SWCAA
Southwest Clean Air Agency

Owens-Brockway Glass Container, Inc. – Plant 2

Air Operating Permit
SW10-17-R1

July 13, 2021

Southwest Clean Air Agency
11815 NE 99th Street, Suite 1294
Vancouver, WA 98682-2322
Telephone: (360) 574-3058

AIR OPERATING PERMIT NUMBER: SW10-17-R1

ISSUED TO: Owens-Brockway Glass Container, Inc. – Plant 2
2310 North Hendrickson Dr.
Kalama, WA 98625

PLANT SITE: Owens-Brockway Glass Container, Inc. – Plant 2
2310 North Hendrickson Dr.
Kalama, WA 98625

NATURE OF BUSINESS: Glass Container Manufacturing

STANDARD INDUSTRIAL CLASSIFICATION CODE (SIC): 3221

NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM CODE (NAICS): 327213

AEROMETRIC INFORMATION RETRIEVAL SYSTEM NUMBER: 53-015-00147

EFFECTIVE DATE: July 13, 2021

EXPIRATION DATE: July 13, 2026

RENEWAL APPLICATION DUE DATE: January 13, 2026

PERMIT ENGINEER:

Clinton H. Lamoreaux, P.E.
Air Quality Engineer

July 13, 2021
Date

REVIEWED BY:

Paul T. Mairose, P.E. Chief Engineer

7/13/2021
Date

Uri Papish, Executive Director

7/13/2021
Date

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I. ABBREVIATIONS

List of Common Abbreviations

Administrator	EPA Region X Administrator
ADP	Air Discharge Permit
AOP	Air Operating Permit
BACT	Best Available Control Technology
CAM	Compliance Assurance Monitoring (40 CFR 64)
CEM	Continuous emission monitor
CEMS	Continuous emission monitoring system
CFR	Code of Federal Regulations
CO	Carbon monoxide
EPA	U.S. Environmental Protection Agency
EU	Emissions unit
EU-#	Refers to a specific emissions unit numbered "#"
FCAA	Federal Clean Air Act
G#	Refers to a specific general term and condition numbered "#"
FGD	Flue gas desulfurization
gr/dscf	Grains per dry standard cubic foot
HAP	Hazardous air pollutant
IEU	Insignificant emissions unit
IEU#	Insignificant emissions unit numbered "#"
lb/hr	Pounds per hour
lb/MMBtu	Pounds per million British thermal units
M#	Refers to a specific monitoring and recordkeeping term or condition (requirement) numbered "#"
NO_X	Oxides of nitrogen
NSR	New source review
O_2	Oxygen
PM	Particulate matter
PM_{10}	Particulate matter with an aerodynamic diameter less than or equal to 10 micrometers
$PM_{2.5}$	Particulate matter with an aerodynamic diameter less than or equal to 2.5 micrometers
ppm	Parts per million
ppmvd	Parts per million, dry volume basis
@ X% O_2	Corrected to X% oxygen content
PTE	Potential to emit
R#	Refers to a specific reporting requirement numbered "#"
RACT	Reasonably Available Control Technology
RCW	Revised Code of Washington
Region 10	Region 10 of the U.S. Environmental Protection Agency
Req-#	Applicable operating term or condition (requirement) numbered "#"
SO_2	Sulfur dioxide
SIP	State implementation plan
SWCAA	Southwest Clean Air Agency
TAP	Toxic air pollutant
VOC	Volatile organic compound
WAC	Washington Administrative Code

Terms not otherwise defined in this permit have the meaning assigned to them in the referenced regulations.

II. REGULATORY BASIS

This Air Operating Permit, hereafter referred to as the "Permit," is authorized under the procedures established in Washington Administrative Code (WAC) 173-401 and Title V (US Code §7661 *et seq.*) of the Federal Clean Air Act (FCAA). As used in this Permit, "term," "condition," "standard," and "requirement" have the same meaning as "applicable requirement" specified under 40 CFR 70.2 and WAC 173-401-200.

The Permit is intended to contain a comprehensive list of the local, state, and federal air pollution regulations and standards applicable to the Permittee's facility and to assure and provide for certification of compliance with those requirements. As listed in Sections V through VIII, the requirements describe the emissions limitations, operating requirements, ambient monitoring, recordkeeping requirements, and reporting frequencies for the facility and cite the originating local, state, or federal regulation or requirement. Federal requirements may be direct (e.g. FCAA or CFR citation) or established under the Washington State Implementation Plan (SIP). Each citation in the table also includes one or two effective dates of the cited regulation. Where there are two dates for the same regulatory citation, the underlying requirement is substantially the same, but the date of the regulation used for enforcement purposes would be different (e.g. federally enforceable versus SWCAA enforceable).

SWCAA is the primary authority that can enforce *all* requirements – federal, state, and local requirements – listed in the Permit. However, the EPA and private citizens may also take enforcement actions under the Permit for those requirements that are federally enforceable; federal regulations, regulations that have a SIP date, and terms of ADPs are federally enforceable. Rules, regulations, and permits that are not SIP approved or federally promulgated are not federally enforceable and are denoted as "*Local*" to indicate they are only enforceable by SWCAA.

For subparts of 40 CFR 60, 40 CFR 61, and 40 CFR 63 delegated to SWCAA by EPA, all monitoring, reporting, or recordkeeping that is required to be sent to the EPA Administrator must only be sent to SWCAA as the delegated authority. For specific subparts that SWCAA has not been delegated implementation and enforcement authority by the EPA, all monitoring, reporting, or recordkeeping that is required to be sent to the EPA Administrator must be sent to both SWCAA and the EPA Administrator.

Federal Regulations	Regulation Version Effective Date	SWCAA Delegation Effective Date
40 CFR 51	April 9, 2021	Not Delegated
40 CFR 52	April 9, 2021	Not Delegated
40 CFR 60 Subpart A	April 9, 2021	July 1, 2019
40 CFR 60 Subpart CC	April 9, 2021	July 1, 2019
40 CFR 60 Subpart IIII	April 9, 2021	July 1, 2019
40 CFR 61 Subpart A	April 9, 2021	July 1, 2019
40 CFR 61 Subpart M	April 9, 2021	July 1, 2019
40 CFR 63 Subpart A	April 9, 2021	July 1, 2019
40 CFR 63 Subpart ZZZZ	April 9, 2021	July 1, 2019
40 CFR 63 Subpart SSSSSS	April 9, 2021	July 1, 2019

Federal Regulations	Regulation Version Effective Date	SWCAA Delegation Effective Date
40 CFR 64	July 1, 2000 (this is found in WAC 173-401-615(4))	Not Delegated
40 CFR 68	April 9, 2021	Not Delegated
40 CFR 82 Subpart B	April 9, 2021	Not Delegated
40 CFR 82 Subpart F	April 9, 2021	Not Delegated
40 CFR 98	April 9, 2021	Not Delegated

State and local regulations may have both an effective date that is included in the SIP and a different effective date as *Local* only requirements.

State Regulations	SIP Regulation Version Effective Date	State Regulation Version Effective Date
WAC 173-400-117	December 29, 2012	November 25, 2018
WAC 173-400-700	April 1, 2011	November 25, 2018
WAC 173-401	—	September 16, 2018
WAC 173-441	—	October 16, 2016
WAC 173-460	—	August 21, 1998*
* Note that a newer version of WAC 173-460 has been published, however it has not been adopted by SWCAA. The version being enforced by SWCAA was effective August 21, 1998.		

SWCAA Regulations	SIP Regulation Version Effective Date	SWCAA Regulation Version Effective Date
SWCAA 400-036	October 9, 2016	March 21, 2020
SWCAA 400-040	October 9, 2016 (excludes (1)(a), (1)(c), (1)(d), (2), and (4))	March 21, 2020
SWCAA 400-050	October 9, 2016 (excludes (3), (5), and (6))	March 21, 2020
SWCAA 400-060	October 9, 2016	March 21, 2020
SWCAA 400-072	October 9, 2016 (except (5)(a)(ii)(B), (5)(d)(ii)(B), (5)(d)(iii)(A), (5)(d)(iii)(B), and all reporting requirements related to TAPs)	March 21, 2020
SWCAA 400-075	—	March 21, 2020
SWCAA 400-076	—	March 21, 2020
SWCAA 400-100	—	March 21, 2020
SWCAA 400-103	—	March 21, 2020
SWCAA 400-105	October 9, 2016 (excludes reporting requirements related to TAPs)	March 21, 2020

SWCAA Regulations	SIP Regulation Version Effective Date	SWCAA Regulation Version Effective Date
SWCAA 400-106	October 9, 2016 (except (1)(d)–(1)(g) and (2))	March 21, 2020
SWCAA 400-107	September 21, 1995	March 21, 2020
SWCAA 400-109	October 9, 2016 (except TAP emissions thresholds (3)(d), (3)(e)(ii), and (4))	March 21, 2020
SWCAA 400-110	October 9, 2016 (except (1)(d))	March 21, 2020
SWCAA 400-111	October 9, 2016 (except (7))	March 21, 2020
SWCAA 400-112	October 9, 2016 (except (6))	March 21, 2020
SWCAA 400-114	November 9, 2003	March 21, 2020
SWCAA 400-115	—	March 21, 2020
SWCAA 400-116	November 9, 2003	March 21, 2020
SWCAA 400-120	—	March 21, 2020
SWCAA 400-130	October 9, 2016	March 21, 2020
SWCAA 400-141	—	March 21, 2020
SWCAA 400-151	November 9, 2003	March 21, 2020
SWCAA 400-171	October 9, 2016 (except (2)(a)(xii))	March 21, 2020
SWCAA 400-205	March 18, 2001	March 21, 2020
SWCAA 400-270	—	March 21, 2020
SWCAA 400 Appendix A	October 9, 2016	March 21, 2020
SWCAA 425	—	June 18, 2017
SWCAA 476	—	March 22, 2020

The Air Discharge Permit (ADP) listed in the table below was issued under state/local authority and a federally approved new source review program; therefore, the terms of this permits are federally enforceable, unless otherwise identified. There are no additional Regulatory Orders or Prevention of Significant Deterioration (PSD) permits applicable to this facility.

Regulatory Orders and Permits	Local Effective Date
ADP 21-3455	March 4, 2021

III. EMISSIONS UNIT IDENTIFICATION

The following emission units or processes and control equipment have been identified at the facility. The EU Number will be used throughout the remainder of the Permit to identify the emission unit or process and any associated control equipment.

EU #	Emission Generating Equipment	Emission Control Measure / Equipment
Material Handling and Maintenance		
EU-1	Raw Material Elevator	Fabric Filtration (Flex Kleen – 400 acfm) Process Enclosure
EU-2	Mixed Batch Elevator	Fabric Filtration (Flex Kleen – 400 acfm) Process Enclosure
EU-3	Mixed Batch Day Bins	Fabric Filtration (Flex Kleen – 400 acfm) Process Enclosure
EU-4	Cullet Elevator	Fabric Filtration (Flex Kleen – 400 acfm) Process Enclosure
EU-5	Silos #1– Sand	Fabric Filtration (Flex Kleen – 400 acfm) Process Enclosure
EU-6	Silo #2 and #3 – Soda Ash	Fabric Filtration (Flex Kleen – 400 acfm) Process Enclosure
EU-7	Silo #4 – Feldspar	Fabric Filtration (Flex Kleen – 400 acfm) Process Enclosure
EU-8	Silo #5 – Limestone	Fabric Filtration (Flex Kleen – 400 acfm) Process Enclosure
EU-9	Silo #6 – Cullet	Fabric Filtration (Flex Kleen – 400 acfm) Process Enclosure
EU-10	Silo #7 – Cullet	Fabric Filtration (Flex Kleen – 400 acfm) Process Enclosure
EU-11	Silo #8 – Cullet	Fabric Filtration (Flex Kleen – 400 acfm) Process Enclosure
EU-12	Silo #9 - Cullet	Fabric Filtration (Flex Kleen – 400 acfm) Process Enclosure
EU-13	Mold Shop	Mold Shop Ventilation System – Fabric Filtration (Donaldson Torit – 1,800 acfm), Downdraft Tables (4) (DualDraw – 5,000 acfm)
Natural Gas Fired Equipment		
EU-14	Glass Melt Furnace (40 MMBtu/hr Oxy-fuel, electric boost)	Oxy-fuel to minimize NO_X, Dry Scrubbing for acid gases, Baghouse for PM, Low Sulfur Fuel (Natural Gas)
EU-15	Forehearth Heater – Line 1 (2.55 MMBtu/hr)	Low Sulfur Fuel (Natural Gas)
EU-16	Forehearth Heater – Line 2 (2.55 MMBtu/hr)	Low Sulfur Fuel (Natural Gas)
EU-17	Shrink Wrap Packaging Heater (0.15 MMBtu/hr)	Low Sulfur Fuel (Natural Gas)
Emergency Generators		
EU-18	62 kW Emergency Generator Engine	Ultra Low Sulfur Diesel (≤ 0.0015% S) Limited Operation EPA Tier 2 Certification

EU #	Emission Generating Equipment	Emission Control Measure / Equipment
EU-19	515 kW Emergency Generator Engine	Ultra Low Sulfur Diesel (≤ 0.0015% S) Limited Operation EPA Tier 2 Certification
Tin Coating		
EU-20	East Hot End Coating Line	None
EU-21	West Hot End Coating Line	None
Other		
EU-22	Mold Swabbing	None
EU-23	Evaporative VOC Sources	Oil skimmer on cullet cooling water

IV. PERMIT PROVISIONS

P1. Credible Evidence — 40 CFR 60.11, 40 CFR 61.12

For the purposes of submitting compliance certifications or establishing whether a violation of any term or condition of this Permit has occurred or is occurring, nothing precludes the use, including the exclusive use, of any credible evidence or information, relevant to whether the Permittee would have been in compliance with a specific term or condition if the appropriate performance or compliance test or procedure would have been performed.

P2. Confidentiality of Records and Information — WAC 173-401-500(5), WAC 173-401-620(2)(e), SWCAA 400-270 (*Local*)

The Permittee is responsible for clearly identifying information that is considered proprietary and confidential prior to submittal to SWCAA. Information considered to be proprietary and confidential may be released only after legal opinion by SWCAA's legal counsel, and notice to the Permittee of the intent to release or deny the release of information. [SWCAA 400-270]

In the case where the Permittee has submitted information to SWCAA under a claim of confidentiality, SWCAA may also require the source to submit a copy of such information directly to the EPA. [WAC 173-401-500(5)]

Upon request, the Permittee must also furnish to SWCAA copies of records required to be kept by the Permittee or, for information claimed to be confidential, the Permittee may furnish such records directly to the EPA along with a claim of confidentiality. SWCAA must maintain confidentiality of such information in accordance with RCW 70A.15.2510 [WAC 173-401-620(2)(e)]

P3. Insignificant Emission Unit - Permit Revision — WAC 173-401-530(6)

Any emission unit or activity that qualifies as insignificant solely on the basis of provisions in WAC 173-401-530(1)(a) must not exceed the emissions thresholds specified in WAC 173-401-530(4) until this Permit is modified pursuant to WAC 173-401-725.

P4. Standard Provisions

WAC 173-401-620(2)
SWCAA 400-103 (*Local*)

(a) *Duty to comply.* The Permittee must comply with all conditions of this Permit. Any Permit noncompliance constitutes a violation of RCW 70A.15 and, for federally enforceable provisions, a violation of the FCAA. Such violations are grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

(b) *Need to halt or reduce activity not a defense.* It must not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit.

(c) *Permit actions.* This Permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

(d) *Property rights.* This Permit does not convey any property rights of any sort, or any exclusive privilege.

(e) *Duty to provide information.* The Permittee must furnish to SWCAA, within a reasonable time, any information that the SWCAA may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the Permit, or to determine compliance with the Permit. Upon request, the Permittee must also furnish to SWCAA copies of records required to be kept by the Permittee or, for information claimed to be confidential, the Permittee may furnish such records directly to the EPA along with a claim of confidentiality. SWCAA must maintain confidentiality of such information in accordance with RCW 70A.15.2510.

(f) *Permit fees.* The Permittee must pay fees in accordance with RCW 70A.15.2270 and SWCAA's fee schedule. Failure to pay fees in a timely fashion subjects the Permittee to civil and criminal penalties as prescribed in RCW 70A.15.3150, RCW 70A.15.3160, and SWCAA 400-103(9).

(g) *Emissions trading.* No permit revision is required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this Permit.

(h) *Severability.* If any provision of this Permit is held to be invalid, all unaffected provisions of the Permit remain in effect and enforceable.

(i) *Permit appeals.* This Permit or any conditions in it may be appealed only by filing an appeal with the Pollution Control Hearings Board and serving it on SWCAA within thirty days of receipt of the Permit pursuant to RCW 43.21B.310. This provision for appeal in this section is separate from and additional to any federal rights to petition and review under FCAA Section 505(b).

(j) *Permit continuation.* This Permit and all terms and conditions contained herein do not expire until the renewal Permit has been issued or denied if a timely and complete application has been submitted. An application shield granted pursuant to WAC 173-401-705(2) remains in effect until the renewal Permit has been issued or denied if a timely and complete application has heen submitted.

P5. Federally Enforceable Requirements WAC 173-401-625

All terms and conditions in a Permit, including any provisions designed to limit a source's potential to emit, are enforceable by the EPA and citizens under the FCAA.

Notwithstanding the above, any terms and conditions included in this Permit that are not required under the FCAA or under any of its applicable requirements are specifically designated as "*Local*" and are not federally enforceable under the FCAA. Terms and conditions so designated are not subject to the EPA and affected states review requirements of WAC 173-401-700 through WAC 173-401-820.

P6. Permit Shield WAC 173-401-640

Compliance with the conditions of this Permit is deemed compliance with all applicable requirements that are specifically identified in this Permit as of the date of Permit issuance. Nothing in this Permit alters or affects the following:

(a) The provisions of section 303 of the FCAA (emergency orders), including the authority of the EPA under that section;

(b) The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of Permit issuance;

(c) The applicable requirements of the acid rain program, consistent with section 408(a) of the FCAA;

(d) The ability of the EPA to obtain information from a source pursuant to section 114 of the FCAA; and

(e) The ability of SWCAA to establish or revise requirements for the use of reasonably available control technology (RACT) as defined in RCW 70A.15.

P7. Emergency Provision WAC 173-401-645

An "emergency" as defined in WAC 173-401-645(1) constitutes an affirmative defense to an action brought for noncompliance with technology based emission limitations. The affirmative defense of emergency must be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

(a) An emergency occurred and that the Permittee can identify the causes(s) of the emergency;

(b) The permitted facility was at the time being properly operated;

(c) During the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the Permit; and

(d) The Permittee submitted notice of the emergency to SWCAA within two working days of the time when emission limitations were exceeded due to the emergency or shorter periods of time specified in an applicable requirement. This notice fulfills the requirement of WAC 173-401-615(3)(b) unless the excess emissions represent a potential threat to human health and safety. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

Burden of proof lies with the Permittee.

P8. Permit Expiration – Application Shield **WAC 173-401-705(2) WAC 173-401-710(3)**

Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with WAC 173-401-710(1) and WAC 173-401-500. All terms and conditions of the Permit remain in effect after the Permit expires if a timely and complete permit application has been submitted. Operation under the terms and conditions of the expired Permit will be allowed until SWCAA takes final action on the renewal application.

P9. Permit Revocation **WAC 173-401-710(4)**

SWCAA may revoke a Permit only upon the request of the Permittee or for cause. SWCAA must provide at least thirty days written notice to the Permittee prior to revocation of the Permit or denial of a permit renewal application. Such notice must include an explanation of the basis for the proposed action and afford the Permittee/applicant an opportunity to meet with SWCAA prior to the authority's final decision. A revocation issued under WAC 173-401-710(4) may be issued conditionally with a future effective date and may specify that the revocation will not take effect if the Permittee satisfies the specified conditions before the effective date.

P10. Changes not Requiring Permit Revision/Off Permit Changes **WAC 173-401-722 WAC 173-401-724**

The Permittee may make changes described in WAC 173-401-722 and WAC 173-401-724 without revising this Permit, provided that the changes satisfy the criteria set forth in those sections, including the requirements to notify SWCAA and EPA. Changes made by the Permittee under WAC 173-401-722 may or may not qualify for a Permit shield and changes under WAC 173-401-724 do not qualify for a Permit shield.

P11. Reopenings for Cause **WAC 173-401-730**

This Permit must be reopened and revised under any of the following circumstances:

(a) Additional applicable requirements become applicable to a source with a remaining permit term of 3 or more years. Such a reopening must be completed not later than 18 months after

promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the Permit is due to expire, unless the original Permit or any of its terms and conditions have been extended pursuant to WAC 173-401-620(2)(j);

(b) Additional requirements (including excess emissions requirements) become applicable to an affected source under the acid rain program. Upon approval by the EPA, excess emissions offset plans will be deemed to be incorporated into the Permit;

(c) SWCAA or the EPA determines that the Permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the Permit; or

(d) SWCAA or the EPA determines that the Permit must be revised or revoked to assure compliance with the applicable requirements.

Proceedings to reopen and issue this Permit must follow the same procedures as apply to initial permit issuance and affect only those parts of the Permit for which cause to reopen exists. Reopenings under this section must not be initiated before a notice of such intent is provided to the source by SWCAA. Such notice must be made at least 30 days in advance of the date that the Permit is to be reopened, except that SWCAA may provide a shorter time period in the case of an emergency.

P12. Unavoidable Excess Emissions — SWCAA 400-107(2)

The provisions of SWCAA 400-107 do not apply to federal standards, emission limits or standards contained in a PSD permit issued solely by EPA, or any event that causes a monitored exceedance of any relevant ambient air quality standard.

Excess emissions which the owner or operator wishes to be considered as unavoidable, must be reported to SWCAA as soon as possible, but no later than forty-eight (48) hours after discovery. The owner or operator of a "source" has the burden of proving to SWCAA or the decision-making authority in an enforcement action that excess emissions were unavoidable.

(a) *Startup or shutdown.* Excess emissions due to startup or shutdown conditions will be considered unavoidable provided the Permittee reports as required under SWCAA 400-107(1) and adequately demonstrates that:
   (1) Excess emissions could not have been prevented through careful planning and design;
   (2) Startup or shutdown was done as expeditiously as practicable;
   (3) All emission monitoring systems were kept in operation unless their shutdown was necessary to prevent loss of life, personal injury, or severe property damage;
   (4) The emissions were minimized consistent with safety and good air pollution control practice during the startup or shutdown period;
   (5) If a bypass of control equipment occurs, that such bypass was necessary to prevent loss of life, personal injury, or severe property damage; and
   (6) Excess emissions that occur due to upsets or malfunctions during routine startup or shutdown are treated as upsets or malfunctions under section (c) below.

(b) *Maintenance.* Excess emissions due to scheduled maintenance will be considered unavoidable if the "source" reports as required under section (1) of SWCAA 400-107 and adequately demonstrates that the excess emissions could not have been avoided through reasonable design, better scheduling for maintenance or through better operation and maintenance practices.

(c) *Upsets or malfunctions.* Excess emissions due to upsets or equipment malfunctions will be considered unavoidable provided the Permittee reports as required under of SWCAA 400-107(1) and adequately demonstrates that:

(1) The event was not caused by poor or inadequate design, operation, maintenance, or any other reasonably preventable condition;

(2) The event was not of a recurring pattern indicative of inadequate design, operation, or maintenance;

(3) The operator took immediate and appropriate corrective action in a manner consistent with safety and good air pollution control practice for minimizing emissions during the event, taking into account the total emissions impact of the corrective action, including slowing or shutting down the emission unit as necessary to minimize emissions, when the operator knew or should have known that an emission standard or permit condition was being exceeded;

(4) All emission monitoring systems and pollution control systems were kept operating to the extent possible unless their shutdown was necessary to prevent loss of life, personal injury, or severe property damage; and

(5) The amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent possible.

V. GENERAL TERMS AND CONDITIONS

G1. Asbestos

40 CFR 61 Subpart M (§61.140)
SWCAA 400-075 (*Local*)
SWCAA 476 (*Local*)

The Permittee must comply with the provisions of SWCAA 476 "Standards for Asbestos Control, Demolition and Renovation" when conducting any renovation, demolition, or asbestos storage activities at the facility.

G2. Chemical Accident Prevention

40 CFR 68

The Permittee must comply with the requirements of the Chemical Accident Prevention Provisions of 40 CFR 68 no later than the following dates:

(a) Three years after the date on which a regulated substance, present above the threshold quantity, is first listed under 40 CFR 68.130; or

(b) The date on which a regulated substance is first present above a threshold quantity in a process. [40 CFR 68.10]

G3. Protection of Stratospheric Ozone **40 CFR 82 Subpart B (§82.30)**
40 CFR 82 Subpart F (§82.150)

The Permittee must comply with the standards for recycling and emissions reduction as provided in 40 CFR Part 82, Subparts B and F.

G4. Duty to Supplement or Correct Application **WAC 173-401-500(6)**

The Permittee, upon becoming aware that relevant facts were omitted or incorrect information was submitted in a Permit application, must promptly submit such supplementary facts or corrected information. In addition, an applicant must provide additional information as necessary to address any requirements that become applicable to the source after the date it filed a complete application but prior to release of a draft Permit.

G5. Certification **WAC 173-401-520**

All application forms, reports, and compliance certifications must be certified by a responsible official. Certification must state that, based on information and belief formed after reasonable inquiry, the statements and information contained in the submittal are true, accurate, and complete.

G6. Inspection and Entry **WAC 173-401-630(2)**
SWCAA 400-105(2) and (3)

The Permittee must allow inspection and entry, upon presentation of credentials and other documents as may be required by law, by SWCAA or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the Permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of the Permit;

(c) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the Permit; and

(d) Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the Permit or applicable requirements.

G7. Schedule of Compliance **WAC 173-401-630(3)**

The Permittee must continue to comply with all applicable requirements with which the source is currently in compliance. The Permittee must meet on a timely basis any applicable requirements that become effective during the permit term. The Permittee must comply with any approved schedule of compliance in accordance with WAC 173-401-510(2)(h)(iii).

G8. Permit Renewal Application — WAC 173-401-710(1) WAC 173-401-610

The Permittee must submit a complete permit renewal application to SWCAA no later than the date established in the Permit. Permit expiration terminates the Permittee's right to operate unless a timely and complete renewal application has been submitted consistent with WAC 173-401-710(1) and WAC 173-401-500. All terms and conditions of the Permit remain in effect after the Permit expires if a timely and complete Permit application has been submitted. Operation under the terms and conditions of the expired Permit will be allowed until SWCAA takes final action on the renewal application.

This Permit expires on July 13, 2026. A renewal application is due on July 13, 2025 and a complete application is due no later than January 13, 2026.

G9. Transfer of Ownership or Operational Control — WAC 173-401-720(1)(d)

A change in Permittee due to transfer of ownership or operational control of an affected source requires a request for administrative permit amendment as governed by WAC 173-401-720(1)(d).

G10. Reporting of Emissions of Greenhouse Gases — WAC 173-441 (*Local*)

WAC 173-441 requires owners and operators of affected facilities to quantify and report emissions of greenhouse gases from applicable source categories listed in WAC 173-441-120. This regulation applies to any facility located in Washington State with total greenhouse gas emissions of ten thousand metric tons of carbon dioxide equivalent (CO_2e) or more per calendar year. The Permittee must prepare and submit greenhouse gas reports to Ecology for each affected facility in accordance with WAC 173-441.

G11. Misrepresentation and Tampering — SWCAA 400-105(5) and (6)

The Permittee must not make any false material statement, representation or certification in any form, notice, or report required under RCW 70A.15, or any ordinance, resolution, regulation, permit or order in force pursuant thereto.

The Permittee must not render inaccurate any monitoring device or method required under RCW 70A.15, or any ordinance, resolution, regulation, permit, or order in force pursuant thereto.

G12. Emission Testing and Monitoring — SWCAA 400-106

SWCAA may conduct or require that emission testing be conducted of any "source" or emission unit within SWCAA's jurisdiction to determine compliance, evaluate control equipment performance, evaluate RACT, or quantify emissions.

The Permittee must provide the necessary platform and sampling ports for SWCAA personnel or others to perform a test of an emission unit. SWCAA must be allowed to obtain a sample from any emission unit. The Permittee must be given an opportunity to observe the sampling and to obtain a sample at the same time.

G13. Portable Sources **SWCAA 400-036**
SWCAA 400-110(6)

Portable sources which locate temporarily at the site a source are allowed to operate at the temporary location without filing an ADP application provided that:

(a) The source/emissions units are registered with SWCAA;

(b) The source/emissions units have an ADP to operate as a portable source;

(c) The owner(s) or operator(s) notifies SWCAA of the intent to operate at the new location at least ten business days prior to starting the operation;

(d) The owner(s) or operator(s) supplies sufficient information including production quantities and hours of operation, to enable SWCAA to determine that the operation will comply with the emission standards for a new source, and will not cause a violation of applicable ambient air quality standards and, if in a nonattainment area, will not interfere with scheduled attainment of ambient standards; and

(e) Portable sources that do not have a valid ADP issued by SWCAA, but do have a valid approval issued by a Washington air pollution control authority after July 1, 2010, may operate within SWCAA jurisdiction without filing an ADP application pursuant to SWCAA 400-109 or obtaining an ADP pursuant to SWCAA 400-110 provided the requirements of SWCAA 400-036 are met.

G14. New Source Review **WAC 173-400-117**
WAC 173-400-720
WAC 173-460-040 (*Local*)
SWCAA 400-072
SWCAA 400-076 (*Local*)
SWCAA 400-109
SWCAA 400-110
SWCAA 400-820

The Permittee must submit an application and approval must be issued or written confirmation of exempt status must be received before commencing construction of the proposed installations, modifications, changes, or alternations. Alternatively, for sources meeting the category criteria in SWCAA 400-072, the Permittee may submit a Small Unit Notification and begin installation after SWCAA has confirmed compliance with the provisions of SWCAA 400-072 in writing. Portable sources may be exempt from this requirement if they fulfill the criteria described in **G13.**

G15. Replacement or Substantial Alteration of Emission Control Technology at an Existing Stationary Source **SWCAA 400-114**

Prior to replacing or substantially altering emission control technology installed at an existing stationary source or emission unit, the Permittee must file an ADP application with SWCAA. Construction must not commence on a project subject to review until SWCAA issues a final

ADP or other regulatory order. However, any ADP application filed under this section is deemed to be approved without conditions if SWCAA takes no action within thirty (30) days of receipt of a complete application.

G16. Process Equipment **SWCAA 400-116(1)**

Any process equipment, including features, machines, and devices constituting parts of or called for by plans, specifications, or other information submitted for approval or required as part of an approval, such as an ADP, must be maintained and operate in good working order. SWCAA reserves the right to take any and all appropriate action to maintain compliance with approval conditions, including directing the facility to cease operations of defective or malfunctioning equipment until corrective action can be completed.

G17. Pollution Control Equipment **SWCAA 400-116(2)**

Any equipment that serves as air contaminant control or capture equipment must be maintained and operate in good working order at all times in accordance with good operations and maintenance practices and in accordance with SWCAA's approval conditions. SWCAA reserves the right to take any and all appropriate action to maintain compliance with approval conditions, including directing the facility to cease operations of defective or malfunctioning equipment until corrective action can be completed.

G18. Adjustment for Atmospheric Conditions **SWCAA 400-205**

Varying the rate of emission of a pollutant according to atmospheric conditions or ambient concentrations of that pollutant is prohibited, except as directed according to air pollution episode regulations as specified at SWCAA 400-230(5).

G19. Outdoor Burning **SWCAA 425 (*Local*)**

The Permittee is prohibited from conducting outdoor burning except as allowed by SWCAA 425.

VI. OPERATING TERMS AND CONDITIONS

The following table lists federal, state, and locally enforceable requirements applicable to the Permittee. The effective date for each applicable requirement is listed in Section II, which also describes the enforceability of the term. Those specific requirements that are enforceable only by SWCAA are denoted with "*Local*". Any requirement with "Facilitywide" listed in the Emission Unit column, applies universally to all emission units or activities, regardless of whether identified as an EU or an IEU. Monitoring requirements are used to provide a reasonable assurance of compliance with the applicable requirements and may or may not involve the use of a reference test method.

Req. #	Requirement	Emission Unit	Monitoring
Req-1	The permittee must not cause or permit any emission that exceeds 20% opacity for more than three minutes in any one hour. Reference Method: SWCAA Method 9 SWCAA 400-040(1)	Facilitywide	M2
Req-2	The permittee must not cause or permit fallout of particulate matter beyond the source's property boundary in sufficient quantity to interfere unreasonably with the use and enjoyment of the property on which the fallout occurs. SWCAA 400-040(2) *Local*	Facilitywide	M2, M4
Req-3	The permittee must take reasonable precautions to prevent and minimize fugitive emissions from plant operations. SWCAA 400-040(3) ADP 21-3455 Condition 12	Facilitywide	M2
Req-4	The permittee must use recognized good practice and procedures to reduce odors to a reasonable minimum. SWCAA 400-040(4) *Local* ADP 21-3455 Condition 13 *Local*	Facilitywide	M4
Req-5	The permittee must not cause or permit the emission of any air contaminant if it is detrimental to the health, safety, or welfare of any person, or causes damage to property or business. SWCAA 400-040(5)	Facilitywide	M2, M4
Req-6	The permittee must not cause or permit any emission unit to emit a gas containing sulfur dioxide in excess of 1,000 ppm of sulfur dioxide on a dry basis, corrected to 7% O_2 for combustion sources other than the glass melt furnace, 12% CO_2 for the Glass Melt Furnace and Forehearth Heaters, and based on an average of 60 minutes. Reference Method: 40 CFR 60 Appendix A Methods 3A, 6 or 6C SWCAA 400-040(6)	EU-14, EU-15, EU-16, EU-17, EU-18, EU-19	M3, M5, M7, M8, M12
Req-7	The permittee must not cause or permit the installation or use of any means which conceals or masks an emission which would otherwise violate any provisions of SWCAA 400-040, 40 CFR 60 Subpart CC, 40 CFR 60 Subpart IIII, or 40 CFR 63 Subpart SSSSSS. 40 CFR 60.12 (applicable to EU-14, EU-18, EU-19) 40 CFR 63.4 (applicable to EU-14) SWCAA 400-040(7)	Facilitywide	N/A

Req. #	Requirement	Emission Unit	Monitoring
Req-8	The permittee must take reasonable precautions to prevent emissions of fugitive dust and operate the source to minimize emissions. SWCAA 400-040(8)(a)	Facilitywide	M2, M3
Req-9	The permittee must not cause or permit emissions of particulate matter from a combustion or incineration emissions unit in excess of 0.1 gr/dscf of exhaust gas corrected to 7% oxygen. Reference Method: 40 CFR 60 Appendix A Method 5 SWCAA 400-050(1 and 4) – *Section (4) is Local Only*	EU-14 - EU-19	M2, M3, M5
Req-10	The permittee must not cause or allow emissions of particulate matter from a general process unit (excludes combustion) in excess of 0.1 gr/dscf of exhaust gas. Reference Method: 40 CFR 60 Appendix A Method 5 SWCAA 400-060	Facilitywide	M2, M3, M5
Req-11	PM_{10} emissions from each raw material and cullet handling baghouse must not exceed 150 pounds per year. PM_{10} emissions from any individual dust collector must not exceed a concentration of 0.005 gr/dscf (1-hour average). Annual emissions must be calculated from actual hours of dust collector operation consistent with the methodology found in Section 6 of the Technical Support Document for Air Discharge Permit 21-3455. Reference Method: 40 CFR 60 Appendix A Method 5 ADP 21-3455 Condition 1	EU-1 – EU-12	M2, M3, M6
Req-12	PM_{10} emissions from the Mold Shop ventilation system must not exceed 676 pounds per year. PM_{10} emissions from the Mold Shop ventilation system dust collector must not exceed a concentration of 0.005 gr/dscf (1-hour average). Annual emissions must be calculated from actual hours of dust collector operation consistent with the methodology found in Section 6 of the Technical Support Document for Air Discharge Permit 21-3455. Reference Method: 40 CFR 60 Appendix A Method 5 ADP 21-3455 Condition 2	EU-13	M2, M3, M6

Req. #	Requirement	Emission Unit	Monitoring
Req-13	Emissions of nickel compounds and hexavalent chromium compounds from thermal spraying must not exceed: Pollutant — Emission Limit (lbs/calendar year) Nickel Compounds as Ni — 0.1 Hexavalent Chromium Compounds as Cr — 0.00006 Unless source emission testing is conducted, annual emissions must be calculated from the amount of material sprayed, the nickel and chromium content of the material sprayed, and the filter efficiency consistent with the methodology found in Section 6 of the Technical Support Document for Air Discharge Permit 21-3455. For MERV 15 filters, an 85% filter efficiency must be assumed. When emission factors from source emissions testing are available for this activity at this facility, those emission factors must be used to calculate annual emissions. ADP 21-3455 Condition 3	EU-13	M2, M3, M16

<table>
<tr><th>Req. #</th><th>Requirement</th><th>Emission Unit</th><th>Monitoring</th></tr>
<tr><td>Req-14</td><td>Emissions from the Glass Melt Furnace exhaust stack must not exceed:

<table>
<tr><th>Pollutant</th><th>Emission Limit (lb/ton glass, 1-hour average)</th><th>Emission Limit (lb/hr, 1-hour average)</th><th>Emission Limit (tons)</th></tr>
<tr><td>NO_X</td><td>1.0</td><td>11.5</td><td>50.19 (12 month rolling total)</td></tr>
<tr><td>CO</td><td>0.20</td><td>2.3</td><td>10.04 (per calendar year)</td></tr>
<tr><td>VOC as C_3H_8</td><td>0.20</td><td>2.3</td><td>10.04 (per calendar year)</td></tr>
<tr><td>SO_2</td><td>0.50</td><td>5.7</td><td>26.33 (per calendar year)</td></tr>
<tr><td>PM (filterable)</td><td>0.09</td><td>1.0</td><td>5.27 (per calendar year)</td></tr>
<tr><td>PM_{10}</td><td>0.27</td><td>3.1</td><td>14.57 (per calendar year)</td></tr>
<tr><td>$PM_{2.5}$</td><td>0.27</td><td>3.1</td><td>14.57 (per calendar year)</td></tr>
</table>

With the exception of formaldehyde, hydrogen chloride, hydrogen fluoride, and lead, emissions of each toxic air pollutant must not exceed the Small Quantity Emission Rate for that toxic air pollutant listed in Washington Administrate Code 173-460 (as in effect August 21, 1998). Emissions of formaldehyde, hydrogen chloride, hydrogen fluoride, and lead must not cause their respective Acceptable Source Impact Levels listed in Washington Administrative Code 173-460 (as in effect August 21, 1998) to be exceeded.

The hourly emission rate limits for SO_2, filterable PM, PM_{10}, and $PM_{2.5}$ do not apply during periods of scheduled maintenance, startup and shutdown periods. Emissions during scheduled maintenance during which the emission control equipment must be bypassed, startup periods, and shutdown periods must be counted towards compliance with the annual and 12-month rolling total emission limits.

Annual emissions must be calculated from Continuous Emissions Monitoring System (CEMS) data where available. If CEMS data is not available (this permit does not require installation of a CEMS), emissions must be calculated using emission factors developed during source emissions testing. If source emissions testing data is not available, emissions must be calculated using the methodology found in Section 6 of the Technical Support Document for Air Discharge Permit 21-3455.

Reference Methods: EPA Methods 1-5, 7E, 10, 25A, 202.

40 CFR 60.292(a)(1) (applies to PM limit)
40 CFR 63.11451 and Table 1 of 40 CFR 63 Subpart SSSSSS (applies to PM limit)
SWCAA 400-075 and 115
ADP 21-3455 Condition 4 (toxics limits are local only)</td><td>EU-14</td><td>M2, M3, M5, M7, M8, M9, M10</td></tr>
</table>

Req. #	Requirement	Emission Unit	Monitoring
Req-15	Emissions from the Forehearth Heaters and the Shrink Wrap Packaging Heaters must not exceed: Unit / NO_X / CO / PM_{10} Forehearth Heater #1: 2,190 lb/yr / 1,840 lb/yr / 166 lb/yr Forehearth Heater #2: 2,190 lb/yr / 1,840 lb/yr / 166 lb/yr Shrink Wrap Packaging Heater: 129 lb/yr / 108 lb/yr / 10 lb/yr Annual emissions must be calculated from actual fuel consumption consistent with the methodology found in Section 6 of the Technical Support Document for ADP 21-3455. ADP 21-3455 Condition 5	EU-15, EU-16, EU-17	M11
Req-16	With the exception of the Glass Melt Furnace exhaust stack and the emergency generator engines, visible emissions from approved equipment must not exceed 0% opacity for more than 3 minutes in any one hour period as determined in accordance with SWCAA Method 9 (found in Appendix A of SWCAA 400). Reference Method: SWCAA Method 9 ADP 21-3455 Condition 6	EU-1 – EU-13, EU-15 - EU-17, EU-20 –EU-23	M2, M3
Req-17	Visible emissions from the Glass Melt Furnace exhaust stack must not exceed 10% opacity for more than 3 minutes in any one hour period as determined in accordance with SWCAA Method 9 (found in Appendix A of SWCAA 400) except during startup, shutdown, and approved maintenance events. Reference Method: SWCAA Method 9 ADP 21-3455 Condition 7	EU-14	M2, M3, M5
Req-18	Visible emissions from the diesel-fired emergency generator engines must not exceed 10% opacity for more than 3 minutes in any one hour period as determined in accordance with SWCAA Method 9 (found in Appendix A of SWCAA 400) except during startup. For the purposes of this requirement, the startup period ends when the earlier of the following operating events occurs: (a) The engine has reached normal operating temperature; or (b) The engine has been operating for 15 minutes. Reference Method: SWCAA Method 9 ADP 21-3455 Condition 8	EU-18, EU-19	M2, M3

Req. #	Requirement	Emission Unit	Monitoring
Req-19	Combined emissions from the East Hot End Coating Line and the West Hot End Coating Line must not exceed: Pollutant: Organic tin (as Sn); Emission Limit lb/day: 6.1; Emission Limit tons per calendar year: 1.12 Pollutant: Hydrogen chloride; Emission Limit lb/day: 2.8; Emission Limit tons per calendar year: 0.52 Unless otherwise approved by SWCAA, annual emissions must be calculated using a material balance approach assuming that any organic tin utilized and not accounted for on the surface of the bottles or equipment is emitted to the ambient air and that all chloride associated with deposited tin forms hydrogen chloride. If measurements of deposited tin or hydrogen chloride source test data are not available, the permittee must assume that one third of the tin utilized is deposited on bottles or other surfaces. ADP 21-3455 Condition 9	EU-20, EU-21	M13
Req-20	Particulate matter emissions from mold swabbing must not exceed 4.00 tons per year. Annual emissions must be calculated using the methodology found in Section 6 of the Technical Support Document for Air Discharge Permit 21-3455. ADP 21-3455 Condition 10	EU-22	M14
Req-21	Emissions of volatile organic compounds from evaporative sources (e.g. mineral oil lubricants) must not exceed 12.00 tons per year. Annual emissions must be calculated using a mass balance approach as described in Section 6 of the Technical Support Document for Air Discharge Permit 21-3455. ADP 21-3455 Condition 11	EU-23	M15

Req. #	Requirement	Emission Unit	Monitoring
Req-22	With the exception of the Glass Melt Furnace, each pollution control device must be operated whenever the processing equipment served by that control device is in operation. All emission control devices must be operated and maintained in accordance with the manufacturer's specifications. Furthermore, control devices must be operated in a manner that minimizes emissions. [ADP 21-3455 Condition 14] At all times, including periods of startup, shutdown, and malfunction, the Glass Melt Furnace and the air pollution control and monitoring equipment for the Glass Melt Furnace must be operated and maintained in a manner consistent with safety and good air pollution control practices for minimizing emissions. Malfunctions must be corrected as soon as practicable after their occurrence. To the extent that an unexpected event arises during a startup, shutdown, or malfunction, an owner or operator must comply by minimizing emissions during such a startup, shutdown, and malfunction event consistent with safety and good air pollution control practices. [40 CFR 63.6(e)(1)(i) and (ii), 40 CFR 63.11455(b)] The air pollution control equipment for the Glass Melt Furnace may only be bypassed for necessary maintenance. Bypass of the melt furnace emission control devices must not exceed 144 hours per year. All maintenance must be conducted in a manner consistent with good air pollution control practices for minimizing emissions. [ADP 21-3455 Condition 14, 40 CFR 60.292(e)] 40 CFR 60.292(e) 40 CFR 63.6(e)(1)(i) 40 CFR 63.11455(b) SWCAA 400-075 ADP 21-3455 Condition 14	Facilitywide	M3, M6, M7, M8, M9, M10
Req-23	The Mold Shop Ventilation System must utilize filter cartridges rated to MERV 15 or better. The downdraft tables in the Mold Shop must utilize HEPA rated (99.97% of 0.3 µm particles) or better filter cartridges. ADP 21-3455 Condition 17	EU-13	M2, M3
Req-24	All thermal spraying must be conducted on the downdraft tables in the Mold Shop. ADP 21-3455 Condition 18	EU-13	M2, M3
Req-25	Unless a subsequent air dispersion modeling analysis is conducted to demonstrate compliance with applicable air quality standards, the melt furnace exhaust stack must discharge at least 100 feet above grade. Any device that obstructs or prevents vertical discharge is prohibited. ADP 21-3455 Condition 19	EU-14	N/A

Req. #	Requirement	Emission Unit	Monitoring
Req-26	The glass melt furnace heaters, forehearth heaters, and shrink wrap packaging heaters must only be fired on natural gas. ADP 21-3455 Condition 20	EU-14, EU-15, EU-16, EU-17	N/A
Req-27	A bag leak detection system must be installed downstream of the Glass Melt Furnace baghouse. The leak detection system must be operated whenever the Glass Melt Furnace baghouse is in operation except for system breakdowns, out-of-control periods, calibration checks or maintenance. The leak detection system must be installed, operated, and maintained in accordance with the requirements in 40 CFR 63.11453(c) and the site specific monitoring plan required by 40 CFR 63.11453(c)(2). The requirements of 40 CFR 63.11453(c) are described in Requirement M9. 40 CFR 63.11453(c) SWCAA 400-075 40 CFR 63.11453(c)(2) 40 CFR 63.11454(a)(7) and (e) ADP 21-3455 Condition 21	EU-14	M9, M10
Req-28	If the results of a required inspection of the Glass Melt Furnace emission control system indicate a problem with the operation of the emission control system, the permittee must take immediate corrective action to return the control device to normal operation according to the equipment manufacturer's specifications or instructions. 40 CFR 63.11455(d)(4) SWCAA 400-075 ADP 21-3455 Condition 22	EU-14	M8
Req-29	The permittee must maintain adequate spare parts to make routine repairs to the Glass Melt Furnace emission control system and bag leak detection system as necessary. Spare bag filters for the Glass Melt Furnace baghouse are mandatory spare parts. ADP 21-3455 Condition 23	EU-14	N/A
Req-30	The concentration of oxygen fed to the Glass Melt Furnace must be at least 92% by volume. ADP 21-3455 Condition 24	EU-14	M7
Req-31	A stoichiometric excess of oxygen must be maintained in the Glass Melt Furnace. ADP 21-3455 Condition 25	EU-14	M7

Req. #	Requirement	Emission Unit	Monitoring
Req-32	The 1-hour average rate of reagent fed to the Glass Melt Furnace dry scrubbing system must be at or above the reagent feed rate measured during the most recent source emissions test that demonstrated compliance with the SO_2 emission rate limit. Reagent feed must be expressed in pounds of reagent per ton of glass. ADP 21-3455 Condition 26	EU-14	M7, M8
Req-33	Exhaust air from each baghouse and the emergency generator engines must be discharged vertically into the ambient air. Any device that obstructs or prevents vertical discharge is prohibited. ADP 21-3455 Condition 27	EU-1 – EU-13, EU-18, EU-19	N/A
Req-34	The diesel-fired emergency generator engines must only be fired on #2 diesel or better. The sulfur content of the fuel fired in the emergency generator engines must not exceed 0.0015% by weight (15 ppm). The fuel fired in the emergency generator engines must either have a minimum cetane index of 40 or a maximum aromatic content of 35 percent by volume. A fuel certification from the fuel supplier may be used to demonstrate compliance with this requirement. 40 CFR 60.4207(b) SWCAA 400-050(2) ADP 21-3455 Condition 28	EU-18, EU-19	M12
Req-35	Operation of the emergency generator engines for maintenance checks and readiness testing must not exceed 100 hours per year. Emergency operation of the emergency generator engines is not limited. A nonresettable time totalizer must be installed on each engine and used to measure hours of operation. 40 CFR 60.4211(f)(2) ADP 21-3455 Condition 29	EU-18, EU-19	M12
Req-36	Operation of the emergency generator engines must be limited to maintenance checks, readiness testing, and as necessary to provide emergency power. ADP 21-3455 Condition 30	EU-18, EU-19	M12
Req-37	The emergency generator engines must not be operated at the same time for maintenance checks and readiness testing. ADP 21-3455 Condition 31	EU-18, EU-19	M12

Req. #	Requirement	Emission Unit	Monitoring
Req-38	Except as provided in 40 CFR 60.4211(g), emergency generator engines must be installed, configured, operated and maintained according to the manufacturer's emissions-related written instructions and the permittee may only change those emissions-related settings that are permitted by the manufacturer. [40 CFR 60.4211(a) and (c)] The permittee must keep records documenting the manufacturer's written instructions for operation and maintenance of the emergency generator engines or the procedures the permittee developed that are approved in writing by the manufacturer. [WAC 173-401-615(1)(b)] 40 CFR 60.4211(g) contains alternative requirements, including a source test requirement, if the permittee chooses to deviate from the manufacturer's written instructions. 40 CFR 60.4211(a) and (c) WAC 173-400-115 WAC 173-401-615(1)(b) SWCAA 400-115	EU-18, EU-19	M12

VII. MONITORING AND RECORDKEEPING TERMS AND CONDITIONS

The permittee must conduct each of the monitoring and recordkeeping activities listed below. All monitoring information required by this permit must be recorded and readily available on-site for inspection. [WAC 173-401-615(2)]

Each record required by this Permit must include the date and the name of the person making the record entry. If a control device or process is not operating during a specific time period, a record must be made to that effect. [ADP 21-3455 Condition 32]

All records and supporting information required by this Permit must be kept for a minimum period of no less than five years and must be maintained in a form readily available for inspection by SWCAA representatives. [ADP 21-3455 Condition 33, WAC 173-401-615(2)(c)]

Pursuant to WAC 173-401-530(2)(c), the following monitoring or recordkeeping requirements do not apply to IEUs unless specified.

M1. General Recordkeeping

WAC 173-401-615(2)
ADP 21-3455 Condition 38

Except for data recorded by an automated system, each record required by this Permit must include, at a minimum, the date and the name of the person making the record entry. For those records required for a control device or process, if the control device or process is not operating during a specific time period, a record must be made to that effect.

The Permittee is required to keep the following records as applicable:

(a) Inspections and Certifications
  (1) Date and time of the inspection or certification;
  (2) Name and title of the person who conducted the inspection or certification;
  (3) Identification of the unit or activity being inspected or certified;
  (4) Operating conditions of the unit or the type of activity occurring at the time of the inspection or certification;
  (5) Compliance status of each monitored requirement as described in Sections V and VII of this Permit; and
  (6) Description of corrective action (if any) taken in response to a discovered permit deviation, excess emission, upset condition, or malfunction, as applicable.

(b) Upset Conditions
  (1) Excess emissions, and upset conditions that cause excess emissions, must be recorded for each occurrence. [ADP 21-3455 Condition 38]

(c) Sampling and Emissions Testing
  (1) Date sampling was performed;
  (2) Entity that performed the sampling;
  (3) Name and title of the person or the entity that performed the sampling or testing;
  (4) Techniques or method used to take the sample;
  (5) Operating conditions existing at the time of sampling or measurement;
  (6) Date analytical analyses (if any) were performed;
  (7) Entity that performed the analyses;
  (8) Analytical techniques or methods used;
  (9) Results of such analyses;
  (10) Compliance status of each monitored requirement; and
  (11) Description of corrective action taken in response to permit deviations and when action was initiated.

(d) Periodic Monitoring and Emissions Records
  (1) Date and time of parameter observation or emission calculation;
  (2) Name of parameter observed or emission calculated;
  (3) Observed parameter value or calculated emission value with appropriate units; and
  (4) Periods that data was unavailable.

(e) Excess Emissions and Permit Deviations
  (1) Date and time of excess emission or permit deviation occurred;
  (2) Description of the excess emission or permit deviation and an identification of the affected unit, process, or activity; and
  (3) Description of corrective action taken in response to a discovered permit deviation, excess emission, upset condition, or malfunction, as applicable.

(f) Maintenance Activities
  (1) Date and time of the maintenance activity;
  (2) Name of the person/company who performed the maintenance;
  (3) Identification of the unit or activity being maintained; and
  (4) Description of the maintenance being conducted.

(g) Changes at Source
  (1) Date changes were made to the source that resulted in emissions of a regulated air pollutant but not otherwise regulated under the Permit;
  (2) Description of the changes made to the source; and

(3) Quantity of emissions resulting from the changes.

M2. Visual Equipment Inspection **WAC 173-401-615(1)**

The permittee must perform monthly inspections of emission units EU-1 through EU-14 (material handling, baghouses, and Glass Melt Furnace) during daylight hours to identify any excess visual emissions, excess fugitive emissions (including fugitive dust), or fallout of particulate matter beyond the permittee's property boundary. EU-15 through EU-23 must be inspected if indicated by a complaint or if otherwise unusual emissions are observed.

Inspections must consist of an initial survey of the affected equipment. If no visible emissions are observed during the initial survey, no further visible emissions observations are necessary. Whenever visible emissions are observed during the initial survey, SWCAA Method 9 must be used to determine the opacity of emissions.

Each SWCAA Method 9 observation must consist of at least 6 minutes of recorded observations. For every reading in excess of the opacity standard, opacity must be read for an additional 6 minutes to a maximum total of 60 minutes or 13 readings in excess of the opacity standard.

Whenever excess visual emissions, fallout beyond the permittee's property boundary, or excessive fugitive emissions are observed during the inspection or at any other time, the permittee must:

(a) Determine the source or cause of the emissions.
(b) Confirm whether the equipment involved is experiencing a malfunction and whether good work practices are being employed to minimize emissions.
(c) Within two hours of discovering excess visual emissions, excess fugitive emissions, or fallout beyond the permittee's property boundary, the permittee must initiate any necessary corrective action.
(d) Within 24 hours of initial discovery, permittee must resolve the issue, or notify SWCAA by the next working day of progress made in resolving the issue.

Implementation of corrective action does not relieve the permittee from the obligation of reporting permit deviations as specified in WAC 173-401-615(3).

M3. General Pollution Control Equipment Inspection **WAC 173-401-615(1)**
ADP 21-3455 Condition 36(a)

The permittee must perform monthly inspections of emission units EU-1 through EU-14 during daylight hours to confirm that pollution control equipment is operating according to manufacturer specifications and/or consistent with good engineering and maintenance practices. The monthly Glass Melt Furnace (EU-14) air pollution control equipment inspection does not require a shutdown or bypass of the air pollution control equipment. The annual inspection of the Glass Melt Furnace air pollution control equipment required by M8 may also serve as the monthly inspection of the Glass Melt Furnace air pollution control equipment for the month in which it is conducted. [WAC 173-401-615(1)]

The Mold Shop Ventilation System and the DualDraw downdraft tables must be inspected for proper operation each month that thermal spraying is conducted. The results of the inspections must

be recorded for each occurrence, and any month without thermal spraying must be noted in the record. The inspection must include, at a minimum, assuring that adequate airflow is available to capture thermal spraying fume, and that filters are properly installed. [ADP 21-3455 Condition 36(a)]

Whenever an operational problem is found during the monthly inspection or any other time, the permittee must initiate corrective action within 2 hours of discovery. The permittee must review maintenance records as necessary to monitor the operations of air pollution control equipment. Within 24 hours of initial discovery, permittee must resolve the operational problem, or notify SWCAA by the next working day of progress made in resolving the operating problem. [WAC 173-401-615(1)]

Implementation of corrective action does not relieve the permittee from the obligation of reporting permit deviations as specified in WAC 173-401-615(3).

M4. Complaint Monitoring **WAC 173-401-615**
ADP 21-3455 Conditions 39

All air quality related complaints received by the permittee regarding activities controlled by the permittee, and the results of any subsequent investigation or corrective action, must be recorded for each occurrence. [ADP 21-3455 Condition 39]

Each complaint must be investigated no later than one workday after the permittee has been notified of the complaint. The permittee must determine the validity of each complaint and the cause of any emissions that may have prompted the complaint, and initiate corrective action, if needed, in response to the complaint. Within 24 hours of notification and investigation, the permittee must resolve the subject of the complaint, or notify SWCAA by the next working day of progress made in resolving the complaint. [WAC 173-401-615(1)]

Implementation of corrective action does not relieve the permittee from the obligation of reporting permit deviations as specified in WAC 173-401-615(3).

Complaint records must indicate: [WAC 173-401-615(2)]

(a) The date and time of the complaint;
(b) The name of the complainant (if provided);
(c) The nature of the complaint;
(d) The date and time of the follow-up inspection; and
(e) Any corrective action taken in response to complaints and when such action was initiated.

M5. Glass Melt Furnace Source Emissions Testing Requirements
40 CFR 60.8 (applies only to initial filterable PM testing of each furnace/rebuild)
40 CFR 60.296 (applies only to initial filterable PM testing of each furnace/rebuild)
40 CFR 63.7 (applies only to initial filterable PM testing of each furnace/rebuild)
40 CFR 63.11452(a), 63.11453(b) (applies only to initial filterable PM testing of each furnace/rebuild)
SWCAA 400-075
ADP 21-3455 Condition 40 and Appendix A

Initial source emissions testing is required each time the furnace is replaced or reconstructed (including re-bricking). The initial source emissions test date of the new or reconstructed furnace serves as the basis for determining when subsequent source emissions testing is due. Initial source emissions testing of the new or re-built Glass Melt Furnace must be conducted as described below within 60 days after achieving the maximum production rate at which the Glass Melt Furnace will be operated, but not later than 180 days after initial startup. Subsequent source emissions testing must be conducted at the frequencies indicated below.

(a) An initial source emissions test to quantify emissions of NO_X, CO, VOCs, SO_2, PM, metals, HF, HCl and sulfuric acid mist from the Glass Melt Furnace exhaust stack was conducted in December 2012.

The permittee must conduct testing for the constituents listed in the table below using the test methods, testing schedule/frequency and minimum test run duration indicated in the table. Testing for each constituent must consist of a minimum of three sampling runs.

Constituent	Test Method or Equivalent[1]	Testing Schedule / Frequency[3]	Minimum Test Run Duration
Stack gas velocity, flow rate	EPA Methods 1 and 2	Initially and each year[4]	N/A
Stack gas O_2, CO_2, dry molecular weight	EPA Method 3A	Initially and each year[4]	60 minutes
Stack gas moisture content	EPA Method 4	Initially and each year[4]	60 minutes
Filterable particulate matter or PM_{10}[5]	EPA Method 5 or 201A	Initially and once every 5 years[4]	180 minutes
Sulfur dioxide[7]	EPA Method 6 or 6C	Initially, each year[4] and each scrubbing reagent change[6]	60 minutes
Nitrogen oxides	EPA Method 7E	Initially and each year[4]	60 minutes
Opacity of emissions	SWCAA Method 9	Initially and each year[4]	6 minutes

Constituent	Test Method or Equivalent[1]	Testing Schedule / Frequency[3]	Minimum Test Run Duration
Carbon monoxide	EPA Method 10	Initially and each year[4]	60 minutes
Volatile organic compounds	EPA Method 25A/18[2]	Initially and once every 5 years[4]	60 minutes
Metals (arsenic, cadmium, chromium, lead, manganese, and nickel)[5]	EPA Method 29	Initially and once every 5 years[4]	60 minutes
Condensable particulate matter	EPA Method 202	Initially and once every 5 years[4]	180 minutes

[1] The use of an alternate or equivalent test method must be pre-approved by SWCAA in writing.

[2] The use of EPA Method 25A with a "methane cutter" is acceptable to determine the VOC concentration. Alternatively, methane and ethane concentrations measured by EPA Method 18 may be subtracted from the total hydrocarbon concentration measured by EPA Method 25A to determine the VOC concentration. When using EPA Method 25A, results must be reported as propane.

[3] Tests conducted more than three months before the required due date will not satisfy the periodic source emission testing requirement without prior approval from SWCAA.

[4] Testing must be conducted no later than the end of the same calendar month during which the initial source emissions test was conducted. Initial source emissions testing for the first gas-fired furnace was conducted in December 2012. Based on the December 2012 date, subsequent testing of constituents with a testing frequency of "each year" must be conducted before the end of December each year. Subsequent testing for constituents with a testing frequency of "Once every 5 years" must be conducted before the end of December every 5 following years (e.g. December 2017, December 2022, etc.).

Initial source emissions testing is required each time the furnace is replaced or reconstructed (re-bricking constitutes reconstruction). The initial test date of the new or reconstructed furnace serves as the basis for determining subsequent test dates. Initial source emissions testing of a new or reconstructed furnace must be conducted within 60 days after achieving the maximum production rate at which the Glass Melt Furnace will be operated, but not later than 180 days after initial startup.

[5] Metals and PM testing must be conducted while the glass melt furnace is producing the glass that has the greatest potential to emit glass manufacturing metal HAP (arsenic, cadmium, chromium, lead, and nickel) from among the glass formulations that will be used at the facility.

The sample volume for each run during initial Method 5 testing must be at least 0.90 dscm (31.89 dscf). [40 CFR 60.296(2)].

[6] Both trona and sodium sesquicarbonate are approved for use as reagents in the dry scrubbing system. If the facility switches from one reagent to another, source emissions testing must be conducted with the new reagent to demonstrate continued compliance with the SO_2 emission limits. Source emissions testing with the new reagent must be completed within 30 days of the change unless such testing has already been conducted within the preceding 12 calendar months. Additional source emissions testing must be conducted as necessary to assure that whichever reagent is in use has been tested within the preceding 12 calendar months.

[7] Unless otherwise approved by SWCAA, SO_2 testing must be conducted while the glass melt furnace is producing the glass that has the greatest potential to emit SO_2 on a pound SO_2 per ton glass basis.

(b) A comprehensive test plan must be submitted to SWCAA for review and approval at least 10 business days prior to testing.

(c) SWCAA personnel must be notified of the test date at least 5 days prior to the testing campaign so that they may be present during testing.

(d) A complete record of operational parameters applicable to the testing, including but not limited to the following must be kept during emissions testing to correlate operations with emissions and must be recorded in the final report of the test results.

(1) Glass production rate
(2) Glass recipe
(3) Glass melting furnace firing rate
(4) Glass melting furnace oxygen addition rate
(5) Glass melting furnace exhaust oxygen concentration (prior to quench air addition)
(6) Startups and shutdowns
(7) Scrubber reactant type (e.g. trona or sodium sodium sesquicarbonate)
(8) Scrubber reactant introduction rate to dry scrubbing system
(9) Bag leak detection system output

(e) Source operations during emissions testing must be representative of maximum intended operating conditions.

(f) Source emissions testing must be conducted as specified in the sections above. The Permittee may submit a written request to SWCAA for approval of minor modifications to the requirements above or the testing schedule. Upon review of the request and in accordance with EPA delegation, SWCAA will inform the Permittee in writing of any approved modifications.

M6. Monitoring of Material Handling and Maintenance Baghouses

ADP 21-3455 Conditions 16, 35(a) and 37

Each material handling baghouse and dust collector (EU-1 through EU-13) must be equipped with a differential pressure gauge capable of continuously measuring the pressure drop across filtration media in the unit. [ADP 21-3455 Condition 16]

The permittee must develop and maintain the following information for EU-1 through EU-13:

(a) The number of hours each material handling or maintenance baghouse is operated must be recorded at least once for each calendar year. [ADP 21-3455 Condition 35(a)]
(b) Maintenance and repair activities that may affect emissions from a material handling or maintenance baghouse must be logged for each occurrence. [ADP 21-3455 Condition 37]

M7. Glass Melt Furnace Operations Monitoring

ADP 21-3455 Conditions 35(b) – 35(h), 37

The permittee must conduct the following monitoring for the Glass Melt Furnace:

(a) The total amount of each raw material used to make glass must be recorded at least once for each calendar month. [ADP 21-3455 Condition 35(b)]
(b) The amount of natural gas consumed by the Melt Furnace Heaters must be recorded at least once for each calendar month. [ADP 21-3455 Condition 35(c)]
(c) The melt furnace glass production rate must be recorded at least once for each day of operation. [ADP 21-3455 Condition 35(d)]
(d) The total amount of glass produced must be recorded at least once for each calendar month. [ADP 21-3455 Condition 35(e)]
(e) To assure a stoichiometric excess of oxygen in the Glass Melt Furnace, the oxygen concentration in the Glass Melt Furnace exhaust must be measured continuously and recorded at least once for each hour of operation. The measuring point must be upstream from where quench air is added. When accurate measurements cannot be made in the exhaust duct due to conditions within the duct (for example when low capacity operation causes quench air to influence the upstream oxygen measurement), the oxygen concentration must be measured at an alternate location, or locations. These alternative locations(s) must provide representative measurements of excess oxygen in the Glass Melt Furnace. When utilizing an alternative sampling location, the oxygen content must be measured at least once each day of operation, or within 60 minutes of reducing the oxygen to fuel ratio at any burner, whichever is more frequent. [ADP 21-3455 Condition 35(f)]
(f) The oxygen to fuel ratio at each Glass Melt Furnace burner must be monitored continuously and logged at least once for each hour of operation. [ADP 21-3455 Condition 35(g)]
(g) The oxygen concentration of the oxygen mixture fed to the Glass Melt Furnace must be determined and recorded at least once per day or once per batch, whichever is less frequent. A certification of purity from the oxygen supplier may be used in lieu of oxygen testing by the permittee. [ADP 21-3455 Condition 35(h)]
(h) Maintenance and repair activities that may affect emissions from the Glass Melt Furnace must be logged for each occurrence. [ADP 21-3455 Condition 37]

M8. Glass Melt Furnace Emission Control Equipment Monitoring

40 CFR 63.11454(a and c)
40 CFR 63.11455(c and d)
ADP 21-3455 Conditions 34 and 35(i) – 35(m)

The permittee must conduct the following monitoring for the Glass Melt Furnace (EU-14) Emission Control Equipment:

(a) The Glass Melt Furnace emission control system must be inspected prior to initial facility startup and at least once every 12 months thereafter. At a minimum, each inspection must include a visual inspection of the system ductwork and fabric filter unit for leaks and an inspection of the inside of the fabric filter for structural integrity and fabric filter condition. [40 CFR 63.11455(d)(1) and ADP 21-3455 Condition 34]

(b) The feed rate and type of reagent fed to the Glass Melt Furnace dry scrubbing system must be recorded for each hour of operation. [ADP 21-3455 Condition 35(i)]

(c) The output of the Glass Melt Furnace bag leak detector and the baghouse inlet temperature must be recorded continuously (at least one cycle of measurement every 15 minutes of operation). [ADP 21-3455 Condition 35(j), 40 CFR 63.11454(a)(4) and (7), 40 CFR 63.11454(c)(1)]

(d) The results of the inspections of the Glass Melt Furnace emission control system must be recorded for each occurrence. [ADP 21-3455 Condition 35(k)]

(e) The number of hours any portion of the Glass Melt Furnace emission control system is offline, and the reason for each outage, must be documented for each occurrence. [ADP 21-3455 Condition 35(l)]

(f) The results of each inspection of the Glass Melt Furnace bag leak detection monitoring system, calibration, monitoring system maintenance, and corrective action taken to return the monitoring system to normal operation must be recorded. [40 CFR 63.11454(a)(5), ADP 21-3455 Condition 35(m)]

(g) Maintenance and repair activities that may affect emissions must be logged for each occurrence. [ADP 21-3455 Condition 37]

(h) The bag leak detection system and baghouse inlet temperature must be monitored in accordance with the requirements of 40 CFR 63.11454(a) and 40 CFR 63.6(e)(1). [40 CFR 63.11454(a), 40 CFR 63.11454(c)(1), 40 CFR 63.11455(c), 40 CFR 63.11455(c)(3), 40 CFR 63.11455(c)(4)] In addition to the requirements listed above, 40 CFR 63.11454(a) requires:

  (1) The permittee must install each sensor in a location that provides representative measurement over all operating conditions, taking into account the manufacturer's guidelines. [40 CFR 63.8(c)(2)(i), 40 CFR 63.11454(a)(1)]

  (2) The permittee must perform an initial calibration of each sensor based on the manufacturer's recommendations. [40 CFR 63.11454(a)(2)]

  (3) The permittee must use a bag leak detector and inlet temperature measurement device that is designed to complete a minimum of one cycle of operation for each successive 15-minute period. [40 CFR 63.11454(a)(3)]

  (4) The permittee must record the results of each inspection, calibration, monitoring system maintenance, and corrective action taken to return the bag leak detector or inlet temperature measurement device to normal operation. [40 CFR 63.11454(a)(5)]

(5) At all times, the permittee must maintain a bag leak detection system and inlet temperature monitoring device including, but not limited to, maintaining necessary parts for routine repairs of the system. [40 CFR 63.8(c)(1)(ii), 40 CFR 63.11454(a)(6)]

In addition to the requirements listed above, 40 CFR 63.8(c) requires:

(6) The bag leak detector read out must be readily accessible on site for operational control or inspection by the operator of the equipment. [40 CFR 63.8(c)(2)(ii)]

(7) The bag leak detector must be installed, operational, and the data verified. Verification of operational status must, at a minimum, include completion of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system. [40 CFR 63.8(c)(3)]

M9. Glass Melt Furnace Bag Leak Detector Setup and Alarm Response

40 CFR 63.11453(c)
40 CFR 63.11454(e)
40 CFR 63.11455(c)(4)
ADP 21-3455 Condition 47

The Glass Melt Furnace (EU-14) bag leak detection system must meet the following specifications: [40 CFR 63.11453(c)(1), 40 CFR 63.11454(e), 40 CFR 63.11455(c)(4)]

(a) The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 1 milligram per dry standard cubic meter (0.00044 grains per actual cubic foot) or less. [40 CFR 63.11453(c)(1)(i)]

(b) The bag leak detection system sensor must provide output of relative PM loadings. The permittee must continuously record the output from the bag leak detection system using electronic or other means (e.g., using a strip chart recorder or a data logger). [40 CFR 63.11453(c)(1)(ii)]

(c) The bag leak detection system must be equipped with an alarm system that will sound when the system detects an increase in relative particulate loading over the alarm set point, and the alarm must be located such that it can be heard by the appropriate plant personnel. [40 CFR 63.11453(c)(1)(iii)]

(d) In the initial adjustment of the bag leak detection system, the permittee must establish, at a minimum, the baseline output by adjusting the sensitivity (range) and the averaging period of the device, the alarm set points, and the alarm delay time. [40 CFR 63.11453(c)(1)(iv)]

(e) Following initial adjustment, the permittee must not adjust the averaging period, alarm set point, or alarm delay time without approval from the EPA or SWCAA except as provided in paragraph (f) below. [40 CFR 63.11453(c)(1)(v)]

(f) Once per quarter, the permittee may adjust the sensitivity of the bag leak detection system to account for seasonal effects, including temperature and humidity, according to the procedures identified in the site-specific monitoring plan. [40 CFR 63.11453(c)(1)(vi)]

(g) The bag leak detection sensor must be installed downstream of the Glass Melt Furnace baghouse. [40 CFR 63.11453(c)(1)(vii)]

The permittee must develop and submit to SWCAA for approval a site-specific monitoring plan for the Glass Melt Furnace bag leak detection system within 60 days of startup. The Glass Melt Furnace leak detection system must be operated and maintained according to the site-specific monitoring plan. The site specific monitoring plan must describe: [40 CFR 63.8(d), 40 CFR 63.11453(c)(2), ADP 21-3455 Condition 47]

(h) Installation of the bag leak detection system. [40 CFR 63.11453(c)(2)(i)]
(i) Initial and periodic adjustment of the bag leak detection system, including how the alarm set-point will be established. [40 CFR 63.11453(c)(2)(ii)]
(j) Operation of the bag leak detection system, including quality assurance procedures. [40 CFR 63.11453(c)(2)(iii)]
(k) How the bag leak detection system will be maintained, including a routine maintenance schedule and spare parts inventory list. [40 CFR 63.11453(c)(2)(iv)]
(l) How the bag leak detection system output will be recorded and stored. [40 CFR 63.11453(c)(2)(v)]
(m) Corrective action procedures as specified in 40 CFR 63.11453(c)(3). [40 CFR 63.11453(c)(2)(vi)]

The permittee must initiate procedures to determine the cause of every alarm within 1 hour of the alarm. Except as approved in the site-specific monitoring plan, the permittee must alleviate the cause of the alarm within 3 hours of the alarm by taking whatever corrective action(s) are necessary. Corrective actions may include, but are not limited to the following: [40 CFR 63.11453(c)(3)]

(n) Inspecting the fabric filter for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in particulate matter emissions. [40 CFR 63.11453(c)(3)(i)]
(o) Sealing off defective bags or filter media. [40 CFR 63.11453(c)(3)(ii)]
(p) Replacing defective bags or filter media or otherwise repairing the control device. [40 CFR 63.11453(c)(3)(iii)]
(q) Sealing off a defective fabric filter compartment. [40 CFR 63.11453(c)(3)(iv)]
(r) Cleaning the bag leak detection system probe or otherwise repairing the bag leak detection system. [40 CFR 63.11453(c)(3)(v)]
(s) Shutting down the process producing the PM emissions. [40 CFR 63.11453(c)(3)(vi)]

M10. 40 CFR 63 Subpart SSSSSS (Glass Melt Furnace) General Recordkeeping

40 CFR 63.10
40 CFR 63.11455(c)(6)
40 CFR 63.11457
SWCAA 400-075

In addition to records relevant to Glass Melt Furnace operation listed above, the permittee must record and maintain the following records for the Glass Melt Furnace in accordance with the requirements of 40 CFR 63 Subpart SSSSSS. The "monitoring equipment" referenced below includes the required Glass Melt Furnace baghouse leak detector and the baghouse inlet temperature monitor.

(a) A copy of each notification and report submitted to comply with 40 CFR 63 Subpart SSSSSS, including all documentation supporting any Initial Notification or Notification of Compliance Status submitted according to the requirements of 40 CFR 63.10(b)(2)(xiv). [40 CFR 63.11457(a)(1), 40 CFR 63.11457(a)(2), 40 CFR 63.10(b)(2)(x) and (xiv)]
(b) Records of the calendar date, time, occurrence and duration of each startup and shutdown. [40 CFR 63.11457(a)(2), 40 CFR 63.10(b)(2)(i)]
(c) The occurrence and duration of each malfunction of operation (i.e., process equipment) or the required air pollution control and monitoring equipment. [63.11455(c)(6), 40 CFR 63.11457(a)(2), 40 CFR 63.10(b)(2)(ii)]
(d) All required maintenance performed on the air pollution control and monitoring equipment. [63.11455(c)(6), 40 CFR 63.11457(a)(2), 40 CFR 63.10(b)(2)(iii)]
(e) Actions taken during periods of startup or shutdown when the source exceeded applicable emission limitations in a relevant standard. [40 CFR 63.11457(a)(2), 40 CFR 63.10(b)(2)(iv)(A)]
(f) Actions taken during periods of malfunction (including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation). [63.11455(c)(6), 40 CFR 63.11457(a)(2), 40 CFR 63.10(b)(2)(iv)(B)]
(g) Each period during which monitoring equipment is malfunctioning or inoperative (including out-of-control periods). [63.11455(c)(6), 40 CFR 63.11457(a)(2), 40 CFR 63.10(b)(2)(vi)]
(h) All required bag leak detector outputs, baghouse inlet temperature measurements, particulate matter source emissions test results and any other measurements that support data that must be reported. [63.11455(c)(6), 40 CFR 63.11457(a)(2), 40 CFR 63.10(b)(2)(vii) and (viii), 40 CFR 63.10(c)(1) and (5)]
(i) All measurements as may be necessary to determine the conditions of performance tests and performance evaluations. [40 CFR 63.11457(a)(2), 40 CFR 63.10(b)(2)(ix)]
(j) All calibration checks, adjustments and maintenance for the Glass Melt Furnace bag leak detector and baghouse inlet temperature monitor. [63.11455(c)(6), 40 CFR 63.11457(a)(2), 40 CFR 63.10(b)(2)(x) and (xi)]
(k) The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions and bag leak detector parameter exceedances as defined in the relevant standard(s), that occurs during startups, shutdowns, and malfunctions of the affected source. [40 CFR 63.11457(a)(2), 40 CFR 63.10(c)(7)]
(l) The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions and bag leak detector parameter exceedances as defined in the relevant standard(s), that occurs during periods other than startups, shutdowns, and malfunctions of the affected source. [40 CFR 63.11457(a)(2), 40 CFR 63.10(c)(8)]
(m) The nature and cause of any malfunction of the monitoring equipment (if known); [63.11455(c)(6), 40 CFR 63.11457(a)(2), 40 CFR 63.10(c)(10)]
(n) The corrective action taken or preventive measures adopted in response to malfunctions of monitoring equipment. [63.11455(c)(6), 40 CFR 63.11457(a)(2), 40 CFR 63.10(c)(11)]
(o) The nature of the repairs or adjustments to monitoring equipment that was inoperative or malfunctioning. [63.11455(c)(6), 40 CFR 63.11457(a)(2), 40 CFR 63.10(c)(12)]
(p) The total process operating time during the reporting period. [40 CFR 63.11457(a)(2), 40 CFR 63.10(c)(13)]
(q) The records of all Glass Melt Furnace Baghouse and leak detection system operation and maintenance. [40 CFR 63.11457(a)(3)]

(r) Records of glass production rate on a process throughput basis (either feed rate or glass production rate). The production data must include the amount (weight or weight percent) of each ingredient in the batch formulation, including all arsenic, cadmium, chromium, lead, manganese, and nickel. [40 CFR 63.11457(a)(4)]
(s) Records of maintenance activities and inspections performed on the Glass Melt Furnace baghouse. The records must include the date, and time of each aspect of the inspection, the name of the person(s) conducting the inspection, the technique or method used to conduct the inspection, the control device operating conditions during the inspection, and the results of the inspection and a description of any corrective action taken. [40 CFR 63.11455(d)(3), 40 CFR 63.11457(a)(5), 40 CFR 63.11457(c)]
(t) Records of all required monitoring data and supporting information including all calibration and maintenance records. [63.11455(c)(6), 40 CFR 63.11457(a)(6)]
(u) For each bag leak detection system: [40 CFR 63.11457(a)(7)]
    (1) Records of the bag leak detection system output;
    (2) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and
    (3) The date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, the cause of the alarm, an explanation of the actions taken, the date and time the cause of the alarm was alleviated, and whether the alarm was alleviated within 3 hours of the alarm.

The records must be in a form suitable and readily available for expeditious review, according to 40 CFR 63.10(b)(1). The results of each inspection and maintenance action must be maintained onsite and available to SWCAA upon request. The records must be maintained for five years following the date of each occurrence, measurement, maintenance, corrective action, report or record. Each record must be kept on site, or they must be accessible from on site, for at least two years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The permittee may keep the records off site for the remaining three years. [40 CFR 63.11457(b), (c), and (d)]

M11. Forehearth Heaters and Shrink Wrap Packaging Heater Monitoring
ADP 21-3455 Conditions 35(c), and 37

The permittee must conduct the following monitoring for the Forehearth Heaters and the Shrink Wrap Packaging Heater (EU-15, EU-16, and EU-17):

(a) The amount of natural gas consumed by the Forehearth Heaters and the Shrink Wrap Packaging Heater must be recorded at least once for each calendar month. [ADP 21-3455 Condition 35(c)]
(b) Maintenance and repair activities that may affect emissions must be logged for each occurrence. [ADP 21-3455 Condition 37]

M12. Emergency Generator Engine Monitoring **WAC 173-401-615(1)**
ADP 21-3455 Conditions 36(c), 36(d), and 37

The permittee must conduct the following monitoring for the emergency generator engines (EU-18 and EU-19):

(a) The permittee must document and record each incidence of inspection, maintenance and repair conducted to demonstrate compliance with the emissions-related maintenance requirements of 40 CFR 60.4211(a). The documentation must include a description of the inspection, maintenance and/or repair conducted and the hour meter reading on the engine at the time of the inspection, maintenance or repair. [WAC 173-401-615(1), ADP 21-3455 Condition 37]
(b) The number of hours each emergency generator engine is operated each calendar year must be recorded from the non-resettable hour meter on each engine. The permittee must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours were spent for non-emergency operation. [ADP 21-3455 Condition 36(c)]
(c) The fuel sulfur content of diesel burned in each emergency generator engine must be determined and recorded for each fuel delivery. A fuel supplier certification may be used in lieu of actual fuel testing. [ADP 21-3455 Condition 36(d)]
(d) The maintenance check and readiness testing schedule for the emergency generator engines must be documented to demonstrate that the two engines are not operated at the same time for maintenance checks and readiness testing in accordance with Condition 31 of ADP 21-3455. [WAC 173-401-615(1)]

M13. Hot End Coating Lines Monitoring
WAC 173-401-615(1)
ADP 21-3455 Conditions 36(e) and 37

The permittee must conduct the following monitoring for the Hot End Coating Lines (EU-20 and EU-21):

(a) The weight of each container of monobutyltin trichloride must be recorded prior to usage, daily during usage, and when the container is disconnected from the feed system. [ADP 21-3455 Condition 36(e)]. The records must include both the date and the time of each weighing. [WAC 173-401-615(1)]
(b) Maintenance and repair activities that may affect emissions must be logged for each occurrence. [ADP 21-3455 Condition 37]

M14. Mold Swabbing Monitoring
ADP 21-3455 Conditions 36(f) and 37

The permittee must conduct the following monitoring for the Mold Swabbing activities (EU-22):

(a) The mass of each mold swabbing material used must be recorded for each calendar month. Alternatively the amount of each mold swabbing material purchased must be recorded for each calendar month. [ADP 21-3455 Condition 36(f)]

(b) Maintenance and repair activities that may affect mold swabbing emissions must be logged for each occurrence. [ADP 21-3455 Condition 37]

M15. Evaporative VOC Monitoring

ADP 21-3455 Conditions 36(g) and 37

The permittee must conduct the following monitoring related to evaporative VOC emissions (EU-23):

(a) The mass of each lubricant and hydraulic oil used must be recorded for each calendar month. Alternatively the amount of each lubricant and hydraulic oil purchased must be recorded for each calendar month. [ADP 21-3455 Condition 36(g)]
(b) Maintenance and repair activities that may affect fugitive VOC emissions must be logged for each occurrence. [ADP 21-3455 Condition 37]

M16. Mold Shop Thermal Spraying Monitoring

ADP 21-3455 Conditions 36(b) and 37

The permittee must conduct the following monitoring related to thermal spraying in the Mold Shop (EU-13):

(a) The amount and composition of each thermal spraying material used in the Mold Shop must be recorded for each calendar year. [ADP 21-3455 Condition 36(b)]
(b) Maintenance and repair activities that may affect emissions from thermal spraying must be logged for each occurrence. [ADP 21-3455 Condition 37]

VIII. REPORTING TERMS AND CONDITIONS

All required reports must be certified by a responsible official consistent with WAC 173-401-520. Where an applicable requirement requires reporting more frequently than once every six months, the responsible official's certification need only be submitted once every six months, covering all required reporting since the date of the last certification. Pursuant to WAC 173-401-530(2)(c), reporting requirements are not applicable to IEUs unless specified.

Where a reporting schedule is specified (e.g. quarterly, semi-annual, or annual), compliance with the reporting frequency is met when reports are submitted more frequently than required.

Each report that is required to be submitted to the Department of Ecology or the EPA must also be submitted to SWCAA by the deadline specified in the applicable requirement for that report. For submissions made electronically to an EPA database, the copy to SWCAA must be in a format approved by SWCAA. [WAC 173-401-615(3)]

All reports required by this Permit, and the supporting information for those reports, must be kept for a minimum period of no less than five years from the date of the report and must be maintained in a form readily available for inspection by SWCAA representatives. [WAC 173-401-615(2)(c)]

Addresses of regulatory agencies are the following, unless otherwise instructed:

Southwest Clean Air Agency
11815 NE 99th Street, Suite 1294
Vancouver, WA 98682-2322

Clean Air Act Compliance Manager
US EPA Region 10, Mail Stop: OCE-101
1200 Sixth Avenue, Suite 155
Seattle, WA 98101

R1. Deviations from Permit Conditions **WAC 173-401-615(3)(b)**
SWCAA 400-107
ADP 21-3455 Conditions 42 and 43

Excess emissions must be reported to SWCAA as follows: [ADP 22-3455 Condition 42]

(a) As soon as possible, but no later than 12 hours after discovery for emissions that represent a potential threat to human health or safety;
(b) As soon as possible, but no later than 48 hours after discovery for emissions which the permittee wishes to claim as unavoidable pursuant to SWCAA 400-107(1); and
(c) No later than 30 days after the end of the month of discovery for all other excess emissions.

The permittee may provide initial notification to SWCAA via telephone. A message may be left on the answering machine for upset conditions that occur outside of normal business hours

Excess emission reports must contain the following information: [SWCAA 400-107]

(d) Identification of the emission unit(s) involved;
(e) A brief description of the event including identification of known causes;
(f) Date, time and duration of the event;
(g) For exceedances of non-opacity emission limitations, an estimate of the quantity of excess emissions;
(h) Corrective action taken in response to the event; and
(i) Preventive measures taken or planned to minimize future recurrence.

Deviations from permit requirements must be reported no later than thirty days after the end of the month during which the deviation is discovered. [40 CFR ADP 21-3455 Condition 43]

Reports of deviations from permit requirements must include: [WAC 173-401-615(3)(b)]

(j) Whether or not the deviation is due to upset conditions;
(k) The probable cause of the deviation; and
(l) The corrective action taken, and when the corrective action was initiated.

All reports must be submitted in writing (e.g. e-mail, facsimile or letter).

R2. Complaint Reports **ADP 21-3455 Conditions 39 and 44**

All air quality related complaints received by the permittee regarding activities controlled by the permittee and the results of any subsequent investigation or corrective action must be recorded

for each occurrence and reported to SWCAA within three days of receipt. The report must include the results of any subsequent investigation or corrective action related to the complaint.

R3. Semi-annual Reports **WAC 173-401-615(3)**

Consistent with WAC 173-401-615(3) the permittee must submit to SWCAA by October 15th and April 15th for the six month periods January through June and July through December respectively, a report on the status of all monitoring requirements. All instances of deviation from permit requirements must be clearly identified. The semi-annual report must contain a certification of any reports submitted during the semi-annual period that have not already been certified. The certification must be consistent with WAC 173-401-520.

R4. Annual Compliance Certification **WAC 173-401-615(1)(b)**
WAC 173-401-630(5)

The permittee must submit to SWCAA and EPA a certification of compliance with all terms and conditions of this permit in accordance with WAC 173-401-630(5)(d). The permittee must submit by March 15th of the following year the following information for the period of January through December:

(a) Identification of each term or condition of the permit that is the basis of the certification;
(b) Statement of compliance status;
(c) Whether compliance was continuous or intermittent;
(d) Method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with WAC 173-401-615;
(e) Such other facts as SWCAA may require to determine the compliance status of the source;
(f) The certification must also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR 64 (CAM) occurred; and
(g) Such additional requirements as may be specified pursuant to Sections 114(a)(3) and 504(b) of the FCAA.

R5. Emission Inventory Reports **SWCAA 400-105**
ADP 21-3455 Condition 50

The following emissions related records must be reported to SWCAA by March 15th for the previous calendar year:

(a) The total amount of each raw material used to make glass;
(b) The number of hours each baghouse and mold shop filter system was operated;
(c) The total quantity of glass produced during normal operations and the total quantity of glass produced while the emission control system is not operating;
(d) The amount of natural gas consumed by the Glass Melt Furnace Heaters, Forehearth Heaters, and the Shrink Wrap Packaging Heaters;
(e) The total number of hours each emergency generator engine operated;
(f) The total amount of monobutyltin trichloride used;

(g) The mass of each mold swabbing material used or the mass of each mold swabbing material purchased, and the amount sent offsite as waste;
(h) The mass of each lubricant and hydraulic oil used or the amount of each lubricant and hydraulic oil purchased, and the amount sent offsite as waste;
(i) The amount and composition of each thermal spraying material used in the Mold Shop; and
(j) Air emissions of criteria air pollutants, volatile organic compounds, hazardous air pollutants (HAPs), and toxic air pollutants (TAPs).

R6. Source Test Plans and Reports **ADP 21-3455 Condition 45 and Appendix A**

A comprehensive test plan must be submitted to SWCAA for review and approval at least 10 business days prior to testing. SWCAA personnel must be notified of the test date at least 5 days prior to the testing campaign so that they may be present during testing.

The results of all required testing must be submitted to SWCAA within 45 days of test completion. Unless otherwise directed by SWCAA, a single hard copy of each report and an electronic copy (e.g. Portable Document Format (PDF)) of each report must be submitted. Each report must include:

(a) A description of the source including manufacturer, model number and design capacity of the equipment, and the location of the sample ports or test locations.
(b) Time and date of the test and identification and qualifications of the personnel involved.
(c) A summary of results, reported in units and averaging periods consistent with the applicable emission standards or limits. At a minimum all pollutant emission rates must be reported in units of lb/hr and lb/ton glass produced. In addition, emissions of NO_X, CO, and SO_2 must be reported in units of ppmvd and ppmvd @ 15% O_2; VOC emissions must be reported as C_3H_8 in units of ppmvd and ppmvd @ 15% O_2; and particulate matter emissions must be reported in units of gr/dscf and gr/dscf @ 15% O_2.
(d) A summary of control system or equipment operating conditions.
(e) A summary of production related parameters.
(f) A description of the test methods or procedures used including all field data, quality assurance/quality control procedures and documentation.
(g) A description of the analytical procedures used including all laboratory data, quality assurance/quality control procedures and documentation.
(h) Copies of field data and example calculations.
(i) Chain of custody information.
(j) Calibration documentation.
(k) Discussion of any abnormalities associated with the results.
(l) A statement signed by the senior management official of the testing firm certifying the validity of the source test report.

R7. Episodic Reports

40 CFR 60.292(e)(3)
40 CFR 63.9(h)
40 CFR 63.11452(a)(1)
40 CFR 63.11453(a)
40 CFR 63.11453(c)(2)
40 CFR 63.11456(b)
ADP 21-3455 Conditions 41, 46, 47, 48, and 49

The following reports must be submitted to SWCAA as indicated below:

(a) Shutdowns and the initiation of cold start-up periods for the Glass Melt Furnace must be reported to SWCAA within 1 business day of each event. The permittee may provide initial notification by telephone; however a written notification (facsimile, electronic mail or letter) must be submitted within 10 days of the event. [ADP 21-3455 Condition 41]

(b) If the Glass Melt Furnace emission control system must be bypassed to conduct routine maintenance, the permittee must submit a report to SWCAA at least 10 calendar days prior to conducting the maintenance. If 10 calendar days cannot be provided, the report must be submitted as soon as practicable. The report must include an explanation of the schedule of the maintenance. [40 CFR 60.292(e)(3), ADP 21-3455 Condition 46]

(c) A written report must be submitted to SWCAA at least seven (7) days prior to the use of any new VOC, TAP, or HAP containing product. The report must include the following: [ADP 21-3455 Condition 49]
   (1) The SDS or technical data sheet for each product;
   (2) A description of the type of product (e.g. lubricant, resin, paint, solvent, etc.) and where it will be used at the facility;
   (3) The date by which the permittee intends to begin use of the product;
   (4) The intended maximum usage rate of the product;
   (5) A quantification of the increase or decrease in emissions of VOC, TAPs, and HAPs resulting from use of the product; and
   (6) A summary of any applicable requirement that would apply as a result of using the new product.

   If the use of any new product results in the exceedance of the applicable SQER for any TAP and/or any emission limit established by Air Discharge Permit 21-3455, the permittee must submit an Air Discharge Permit application to SWCAA to request a permit revision. Use of the new product must not begin until a revised permit is issued. Any new product used only for testing purposes does not need to be reported to SWCAA prior to use, provided the quantity of usage does not exceed five (5) gallons.

(d) For each reconstructed furnace (a re-bricking event is considered reconstruction for the purposes of this requirement) the permittee must submit a Notification of Compliance Status to SWCAA before the close of business on the 60th day following completion of performance testing conducted in accordance witb M5. The Notification of Compliance Status must meet the requirements of 40 CFR 63.9(h). [40 CFR 63.9(h), 40 CFR 63.11452(a)(1), 40 CFR 63.11453(a), 40 CFR 63.11456(b), ADP 21-3455 Condition 48]

(e) The permittee must submit a site-specific monitoring plan to SWCAA within 60 days of initial startup in accordance with 40 CFR 63.11453(c)(2). The site specific monitoring plan will be considered final only after SWCAA's written approval. SWCAA may require

modifications to the site specific monitoring plan prior to final approval. [40 CFR 63.11453(c)(2), ADP 21-3455 Condition 47]

IX. NON-APPLICABLE REQUIREMENTS WAC 173-401-640(2)

This section lists all federal, state, and/or local requirements that might reasonably apply to the permittee, but are deemed non-applicable after review by SWCAA. In accordance with WAC 173-401-640, the permittee is provided a permit shield for not complying with the requirements described below where they have been identified to be non-applicable to specific emission units. Certain subsections describe requirements that may apply to the permittee but are not "applicable requirements" for the purposes of the Air Operating Permit program and therefore will not be included in an Air Operating Permit.

N1. Standards of Performance for Non-metallic Mineral Processing Plants

40 CFR 60.670 et seq.
WAC 173-400-115
SWCAA 400-115

Subpart OOO applies to each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station at nonmetallic mineral processing plants. The provisions of Subpart OOO do not apply to plants without applicable crushers. Subpart OOO establishes opacity and particulate matter emission limits for stationary (fixed) plants with capacities greater than 25 tons per hour and portable plants greater than 150 tons per hour that were constructed, reconstructed or modified after August 31, 1983. More stringent requirements apply to affected facilities constructed, reconstructed or modified on or after April 22, 2008. This facility operates an enclosed, stationary, 45 ton per hour cullet crusher, which would be the only form of "processing" of raw material at the facility. Cullet is not considered a non-metallic mineral for the purposes of Subpart OOO and therefore this regulation is not applicable to this facility. In an EPA determination dated December 2, 1987 (ADI Control Number NR126) the EPA determined that glass recycling is not subject to Subpart OOO.

N2. Subpart N - National Emission Standards for Inorganic Arsenic Emissions from Glass Manufacturing Plants

40 CFR 61.160 et seq.
SWCAA 400-075

Subpart N establishes requirements for controlling arsenic emissions from glass manufacturing plants that use commercial arsenic as a raw material. This facility does not use arsenic as a raw material; therefore this regulation does not apply to this facility.

N3. Subpart WWWWWW - National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Plating and Polishing Operations

40 CFR 63.11504 et seq.
SWCAA 400-075

Subpart WWWWWW applies to a variety of activities that result in the application of a metal onto a surface, including thermal spraying and dry mechanical polishing of finished metals and

formed products after thermal spraying. This facility conducts spray welding (a form of thermal spraying) in the mold shop to recondition worn parts. 40 CFR 63.11505(d)(4) exempts "plating, polishing, coating, or thermal spraying conducted to repair surfaces or equipment" from Subpart WWWWWW, therefore this regulation does not apply to activities at this facility.

N4. Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers **40 CFR 63.400 et seq. SWCAA 400-075**

Subpart Q applies to all new and existing industrial process cooling towers that are operated with chromium-based water treatment chemicals on or after September 8, 1994. The cooling towers at this facility do not use chromium-based water treatment chemicals; therefore, this requirement is not applicable.

N5. Registration Program **WAC 173-400-099 SWCAA 400-100**

Pursuant to SWCAA 400-100(1)(b) air operating permit sources are exempt from the registration requirements of SWCAA 400-100.

N6. Requirements for Sources in a Maintenance Plan Area **SWCAA 400-111**

The permittee is not located in a maintenance plan area for any criteria pollutant. Therefore, this regulation is not applicable.

N7. Requirements for New Sources in Nonattainment Areas **WAC 173-400-112 SWCAA 400-112**

The permittee is not located in a nonattainment area for any criteria pollutant. Therefore, this regulation is not applicable.

N8. Bubble Rules **WAC 173-400-120 SWCAA 400-120**

The permittee has not requested an emission bubble for any regulated pollutant. Therefore, this regulation is not applicable.

N9. Acquisition and Use of Emission Reduction Credits **SWCAA 400-130**

The permittee has neither sought nor been issued emission reduction credits (ERCs). Therefore, this regulation is not applicable.

N10. Federal Greenhouse Gas Reporting Requirements **40 CFR 98**

The EPA GHG reporting rule was finalized September 22, 2009. In the preamble EPA responds to a question regarding whether it is an applicable requirement for the purposes of Title V:

"As currently written, the definition of "applicable requirement" in 40 CFR 70.2 and 71.2 does not include a monitoring rule such as today's action, which is promulgated under CAA sections 114(a)(1) and 208.

These requirements will be enforced directly by the USEPA outside of the Air Operating Permit Program."

APPENDIX A

VISIBLE EMISSIONS EVALUATION METHOD

1. Principle

The opacity of emissions from stationary sources is determined visually by a qualified observer.

2. Procedure

The observer must be certified in accordance with the provisions of Section 3 of 40 CFR Part 60, Appendix A, Method 9, as in effect on July 1, 2002.

2.1 Position

The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented in the 140° sector to his/her back. Consistent with maintaining the above requirement, the observer shall, as much as possible, make his/her observations from a position such that his/her line of vision is approximately perpendicular to the plume direction, and when observing opacity of emissions from rectangular outlets (e.g., roof monitors, open baghouses, noncircular stacks), approximately perpendicular to the longer axis of the outlet. The observer's line of sight should not include more than one plume at a time when multiple stacks are involved, and in any case, the observer should make his/her observations with his/her line of sight perpendicular to the longer axis of such a set of multiple stacks (e.g., stub stacks on baghouses).

2.2 Field Records

The observer shall record the name of the plant, emission location, type of facility, observer's name and affiliation, a sketch of the observer's position relative to the source, and the date on a field data sheet. The time, estimated distance to the emission location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), and plume background are recorded on a field data sheet at the time opacity readings are initiated and completed.

2.3 Observations

Opacity observations shall be made at the point of greatest opacity in that portion of the plume where condensed water vapor is not present. The observer shall not look continuously at the plume, but instead shall observe the plume momentarily at 15 second intervals.

2.3.1 Attached Steam Plumes

When condensed water vapor is present within the plume as it emerges from the emission outlet, opacity observations shall be made beyond the point in the plume at which condensed water vapor is no longer visible. The observer shall record the

approximate distance from the emission outlet to the point in the plume at which the observations are made.

2.3.2 Detached Steam Plumes

When water vapor in the plume condenses and becomes visible at a distinct distance from the emission outlet, the opacity of emissions should be evaluated at the emission outlet prior to the condensation of water vapor and the formation of the steam plume.

2.4 Recording Observations

Opacity observations shall be recorded to the nearest 5 percent at 15 second intervals on a field data sheet. A minimum of 24 observations shall be recorded. Each momentary observation recorded shall be deemed to represent the average opacity of emissions for a 15 second period.

2.5 Data Reduction

The number of observation at each opacity level shall be determined and recorded on the field data sheet. Opacity shall be determined by the highest 13 observations in any consecutive 60-minute period. The opacity standard or emissions limit is exceeded if there are more than 12 observations during any consecutive 60 minute period for which an opacity greater than the standard or emission limit is recorded. The opacity standard is a 1 hour standard (rolling 60 minutes). Only one violation of the standard per hour may be recorded meaning that a violation for any given consecutive 60 minute period may be recorded in substantially fewer than 60 minutes. No one hour time sets shall overlap for purpose of determining a violation or violations. Data used to establish a violation in one consecutive 60 minute period can not be used to establish a violation in a second consecutive 60 minute period. The opacity determination shall be recorded on the observational record sheet.

3. References

Federal Register, Vol. 36, No. 247, page 24895, December 23, 1971.

"Criteria for Smoke and Opacity Training School 1970 - 1971" Oregon-Washington Air quality Committee."

"Guidelines for Evaluation of Visible Emissions" EPA 340/1-75-007.

APPENDIX B

Site Specific Monitoring Plan

OWENS-BROCKWAY GLASS CONTAINER INC.

2310 North Hendrickson Drive
Kalama, WA 98625

Date: 10-30-2015

I. Background

This plan is prepared in accordance with Code of Federal Regulations Title 40, chapter I, subchapter C, part 63, subpart SSSSSS, section 63.11453(c) (2) [40 CFR 63.11453(c) (2)] and SWCAA 15-3131 Air Discharge Permit

A. Emission Unit:

Glass Melt Furnace bag leak detection system

B. Applicable Requirement, Emission Limits and Monitoring Requirements

As an owner or operator of an affected furnace, as defined in § 63.11449(a), subject to the emissions limit in Table 1 to this subpart and is controlled with a fabric filter we are required to install, operate, and maintain a bag leak detection system. The bag leak detection system is capable of detecting PM emissions at concentrations of less than 1 milligram per dry standard cubic meter.

C. Control Technology and Installation

Fabric filter is used as a PM control to Glass Melt Furnace. The leak detection sensor is installed downstream of the fabric filter. The bag leak detection system sensor utilizes the triboelectric effect which produces an increasing signal with increasing PM loadings. The signal resulting from the derived current is a degree for the exhaust gas' dust content. The micro controller integrated in the control unit produces a dust proportional signal which is provided as 4 … 20 mA – signal.

The system alarm is run through the main furnace computer and will sound outside the control room, allowing the furnace tender to respond whether they are in front of the computer or outside doing rounds.

The baseline output was set to the highest sensitivity with no averaging time. The alarm set point is set at 30% with no delay time. The alarm limits, alarm time delay, and averaging period will not be adjusted without approval from the delegated authority as defined in 63.11453(c)(1)(vi).

II. Operation and Preventive Maintenance Plan

A. Initial adjustment of the bag leak detector was done at the factory and by the bag filter system vendor upon startup of the bag filter system. No periodic adjustment is required. The alarm set point will be set at 30%. The average reading was 0.6% during the 2012 stack test, the average filterable PM concentration was 0.00027 gr/dscf. The monitor is at the most sensitive setting which means the output is multiplied by 10 so the 0.6% in actuality was 0.06%. If the alarm is set at 30% (3% actual). 30/0.6=50, if you multiply the 0.00027 gr/dscf by 50 the concentration would be 0.0135 gr/dscf. This is below the limit concentration of 0.0144 gr/dscf, but is high enough that the cleaning spikes do not trigger false alarms.

B. The filter controller PFM 92 C is a highly sensitive system for continuous, triboelectric insitu filter monitoring. The qualitative monitoring of the exhaust gas is done hereby. The measuring gas is measured triboelectrically in the exhaust gas flow by means of the probe rod of the PFM 92 C. The signal resulting from the derived current is a degree for the exhaust gas' dust content. The micro controller integrated in the control unit produces a dust proportional signal which is provided as 4 ... 20 mA – signal. This charge difference, also called charge fluctuation, is the basis for triboelectric dust meters which use the charge exchange between measuring probe and nearby streaming or direct impacting dust particles.

C. The bag leak detector will be removed, the probe cleaned and the seal around the probe will be checked every 6 months, spare seals will be kept on hand for quick replacement if needed. The output voltage will be checked when the probe is cleaned for any drifting that may occur. There is a regular spike in the cleaning cycle that gives a good representation that the probe is functioning correctly.

D. Record Keeping

The output of the bag leak detection system is sent to the SORG furnace computer system for display and data storage in 15 second intervals. The data can be stored indefinitely and retrieved as necessary.

III. Corrective action procedures:

In case of a leak detection (alarm), the following steps will be required to correct the issue. This might require more than 3 hours to alleviate this type of condition:

1) Place the filter baghouse in bypass mode
2) Open the doors to the filter array to allow for the bags to cool
3) For the safety of the employees, 3 hours may be exceeded in order to allow for adequate cooling of the filter array
4) The bags will be inspected to find the damaged bag or bags
5) The damaged bag or bags will be replaced or blinded off
6) The doors will be closed and the bypass closed to bring the filter unit back online