use and enjoyment of their property to use recognized good practice and procedures to reduce these odors to a reasonable minimum. This source must be managed properly to maintain compliance with this regulation. This regulation applies to the facility.

7.l. SWCAA 400-040(6) "Sulfur Dioxide" requires that no person is allowed to emit a gas containing in excess of 1,000 ppmd of SO_2, corrected to 7% O_2 or 12% CO_2 as required by the applicable emission standard for combustion sources. The facility emits SO_2; therefore, this regulation applies to the facility.

7.m. SWCAA 400-050 "Emission Standards for Combustion and Incineration Units" requires that all provisions of SWCAA 400-040 be met, and that no person is allowed to cause or permit the emission of PM from any combustion or incineration unit in excess of 0.23 g/Nm^3_{dry} (0.1 gr/dscf) of exhaust gas at standard conditions. The facility has combustion units; therefore, this regulation applies to the facility.

7.n. SWCAA 400-109 "Air Discharge Permit Applications" requires that an ADP application be submitted for all new installations, modifications, changes, or alterations to process and emission control equipment consistent with the definition of "new source". Sources wishing to modify existing permit terms may submit an ADP application to request such changes. An ADP must be issued, or written confirmation of exempt status must be received, before beginning any actual construction, or implementing any other modification, change, or alteration of existing equipment, processes, or permits. This regulation applies to the facility.

7.o. SWCAA 400-110 "New Source Review" requires that SWCAA issue an ADP in response to an ADP application prior to establishment of the new source, emission unit, or modification. The new units meet the definition of a new source; therefore, this regulation applies to the facility.

7.p. SWCAA 400-111 "Requirements for Sources in a Maintenance Plan Area" requires that no approval to construct or alter an air contaminant source will be granted unless it is evidenced that:

(1) The equipment or technology is designed and will be installed to operate without causing a violation of the applicable emission standards;
(2) Emissions will be minimized to the extent that the new source will not exceed emission levels or other requirements provided in the maintenance plan;
(3) BACT will be employed for all air contaminants to be emitted by the proposed equipment;
(4) The proposed equipment will not cause any ambient air quality standard to be exceeded; and
(5) If the proposed equipment or facility will emit any toxic air pollutant regulated under WAC 173-460, the proposed equipment and control measures will meet all the requirements of that Chapter.

The facility is located in a maintenance plan area; therefore, this regulation applies to the facility.

7.q. SWCAA 490 "Emission Standards and Controls for Sources Emitting Volatile Organic Compounds" establishes emission standards and control requirements for sources of VOC located in ozone nonattainment or maintenance plan areas. SWCAA 490-204 "Graphic Arts Systems" applies to printing systems including flexographic printing systems that use more than 100 tpy of VOCs as a component of ink, for the thinning of ink, cleaning of presses, press components and equipment. The permittee does not use more than 100 tpy of VOCs, therefore, the standards in this section do not apply to the permittee.

8. RACT/BACT/BART/LAER/PSD/CAM DETERMINATIONS

The proposed equipment and control systems incorporate BACT for the types and amounts of air contaminants emitted by the processes as described below:

New BACT Determination(s)

8.a. BACT Determination – Bag Making Machines Line 607 (new). This line is a relatively minor source of VOC and TAP emissions. Consistent with previous BACT determinations, at the facility's level of emissions, the use of inks containing less than 1 pound per gallon VOC meets the requirements of BACT.

Previous BACT Determination(s)

8.b. BACT Determination – Bag Making Machines Lines 603-606. These lines are a relatively minor source of VOC and TAP emissions. At the facility's level of emissions, the use of inks containing less than 1 pound per gallon VOC meets the requirements of BACT.

8.c. BACT Determination – Shopper Bag and Folder Gluer Lines. These lines are a relatively minor source of VOC and TAP emissions. At the facility's level of emissions, the use of inks containing less than 1 pound per gallon VOC meets the requirements of BACT.

8.d. BACT Determination – Pear Wrap Line. This line is a relatively minor source of VOC and TAP emissions. At the facility's level of emissions, the use of inks containing less than 1 pound per gallon VOC meets the requirements of BACT.

8.e. BACT Determination – Hudson Sharp Press with Maxon Dryer. This press is a relatively minor source of VOC and TAP emissions. At the facility's level of emissions, the use of inks containing less than 1 pound per gallon VOC and the use of natural gas in the Maxon dryer have been determined to meet the requirements of BACT.

8.f. BACT Determination – Wolverine and Sleeter Presses. During the review for ADP SWCAA 03-2477, it was determined that these presses met the requirements of BACT. At the permitted level of emissions, the use of inks containing less than 1 pound per gallon VOC has been determined to meet the requirements of BACT.

8.g. BACT Determination – Space Heaters. BACT for the space heaters was reviewed in ADP SWCAA 00-2269. The use of natural gas in space heaters of this size was determined to meet the requirements of BACT at the time of permitting.

Other Determinations

8.h. Prevention of Significant Deterioration (PSD) Applicability Determination. This permitting action will not result in a potential increase in emissions equal to or greater than the PSD thresholds. Therefore, PSD review is not applicable to this action.

8.i. Compliance Assurance Monitoring (CAM) Applicability Determination. CAM is not applicable to any emission unit at this facility because it is not a major source and is not required to obtain a Part 70 (Title V) permit.

9. AMBIENT IMPACT ANALYSIS

9.a. Criteria Air Pollutant Review. Emissions of NO_x, CO, PM, VOC (as a precursor to O_3), and SO_2 are emitted at levels where no adverse ambient air quality impact is anticipated.

9.b. Toxic Air Pollutant Review. Based on the emission calculations in accordance with Section 6 for the emission units and activities described in ADP application CL-3287, none of the estimated emission rates exceed the Small Quantity Emission Rate (SQER) specified in WAC 173-460 (July 1998), therefore, no adverse ambient air quality impact is anticipated.

Conclusions

9.c. Installation of new Bag Making Machine, as proposed in ADP application CL-3287, will not cause the ambient air quality requirements of 40 CFR 50 "National Primary and Secondary Ambient Air Quality Standards" to be violated.

9.d. Installation of new Bag Making Machine, as proposed in ADP application CL-3287, will not cause the requirements of WAC 173-460 "Controls for New Sources of Toxic Air Pollutants" or WAC 173-476 "Ambient Air Quality Standards" to be violated.

9.e. Installation of new Bag Making Machine, as proposed in ADP application CL-3287, will not violate emission standards for sources as established under SWCAA General Regulations Sections 400-040 "General Standards for Maximum Emissions," 400-050 "Emission Standards for Combustion and Incineration Units," and 400-060 "Emission Standards for General Process Units."

10. DISCUSSION OF APPROVAL CONDITIONS

SWCAA has made a determination to issue ADP 25-3691 in response to ADP application CL-3287. ADP 25-3691 contains approval requirements deemed necessary to assure compliance with applicable regulations and emission standards as discussed below.

10.a. Supersession of Previous Permits. ADP 25-3691 supersedes ADP 21-3451 in its entirety. Compliance will be determined under this ADP, not previously superseded ADPs. Existing approval conditions for units not affected by this project have been carried forward unchanged.

10.b. Emission Limits. Facility-wide emission limits are based on the sum of the emission limits for approved equipment calculated in Section 6 of this TSD.

TAPs are limited via a blanket limitation that does not allow emissions of individual TAPs to exceed their respective small quantity emission rates established in WAC 173-460. Such a blanket limitation is more appropriate for this facility because material formulations have changed and are expected to continue changing in the future.

Even though the facility is now using low-VOC content inks and glues, the facility asked to keep the existing VOC limit of 11.79 tpy for the printing and gluing operations to account for changes in production and materials.

Emissions for natural gas combustion were limited to the quantity of emissions anticipated from operation of each emissions unit for 8,760 hours per year at full rated load using the emission factors supplied in Section 6. Visible emissions from the natural gas-fired emission units were limited to zero percent (0%) opacity as this limit is readily achievable for properly operated equipment.

10.c. Operational Limits and Requirements. Because this type of operation has the potential to produce nuisance odors, the requirement to minimize odor impacts on neighboring property owners from SWCAA 400-040 was incorporated directly into the ADP. The requirement to store materials containing volatile organic compounds in enclosed containers to minimize evaporation was included as implementation of good air pollution control practice (presumptive BACT).

10.d. Monitoring and Recordkeeping Requirements. ADP 25-3691 establishes monitoring and recordkeeping requirements sufficient to document compliance with applicable emission limits, ensure proper operation of approved equipment and provide for compliance with generally applicable requirements.

10.e. Reporting Requirements. ADP 25-3691 establishes general reporting requirements for annual air emissions, upset conditions and excess emissions. Specific reporting requirements are established for coating consumption, fuel consumption, and material throughput. Reports are to be submitted on a semi-annual basis.

SWCAA is required to be notified before a new material is used that will result in emissions of a new HAP or TAP not already reviewed. This requirement allows SWCAA and the permittee to assess whether a process or material change will have an adverse effect on air quality or require New Source Review without formal submittal of an ADP application. Significant changes must still undergo New Source Review. The ADP requires reporting of the annual air emissions inventory and reporting of the data necessary to develop the inventory. Excess emissions must be reported immediately in order to qualify for relief from monetary penalty in accordance with SWCAA 400-107.

SHUTDOWN/ALTERNATIVE OPERATING SCENARIOS/POLLUTION PREVENTION

11.a. Start-up and Shutdown Provisions. Pursuant to SWCAA 400-081 "Start-up and Shutdown", technology-based emission standards and control technology determinations must take into consideration the physical and operational ability of a source to comply with the applicable standards during start-up or shutdown. Where it is determined that a source is not capable of achieving continuous compliance with an emission standard during start-up or shutdown, SWCAA will include appropriate emission limitations, operating

parameters, or other criteria to regulate performance of the source during start-up or shutdown.

To SWCAA's knowledge, this facility can comply with all applicable standards during startup and shutdown.

11.b. Alternate Operating Scenarios. SWCAA conducted a review of alternate operating scenarios applicable to equipment affected by this permitting action. The permittee did not propose or identify any applicable alternate operating scenarios. Therefore, none were included in the approval conditions.

11.c. Pollution Prevention Measures. SWCAA conducted a review of possible pollution prevention measures for the facility. No pollution prevention measures were identified by either the permittee or SWCAA separate or in addition to those measures required under BACT considerations. Therefore, none were included in the approval conditions.

12. EMISSION MONITORING AND TESTING

There are no emission monitoring or testing requirements established as part of this permitting action.

13. FACILITY HISTORY

13.a. General History. This facility began operation in 1976. Printing operations began at this facility in 2000 with 3 Sleeter presses. The Wolverine flexographic printing press was permitted in 2003.

13.b. Previous Permitting Actions. The following past permitting actions have been taken by SWCAA for this facility:

Permit	Application	Date Issued	Description
21-3451	CL-3135	February 11, 2024	Installation and operation of two Web bag making production lines that include flat handle units, a bundler, and inline printers. Additionally operation of two Garant bag machines with 4-color printers. Superseded ADP 18-3310.
18-3310	CL-3056	November 19, 2018	Approved the installation of two Newlong "Shopper" bag making machines and other modifications to existing equipment. Superseded ADP 17-3222.

Permit	Application	Date Issued	Description
17-3222	CL-3007	April 27, 2017	Approved the installation of a new pear wrap print line that consisted of a Faustell printing/coating line, a sheeter, 2 storage tanks, and 2 mixing tanks. Superseded ADP 04-2552.
04-2552	CL-1642	June 7, 2004	Approved the installation of Hudson Sharp printing press and Maxon natural gas ink dryer. Superseded ADP 03-2477.
03-2477	CL-1570	August 20, 2003	Wolverine press installation and operation. Superseded ADP 00-2269.
00-2269	CL-1455	May 2, 2000	Approved paper product printing operations at the facility.

13.c. Compliance History. A search of source records on file at SWCAA did not identify any previous or outstanding compliance issues over the past five (5) years.

14. PUBLIC INVOLVEMENT OPPORTUNITY

14.a. Public Notice for ADP Application CL-3287. Public notice for ADP application CL-3287 was published on the SWCAA website for a minimum of fifteen (15) days beginning on February 5, 2025.

14.b. Public/Applicant Comment for ADP Application CL-3287. SWCAA did not receive specific comments, a comment period request, or any other inquiry from the public or the applicant regarding ADP application CL-3287. Therefore, no public comment period was provided for this permitting action.

14.c. State Environmental Policy Act. After review of the SEPA Checklist for this project, SWCAA has determined that the project does not have a probable significant impact on the environment and has issued Determination of Non-Significance 25-012. An Environmental Impact Statement is not required under RCW 43.21C.030(2)(c).