

IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF NORTH CAROLINA

UNITED STATES OF AMERICA

Plaintiff,

v.

PILKINGTON NORTH AMERICA,
INC.

Defendant.

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) CIVIL ACTION NO. 1:21-cv-00040
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CONSENT DECREE

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WHEREAS, the United States Environmental Protection Agency (“EPA”), has selected the glass manufacturing industry, including float glass manufacturing facilities, as a national enforcement priority under the Clean Air Act’s (“CAA” or “Act”), 42 U.S.C. § 7401 *et seq.*, New Source Review program;

WHEREAS, Pilkington North America, Inc. (“Pilkington”) owns and operates a float glass manufacturing facility located at U.S. Highway 74 East Laurinburg, Scotland County, North Carolina (the “Laurinburg Facility”);

WHEREAS, concurrently with the lodging of this Consent Decree, the United States of America, on behalf of the EPA, filed a Complaint in this action seeking injunctive relief against Pilkington for alleged violations of the CAA with respect to emissions of nitrogen oxides (“NO_x”), sulfur dioxide (“SO₂”), and particulate matter (including PM, PM₁₀, and PM_{2.5}) (“PM”) at the Laurinburg Facility;

WHEREAS, the Complaint alleges that Pilkington violated and/or continues to violate the Prevention of Significant Deterioration (“PSD”) provisions in Part C of Subchapter I of the CAA, 42 U.S.C. §§ 7470–7492, the permitting requirements of CAA Subchapter V (“Title V”), 42 U.S.C. §§ 7661–7661f, regulations implementing those CAA provisions, and the federally-enforceable state implementation plan (“SIP”) developed by North Carolina;

WHEREAS, the Complaint alleges that Pilkington made major modifications to its Laurinburg Facility without obtaining the required CAA permits and without complying with the CAA’s PSD requirements regarding installing pollution control technology, emission limits, monitoring, record-keeping, and reporting;

WHEREAS, the United States and Pilkington anticipate that the installation and operation of pollution control technology and other measures required pursuant to this Consent Decree will achieve significant reductions of emissions from the Laurinburg Facility, thereby significantly improving air quality;

WHEREAS, the objectives of the Parties in entering into this Consent Decree are to further the purposes of the CAA as described in CAA Section 101, 42 U.S.C. § 7401, to protect public health, public welfare, and the environment, and to have Pilkington perform the actions described below, and to ensure that Pilkington achieves and maintains compliance with the CAA, applicable state and local laws, and the terms and conditions of applicable CAA permits;

WHEREAS, EPA issued a notice of violation (“NOV”) to Pilkington with respect to such allegations on August 28, 2020;

WHEREAS, EPA provided Pilkington and the State of North Carolina with actual notice of the alleged violations, in accordance with Sections 113(a)(1) and (b) of the CAA, 42 U.S.C. §7413(a)(1), (b);

WHEREAS, for purposes of this Consent Decree only, Pilkington has waived any applicable federal or state requirements of notice of the alleged violations;

WHEREAS, the Parties recognize and the Court by entering this Consent Decree finds: (1) that this Consent Decree has been negotiated in good faith and will avoid litigation between the Parties; and (2) that this Consent Decree is fair, reasonable, and in the public interest;

WHEREAS, Pilkington consents to the simultaneous filing of the Complaint and lodging of this Consent Decree against Pilkington without any adjudication of any issue of fact or law;

WHEREAS, Pilkington has denied and continues to deny the allegations in the Complaint and NOV;

WHEREAS, the resolution of liability provided by this Consent Decree is conditioned upon specified Consent Decree requirements, including emission limits and standards, being incorporated into and remaining in Pilkington's Title V permit; and

NOW, THEREFORE, before the taking of any testimony, without the adjudication or admission of any issue of fact or law, except as provided in Section I, and with the consent of the Parties, IT IS HEREBY ADJUDGED, ORDERED, AND DECREED as follows:

I. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§ 1331, 1345, and 1355, and Section 113(b) of the Act, 42 U.S.C. § 7413(b), and it has jurisdiction over the Parties. Venue lies in this judicial district pursuant to Section 113(b) of the Act, 42 U.S.C. § 7413(b), and 28 U.S.C. §§ 1391(b) and (c) and 1395(a), because the Laurinburg Facility is located in and the events giving rise to the allegations in the Complaint occurred in this district. For purposes of this Consent Decree or any action to enforce this Consent Decree, the Parties consent to venue in this judicial district and to the Court's jurisdiction over this Consent Decree, over any action to enforce this Consent Decree, and over the Parties.

2. Solely for purposes of this Consent Decree, and without admission of liability, Pilkington agrees that the Complaint states claims upon which relief may be granted pursuant to the Clean Air Act, its implementing regulations, and the cited provisions of state law.

II. APPLICABILITY

3. The obligations of this Consent Decree apply to and are binding upon the United States and upon Pilkington and any successors, assigns, or other entities or persons otherwise bound by law.

4. For work performed after the Effective Date, Pilkington shall provide a copy of this Consent Decree to all vendors, suppliers, consultants, contractors, agents, and any other company or organization retained to perform any of the work required by this Consent Decree. Notwithstanding any retention of contractors, subcontractors, or agents to perform any work required under this Consent Decree, Pilkington shall be responsible for ensuring that all work is performed in accordance with the requirements of this Consent Decree.

5. In any action to enforce this Consent Decree, Pilkington shall not raise as a defense the failure by any of its officers, directors, employees, agents, or contractors to take any action necessary to comply with the provisions of this Consent Decree, unless Pilkington establishes that such failure resulted from a Force Majeure event and Pilkington has complied with all the requirements of Section X of this Consent Decree.

III. DEFINITIONS

6. Terms used in this Consent Decree that are defined in the CAA or in regulations promulgated pursuant to or authorized by the CAA shall have the meanings assigned to them in the CAA or such regulations, unless otherwise provided in this Decree. Whenever the terms set forth below are used in this Consent Decree, the following definitions shall apply:

a. “Abnormally Low Production Rate” shall mean a glass production rate for a Furnace that is at or below the production rate set forth in Table 11, which reflects roughly 35% of the permitted production rate divided by twenty-four hours.

b. “Abnormally Low Production Rate Day” shall mean any Operating Day where glass production at a Furnace occurs at or below the applicable Abnormally Low Production Rate for at least one continuous hour.

c. “Ammonia Slip” shall mean emissions of unreacted ammonia that result from incomplete reaction of NO_x and the reagent.

d. “Calendar Year” shall mean the period commencing on January 1 and ending on December 31 of the same year.

e. “CD Emission Reductions” shall mean any emission reductions that are generated or result from any projects, controls, or any other actions utilized to comply with this Consent Decree.

f. “CEMS” shall mean Continuous Emission Monitoring System.

g. “CEMS Certification” shall mean the certification of a CEMS as required by 40 C.F.R. § 60.13, 40 C.F.R. Part 60 Appendix B (Performance Specification 2), and 40 C.F.R. Part 60 Appendix F (Quality Assurance Procedures).

h. “CEMS Certification Event” shall mean any event that triggers the requirement to complete a first CEMS Certification or subsequent CEMS Certification.

i. “Ceramic Filter System” shall mean a catalyst-embedded filter system which, in combination with ammonia injection, and a dry scrubber reactant, is designed to remove NO_x, SO₂, and PM. The Ceramic Filter System includes the following ancillary support equipment: quench systems, heat exchangers, fans, chemical reactant storage and feed systems.

j. “Cold Tank Repair” shall refer to the process of stopping glass production, stopping the flow of fuel, fully cooling down the Furnace, replacing some or all of the refractory in the Furnace, including the crown, and/or the regenerators (if applicable), and beginning a new campaign (*i.e.*, restarting the Furnace by firing fuel and producing glass). Cold Tank Repair, for the purposes of this Consent Decree, does not include any refractory repairs conducted when the Furnace is still hot or repairs solely required for restart of a Furnace which has temporarily ceased Operation for economic reasons.

k. “Complaint” shall mean the complaint filed by the United States in this action.

l. “Consent Decree” and “Decree” shall mean this Consent Decree and all Appendices attached hereto (as listed in Section XXIV). In the event of any conflict

between the text of this Consent Decree and any Appendix, the text of this Consent Decree shall control.

m. “Continuous Operating Year” shall mean a Calendar Year during which a Furnace that is connected to a Control Device Operates on every Day of that Calendar Year.

n. “Control Device” shall mean Selective Catalytic Reduction, a Ceramic Filter System, a Dry Scrubber, or a Particulate Device.

o. “Control Device Startup” shall mean the period of time from the initial commencement of operation of a Control Device until operation of the device is stable and the device has achieved normal operating conditions. A Control Device Startup shall not exceed thirty Days. Control Device Startup does not include subsequent startups of the Control Device, unless the subsequent startup of the Control Device occurs following a Cold Tank Repair.

p. “Daily Glass Production” shall mean the Tons of glass produced per Day from the Furnace (commonly known as “pulled”), as recorded each shift by set lehr speed, an average of glass width and thickness measurements, and glass density for the type of glass manufactured.

q. “Date of Lodging” shall mean the date this Consent Decree is lodged with the Clerk of Court for the United States District Court for the Middle District of North Carolina pending public comment and Court action.

r. “Day” shall mean a calendar day unless expressly stated to be a business day. In computing any period of time under this Consent Decree, where the last

day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business the next business day. A Day starts at 12:00 a.m. and ends at 11:59 p.m.

s. “Defendant” shall mean Pilkington.

t. “Dry Scrubber” and “DS” shall mean a pollution control system, sometimes referred to as a sorbent injection system, which involves the addition of an alkaline material into the gas stream to react with the acid gases. The acid gases react with the alkaline sorbents to form solid salts. There is no moisture added in the reaction chamber or reaction area.

u. “Effective Date” shall have the definition provided in Section XVII;

v. “Emission Credit(s)” shall mean an authorization or credit to emit a specified amount of the pollutants NO_x, SO₂, PM, PM₁₀, and PM_{2.5} that is authorized by, allocated by, or issued under an emissions trading or marketable permit program of any kind established under the CAA or the North Carolina SIP.

w. “EPA” shall mean the United States Environmental Protection Agency and any of its successor departments or agencies.

x. “Furnace” shall mean a unit comprised of a refractory-lined vessel in which raw materials are charged and melted at high temperature to produce molten glass, including the regenerators and burners.

y. “Furnace 1” shall mean the natural gas-fired glass melting float furnace with a 39.0 tons per hour maximum draw rate, also known in the Title V permit as emission source ES-01 at the Laurinburg Facility.

z. “Furnace Startup” shall mean the period of time from the initial heat-up of the Furnace refractory with portable burners until the commencement of production launch, and includes the initial filling of the Furnace with cullet and/or raw materials. A Furnace Startup shall last no more than forty-five Days.

aa. “Inlet” shall mean the concentration of NO_x (in ppmv corrected to 7% O₂) measured by the CEMS prior to Selective Catalytic Reduction or Ceramic Filter System.

bb. “Installation of Controls” shall, solely for the purposes of this Consent Decree, include:

- i. the installation of Selective Catalytic Reduction, Dry Scrubber, or Particulate Device;
- ii. the installation of a Ceramic Filter System; or
- iii. the installation of any alternative controls or alternative control technology approved under Paragraph 22.

cc. “Interim Low-Iron 30-day Rolling Average Emission Limit” shall mean the 30-day Rolling Average Emission Limit during Low-Iron Glass Batch Production Days. This limit applies only until the compliance deadline specified in Paragraph 8 and Table 3 for operating SCR or a Ceramic Filter System on Furnace 1. Compliance with the Interim Low-Iron 30-day Rolling Average Emission Limit for NO_x shall be determined by calculating the Low-Iron 30-day Rolling Average Emission Rate for NO_x and comparing that with the Interim Low-Iron 30-day Rolling Average Emission Limit for NO_x.

dd. “Low-Iron 30-day Rolling Average Emission Rate for NO_x” shall mean the 30-day Rolling Average Emission Rate recorded for NO_x on Low-Iron Glass Batch Production Days.

ee. “Low-Iron Glass Batch Production Day” shall mean any Operating Day that Pilkington makes low-iron glass of salable quality and shall include the Operating Days, not to exceed ten days, that Pilkington transitions its glass manufacturing process from making non-low iron glass to making low-iron glass. Low-Iron Glass Batch Production Day does not include any other Operating Days, including Operating Days during which Pilkington transitions from low-iron glass production to non-low-iron glass production.

ff. “Maintenance” shall mean activities necessary to keep the equipment (e.g., the Furnace or Control Devices) working in its normal operating condition, as described in Paragraph 20.

gg. “Malfunction” shall mean, consistent with 40 C.F.R. § 60.2, any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process (e.g., the Furnace or Control Devices) to operate in a normal or usual manner. Malfunction shall not include failures that are caused in part or in whole by poor maintenance or careless operation.

hh. “NO_x” shall mean the sum of oxides of nitrogen in the flue gas, collectively expressed as NO₂.

ii. “New Source Review” and “NSR” shall mean the PSD provisions in Part C of Subchapter I of the CAA, 42 U.S.C. §§ 7470–7492, the NNSR provisions in

Part D of Subchapter I of the CAA, 42 U.S.C. §§ 7501–7515, implementing regulations, and analogous provisions of the federally enforceable North Carolina SIP.

jj. “Interim Non-Low-Iron 30-day Rolling Average Emission Limit” shall mean the 30-day Rolling Average Emission Limit of NO_x emitted from Furnace 1 during Operating Days that are not Low-Iron Glass Batch Production Days. This limit applies only until the compliance deadline specified in Paragraph 8 and Table 3 for operating SCR or Ceramic Filter System on Furnace 1. Compliance with the Interim Non-Low-Iron 30-day Rolling Average Emission Limit for NO_x shall be determined by calculating the Non-Low-Iron 30-day Rolling Average Emission Rate for NO_x and comparing that with the Interim Non-Low-Iron Low-Iron 30-day Rolling Average Emission Limit for NO_x.

kk. “Non-Low-Iron 30-day Rolling Average Emission Rate for NO_x” shall mean the 30-day Rolling Average Emission Rate recorded for NO_x on Operating Days that are not Low-Iron Glass Batch Production Days.

ll. “Nonattainment New Source Review” or “NNSR” shall mean the nonattainment new source review program within the meaning of Part D of Subchapter I of the CAA, 42 U.S.C. §§ 7501–7515, implementing regulations, and analogous provisions of the federally enforceable North Carolina SIP.

mm. “Operate,” “Operation,” “Operating,” and “Operated” shall mean any time when fuel is fired in the Furnace.

nn. “Operating Day” shall mean any Day when any fuel is fired in Furnace 1.

oo. “Outlet” shall mean the NO_x concentration (in ppmv corrected to 7% O₂) measured by the CEMS after Selective Catalytic Reduction or a Ceramic Filter System.

pp. “Paragraph” shall mean a portion of this Consent Decree identified by an Arabic numeral.

qq. “Particulate Device” and “PD” shall mean a control device that uses add-on technology to reduce Particulate Matter emissions, including, but not limited to, electrostatic precipitators and baghouses.

rr. “Particulate Matter” and “PM” shall mean any finely divided solid or liquid filterable material, other than uncombined water, as measured using EPA Test Method 5 (40 C.F.R. Part 60 Appendix A-3) (filterable only).

ss. “Party” and “Parties” shall mean the United States and Pilkington.

tt. “Permit” shall include any and all interim and final authorizations issued pursuant to federal, state, or local law that are necessary: (1) to construct, modify, or operate a Furnace, or (2) to construct, install, and operate a Control Device or monitoring device required by this Consent Decree or other applicable law.

uu. “Pilkington” shall mean Pilkington North America, Inc.

vv. “Prevention of Significant Deterioration” and “PSD” shall mean the attainment area New Source Review program within the meaning of Part C of Subchapter I of the CAA, 42 U.S.C. §§ 7470–7492, implementing regulations, and analogous provisions of the federally enforceable North Carolina SIP.

ww. “Project Dollars” shall mean Pilkington’s expenditures in carrying out the Environmental Mitigation Project identified in Section V and Appendix A (Mitigation Project) of this Consent Decree to the extent that the expenditures or payments: (1) comply with the requirements set forth in Section V and Appendix A of this Consent Decree; and (2) constitute Pilkington’s direct expenditures for the Mitigation Project or Pilkington’s external costs for contractors, vendors, and equipment. Pilkington shall not include its own personnel costs in overseeing the implementation of the Mitigation Project as Project Dollars

xx. “Removal Efficiency for NO_x” shall mean the percent reduction in concentration of NO_x achieved by Furnace 1’s Control Device. This percent reduction shall be calculated by subtracting the Outlet concentration of NO_x (corrected to 7% O₂) from the Inlet concentration of NO_x (corrected to 7% O₂), dividing the difference by the Inlet concentration, and then multiplying the result by 100. Pilkington shall complete this calculation on an hourly basis, each Operating Day, using all valid one-hour emissions data outputs (inlet and outlet concentrations) from the NO_x CEMS.

yy. “Removal Efficiency 24-hour Block Average for NO_x” shall mean the average of all Removal Efficiency for NO_x for a given Operating Day.

zz. “Section” shall mean a portion of this Consent Decree identified by a Roman numeral.

aaa. “Selective Catalytic Reduction” and “SCR” shall mean a pollution control device that reacts ammonia (NH₃) or urea with NO_x to form nitrogen (N₂) and water (H₂O) using a catalyst to speed the reaction.

bbb. “SO₂” shall mean the pollutant sulfur dioxide.

ccc. “Surrender of Air Permits or Air Permit Conditions” shall mean that Pilkington has asked the permitting authority, in writing, to terminate all air Permits for a particular Furnace or air Permit conditions for a particular Furnace, and the permitting authority has done so.

ddd. “Title V Permit” shall mean a Permit required by or issued pursuant to the requirements of 42 U.S.C. § 7661–7661f, implementing regulations, and analogous provisions of North Carolina’s title V program.

eee. “Ton” and “Tons” shall mean short ton (equal to 2,000 pounds) or short tons.

fff. “United States” shall mean the United States of America, acting on behalf of EPA.

ggg. “24-hour Block Emission Rate” is a pound per day figure that shall be calculated by averaging all valid one-hour emissions data outputs from the applicable CEMS (pounds per hour) for a given Operating Day, multiplying that average by the number of minutes the relevant furnace Operated that Operating Day, and then dividing by sixty.

hhh. “30-day Rolling Average Emission Rate” shall be expressed as pounds of pollutant emitted per Ton of glass produced and calculated at Furnace 1 in accordance with the following formula and subparagraphs i and ii below:

$$30 - day\ average\ \frac{lb\ E}{Ton} = \frac{COD_E(lbs) + P29D_E(lbs)}{COD_{Prod}(Tons) + P29D_{Prod}(Tons)}$$

Where: 30-day average (lb E/Ton) = The 30-day Rolling Average Emission Rate

E = emissions of NO_x or SO₂.

COD = Current Operating Day where a 30-day Rolling Average Emission Limit is the applicable limit and the CEMS measures at least one full hour of emissions data.

COD_E = The daily emissions as measured by a CEMS on the COD, in pounds.

COD_{Prod} = Daily Glass Production on the COD in Tons of glass.

P29D = The previous twenty-nine Operating Days where a 30-day Rolling Average Emission Limit is the applicable limit and the CEMS measures at least one full hour of emissions data.

P29D_E = The sum of the daily NO_x or SO₂ emissions as measured by a CEMS during the P29D, in pounds.

P29D_{Prod} = The sum of the Daily Glass Production during the P29D, in Tons of glass.

i. A new 30-day Rolling Average Emission Rate shall be calculated for each new Operating Day where a 30-day Rolling Average Emission Limit is the applicable limit and the CEMS measures at least one full hour of emissions data.

Any Operating Day where the newly calculated 30-day Rolling Average Emission Rate exceeds the 30-day Rolling Average Emission Limit is a separate one Day violation; and

ii. As specified in Paragraphs 7.f, 9.f., and 10.d–e, of this Consent Decree, certain Abnormally Low Production Rate Days, Furnace and/or Control Device Startup Days, Malfunction Days, and Maintenance Days may be excluded from the 30-day Rolling Average Emission Rate.

iii. “30-day Rolling Average NO_x Removal Efficiency Rate” shall be expressed as the percent reduction in concentration of NO_x achieved by Furnace 1’s

Control Device. It shall be calculated by summing the “Removal Efficiency 24-hour Block Averages for NO_x” from the Furnace for the current Operating Day and previous twenty-nine Operating Days when a 30-day Rolling Average NO_x Removal Efficiency Limit is the applicable limit, and then dividing by thirty.

i. A new 30-day Rolling Average NO_x Removal Efficiency Rate shall be calculated for each new Operating Day where a 30-day Rolling Average NO_x Removal Efficiency Limit is an applicable limit and the CEMS measures at least one full hour of emissions data. Any Operating Day where the newly calculated 30-day Rolling Average NO_x Removal Efficiency Rate is less than the 30-day Rolling Average NO_x Removal Efficiency Limit is a separate one-day violation.

ii. As specified in Paragraph 8.d–f of this Consent Decree, certain emissions associated with Furnace and/or Control Device Startup, Malfunction, and Maintenance Days may be excluded from the 30-day Rolling Average NO_x Removal Efficiency Rate.

jjj. “30-day Rolling Average Emission Limit” shall mean the maximum allowable rate of emission of a specified air pollutant and shall be expressed as pounds of pollutant emitted per Ton of glass produced. Compliance with the 30-day Rolling Average Emission Limit shall be determined by calculating the 30-day Rolling Average Emission Rate and comparing that with the 30-day Rolling Average Emission Limit.

kkk. “30-day Rolling Average NO_x Removal Efficiency Limit” shall mean the percent reduction in concentration of NO_x that must be achieved by Furnace 1’s Control Device. Compliance with the 30-day Rolling Average NO_x Removal Efficiency

Limit shall be determined by calculating the 30-day Rolling Average NO_x Removal Efficiency Rate and comparing that with the 30-day Rolling Average NO_x Removal Efficiency Limit.

IV. COMPLIANCE REQUIREMENTS

A. NO_x Emission Controls, Limits, and Compliance Schedule

7. Interim NO_x Emission Controls and Limits for Furnace 1

a. The requirements of this Paragraph 7 shall apply until the compliance deadline specified in Paragraph 8 and Table 3 for operating a SCR or Ceramic Filter System on Furnace 1.

b. Except as provided in Paragraph 7.f, by no later than 180 days after the Effective Date, Pilkington shall monitor NO_x formation during all times of Furnace 1 Operation.

c. Except as provided otherwise herein, by no later than 180 days after the Effective Date, Pilkington shall comply with the following applicable 30-day Rolling Average Emission Limits for NO_x at Furnace 1:

i. For any Low-Iron Glass Batch Production Day, Pilkington shall comply with an Interim Low-Iron 30-day Rolling Average Emission Limit of 22.6 lbs of NO_x per Ton of glass produced at Furnace 1.

ii. For any Operating Day that is not a Low-Iron Glass Batch Production Day, Pilkington shall comply with an Interim Non-Low-Iron 30-day Rolling Average Emission Limit of 16.6 lbs of NO_x per Ton of glass produced at Furnace 1.

d. No demonstration of compliance with the emission limits in this Paragraph is required until Pilkington has operated for thirty Operating Days following the compliance date in Table 1.

Table 1: Furnace 1 Interim NO_x Emission Limit and Compliance Date

Emission Control	Operating Day Type	Emission Limit	Compliance Date	Compliance Demonstration
Process controls	Low-Iron Glass Batch Production Day	22.6 lbs of NO _x per Ton of glass produced	180 days after the Effective Date	On and after the 30th Operating Day after the Compliance Date
	Operating Day that is not a Low-Iron Glass Batch Production Day	16.6 lbs of NO _x per Ton of glass produced		

e. Except as provided otherwise herein, Pilkington shall monitor NO_x emissions from Furnace 1 continuously using a NO_x CEMS and shall calculate a new 30-day Rolling Average Emission Rate for each new Operating Day.

f. Interim NO_x Limit during Furnace 1 Maintenance, Malfunction, and Abnormally Low Production Rate Days:

i. Maintenance of the Furnace

For any Operating Day where Maintenance of Furnace 1 is performed, Pilkington may exclude the emissions generated during that Operating Day (or Days) from the Interim 30-day Rolling Average Emission Rate for NO_x for Furnace 1. During the Day(s) excluded from the 30-day Rolling Average Emission Rate, the 24-hour Block

Emission Rate from Furnace 1 shall not exceed the following 24-hour Block limit, as demonstrated using a CEMS:

$$NO_{X \text{ interim Maint}} = \frac{MH \times 3 \times NO_{X \text{ interim}}}{24} + \frac{NH \times NO_{X \text{ interim}}}{24}$$

Where: $NO_{X \text{ Interim Maint}}$ = NO_x emission limit for Furnace 1 during Maintenance of the Furnace in pounds per Day

$NO_{X \text{ interim}}$ = NO_x emission limit in lbs/day as shown in Table 2.

MH = Hours of Maintenance

NH = Normal Hours = 24 – MH

ii. Malfunction of the Furnace

For any Operating Day on which a Malfunction of Furnace 1 occurs, Pilkington may exclude the emissions generated during that Operating Day (or Days) from Furnace 1 from the Interim 30-day Rolling Average Emission Rate for NO_x for Furnace 1. During the Day(s) excluded from the 30-day Rolling Average Emission Rate, the 24-hour Block Emission Rate from Furnace 1 shall not exceed the following 24-hour Block limit, as demonstrated using a CEMS:

Table 2: Interim Furnace 1 NO_x Emission Limits during Days when there is a Malfunction of the Furnace

Type of Glass Being Produced	NO_x Limit (Lbs/day)
Non-Low-Iron Glass Batch Production Day	15,538 lbs/day
Low-Iron Glass Batch Production Day	21,154 lbs/day

iii. Abnormally Low Production Rate Days

Pilkington may exclude the NO_x emissions generated during an Abnormally Low Production Rate Day (or Days) from the 30-day Rolling Average Emission Rate. During the Day(s) excluded from the 30-day Rolling Average Emissions Rate, the 24-hour Block Emission Rate from Furnace 1 shall not exceed the following 24-hour Block limit, as demonstrated using a CEMS:

$$\overset{\text{(Add)}}{NO_{x \text{ abn interim}}} = E \frac{\text{lb NO}_x}{\text{ton}} \times \left[\frac{P}{0.35} \right]$$

Where: NO_{x abn interim} = NO_x emission limit (in pounds per Day) for Furnace 1 during Abnormally Low Production Rate Days

E = The applicable NO_x emission limit for Furnace 1 from Paragraph 7.c

P = Furnace 1 specific production threshold as defined in Table 11, in Tons of glass produced per Day

8. Final NO_x Emission Controls and Emission Limits for Furnace 1

a. Final NO_x Emission Controls for Furnace 1

Each Operating Day after March 31, 2023, or after Furnace 1 undergoes a Cold Tank Repair, whichever is earlier, Pilkington shall not Operate Furnace 1 without passing all stack gases through an SCR or a Ceramic Filter System (except as set forth in Paragraph 8.d–f) in compliance with the following:

i. the SCR or Ceramic Filter System must be designed for a removal efficiency of at least 90%; and

ii. Pilkington shall operate the SCR or Ceramic Filter System in accordance with the vendor recommendations in order to minimize emissions to the extent practicable, including consideration of Ammonia Slip.

b. Final NO_x Emission Limits for Furnace 1

The Day after re-certification of the CEMS under Section IV.E following the next Cold Tank Repair or March 31, 2023, whichever first occurs, Pilkington shall comply with an 80% 30-day Rolling Average NO_x Removal Efficiency Limit at Furnace 1, except as provided in Paragraph 8.d–f. No demonstration of compliance is required until Pilkington has Operated for thirty Operating Days after the compliance date in Table 3.

Table 3: Furnace 1 Final NO_x Emission Limit and Compliance Date

Emission Control	Final NO_x Emission Limit	Compliance Date	Compliance Demonstration
SCR or Ceramic Filter System	30-day Rolling Average NO _x Removal Efficiency Limit of 80 percent	The Day after re-certification of the CEMS under Section IV.E following the next Cold Tank Repair or March 31, 2023, whichever is earlier	On and after the 30 th Operating Day after the Compliance Date

c. Except as provided otherwise herein, Pilkington shall monitor NO_x emissions from Furnace 1 continuously using a NO_x CEMS and shall calculate a new 30-day Rolling Average NO_x Removal Efficiency Rate for each new Operating Day using a NO_x CEMS.

d. Furnace 1 NO_x Limit during Furnace Startup. For no more than the forty-five Days allowed for Furnace Startup, the Furnace 1 exhaust may bypass the SCR

or Ceramic Filter System to avoid having the operating inlet temperature of the SCR or Ceramic Filter System fall below its operational range. During these bypass Days, Pilkington shall burn no more than five million standard cubic feet of natural gas in Furnace 1 per Day. When technically feasible and available, Pilkington shall operate the SCR or Ceramic Filter System on the Furnace 1 exhaust.

e. Furnace 1 NO_x Limit during Control Device Startup or Control Device Malfunction. For any Operating Day that the SCR or Ceramic Filter System does not operate or is not operating normally because of the Control Device Startup or Malfunction of the Control Devices for any period of time, Pilkington may exclude that Day's Removal Efficiency from the 30-day Rolling Average NO_x Removal Efficiency Rate. During the Day(s) excluded from the 30-day Rolling Average NO_x Removal Efficiency Rate, the 24-hour Block Emission Rate from Furnace 1 shall not exceed the 24-hour Block limit listed in Table 4 below, as demonstrated using a CEMS.

Table 4: Furnace 1 NO_x Emission Limits During Days Where the SCR or Ceramic Filter System Is Not Operating Pursuant to Paragraph 8.e

Type of Glass Being Produced	NO_x w/o SCR (lb/Day)
Non-Low-Iron Glass Batch Production Day	15,538 lbs/Day
Low-Iron Glass Batch Production Day	21,154 lbs/Day

f. Furnace 1 NO_x Limit during Maintenance of Control Devices. For any Operating Day where Maintenance activities on a Control Device are performed, Pilkington may exclude the Maintenance Day from the 30-day Rolling Average NO_x Removal Efficiency Rate. For any Day that is excluded from the 30-day Rolling Average

NO_x Removal Efficiency Rate, the 24-hour Block Emission Rate from Furnace 1 shall not exceed the following 24-hour Block limit, as demonstrated using a CEMS:

$$NO_{X \text{ Control Device Maint}} = \frac{MH \times NO_{X \text{ w/o SCR}}}{24} + \frac{NH \times NO_{X \text{ w/o SCR}} \times 0.2}{24}$$

Where: NO_{X Control Device Maint} = NO_x emission limit for a Furnace during Maintenance of the Control Device, in pounds per Day

NO_{x w/o SCR} = NO_x limit from Table 4 during Days where the SCR or Ceramic Filter System is not operating

MH = Hours of Maintenance

NH = Normal Hours = 24 – MH

B. SO₂ Emission Controls, Limits, and Compliance Schedule

9. Interim SO₂ Emission Controls and Limits for Furnace 1

a. The requirements of this Paragraph 9 shall apply until the compliance deadline specified in Paragraph 10 and Table 6 for operating a DS or Ceramic Filter System on Furnace 1.

b. Except as provided otherwise herein, by no later than 180 days after the Effective Date, Pilkington shall continuously monitor SO₂ formation during all times of Furnace 1 Operation.

c. Except as provided otherwise herein, by no later than 180 days after the Effective Date, Pilkington shall comply with an Interim 30-day Rolling Average Emission Limit of 2.5 lbs of SO₂ per Ton of glass produced at Furnace 1, except as provided in Paragraph 9.f.

d. No demonstration of compliance with the emission limits in this Paragraph is required until Pilkington has operated for thirty Operating Days following the compliance date in Table 5.

Table 5: Furnace 1 Interim SO₂ Emission Limit and Compliance Date

Emission Control	Emission Limit	Compliance Date	Compliance Demonstration
Batch formulation/ Process controls	2.5 lbs of SO ₂ per Ton of glass produced	180 days after the Effective Date	On and after the 30th Operating Day after the Compliance Date

e. Except as provided otherwise herein, Pilkington shall monitor SO₂ emissions continuously using an SO₂ CEMS and shall calculate a new 30-day Rolling Average Emission Rate for each new Operating Day.

f. SO₂ Limit during Furnace 1 Maintenance, Malfunction, and Abnormally Low Production Rate Days.

i. Maintenance of the Furnace

For any Operating Day where Maintenance of Furnace 1 is performed, Pilkington may exclude the emissions generated during that Operating Day (or Days) from the 30-day Rolling Average Emission Rate for SO₂ for Furnace 1. During the Day(s) excluded from the 30-day Rolling Average Emission Rate, the 24-hour Block Emission Rate from Furnace 1 shall not exceed the following 24-hour Block limit, as demonstrated using a CEMS:

$$SO_{2 \text{ Maint}} = \frac{MH \times [3 \times SO_{2 \text{ Abn}}]}{24} + \frac{NH \times SO_{2 \text{ Abn}}}{24}$$

Where: $SO_{2\text{ Maint}}$ = SO_2 emission limit for Furnace 1 during Maintenance of the Furnace in pounds per Day

$SO_{2\text{ Abn}}$ = SO_2 emission limit (in pounds per Day) for Furnace 1 during Days when an Abnormally Low Production Rate is occurring

MH = Hours of Maintenance

NH = Normal Hours = 24 – MH

ii. Malfunction of the Furnace

For any Operating Day on which a Malfunction of the Furnace occurs, Pilkington may exclude the emissions generated during that Operating Day (or Days) from Furnace 1 from the 30-day Rolling Average Emission Rate for SO_2 for Furnace 1. During the Day(s) excluded from the 30-day Rolling Average Emission Rate, the 24-hour Block Emission Rate from Furnace 1 shall not exceed the following 24-hour Block limit, as demonstrated using a CEMS:

$$SO_{2\text{ Malf}} = 3 \times 2.5 \frac{\text{lb } SO_2}{\text{ton}} \times \left[\frac{P}{0.35} \right]$$

Where: $SO_{2\text{ Malf}}$ = SO_2 emission limit for Furnace 1 during Malfunction of the Furnace in pounds per Day

P = Furnace 1 specific production threshold as defined in Table 11, in Tons of glass produced per Day

iii. Abnormally Low Production Rate Days

Pilkington may exclude the SO_2 emissions generated during an Abnormally Low Production Rate Day (or Days) from the 30-day Rolling Average Emission Rate. During the Day(s) excluded from the 30-day Rolling Average Emissions Rate, the 24-hour Block

Emission Rate from Furnace 1 shall not exceed the following 24-hour Block limit, as demonstrated using a CEMS:

$$SO_{2\text{ Abn}} = 2.5 \frac{\text{lb } SO_2}{\text{ton}} \times \left[\frac{P}{0.35} \right]$$

Where: $SO_{2\text{ Abn}}$ = SO_2 emission limit (in pounds per Day) for Furnace 1 during Days when an Abnormally Low Production Rate is occurring

P = Furnace 1 specific production threshold as defined in Table 11, in Tons of glass produced per Day

10. Final SO_2 Emission Controls Operation and Emission Limits for Furnace 1

a. Final SO_2 Emission Controls for Furnace 1

Each Operating Day after March 31, 2023 or after Furnace 1 undergoes a Cold Tank Repair, whichever is earlier, Pilkington shall not Operate Furnace 1 without passing all stack gases through a DS or a Ceramic Filter System (except as provided in Paragraph 10.d–e).

b. Final SO_2 Emission Limits for Furnace 1

The Day after re-certification of the CEMS under Section IV.E following the next Cold Tank Repair or March 31, 2023, whichever first occurs, Pilkington shall not exceed a 30-day Rolling Average Emission Limit of 1.2 lbs of SO_2 per Ton of glass produced, except as provided in Paragraph 10.d–g. No demonstration of compliance is required until Pilkington has operated for thirty Operating Days after the compliance date in Table 6.

Table 6: Furnace 1 Final SO₂ Emission Limit and Compliance Date

Emission Control	Emission Limit	Compliance Date	Compliance Demonstration
DS or Ceramic Filter System	1.2 lbs of SO ₂ per Ton of glass produced	The Day after certification of the CEMS under Section IV.E following the next major Cold Tank Repair or March 31, 2023, whichever is earlier	On and after the 30 th Operating Day after the Compliance Date

c. Except as provided otherwise herein, Pilkington shall monitor SO₂ emissions from Furnace 1 continuously using an SO₂ CEMS and shall calculate a new 30-day Rolling Average Emission Rate for each new Operating Day using an SO₂ CEMS.

d. Furnace 1 SO₂ Limit during Furnace Startup. For the forty-five Days allowed for Furnace Startup, Furnace 1 exhaust may bypass the DS or the Ceramic Filter System to avoid having the operating inlet temperature of the DS or the Ceramic Filter System fall below its operational range during Furnace Startup. During these bypass Days, Pilkington shall burn no more than five million standard cubic feet of natural gas in Furnace 1 per Day. When technically feasible and available, Pilkington shall operate the DS or Ceramic Filter System on the Furnace 1 exhaust.

e. Furnace 1 SO₂ Limit during Control Device Startup or Malfunction of the DS, PD, or the Ceramic Filter System. For any Operating Day that the DS or

Ceramic Filter System does not operate or is not operating normally because of Control Device Startup or Malfunction of the DS, PD, or the Ceramic Filter System for any period of time, Pilkington may exclude the emissions generated during that Operating Day (or Days) from Furnace 1 from the 30-day Rolling Average Emission Rate for SO₂. During the Day(s) excluded from the 30-day Rolling Average Emission Rate, the 24-hour Block Emission Rate from Furnace 1 shall not exceed the following 24-hour Block limit, as demonstrated using a CEMS: 2,500 lbs of SO₂ per Day. During Malfunction of an SCR installed on Furnace 1, Pilkington shall pass all stack gases through the Furnace 1 DS.

Table 7: Furnace 1 SO₂ Emission Limits During Days Where the DS or Ceramic Filter System Is Not Operating Pursuant to Paragraph 10.e.

Furnace	SO ₂ w/o DS (lb/Day)
Furnace 1	2,500 lbs/Day

f. Furnace 1 SO₂ Limit during Maintenance of the DS or PD, or the Ceramic Filter System. For any Operating Day when Maintenance is performed on the DS or PD, or the Ceramic Filter System for Furnace 1, Pilkington may exclude the emissions generated during that Operating Day (or Days) from Furnace 1 from the 30-day Rolling Average Emission Rate for SO₂. During the Day(s) excluded from the 30-day Rolling Average Emission Rate, the 24-hour Block Emission Rate from Furnace 1 shall not exceed the following 24-hour Block limit, as demonstrated using a CEMS:

$$SO_{2 \text{ Scrub Maint}} = \frac{MH \times 2,500}{24} + \frac{NH \times [1.2 \times \left[\frac{P}{0.35} \right]]}{24}$$

Where: SO_{2 Scrub Maint} = SO₂ emission limit (in pounds per Day) for Furnace 1 during Maintenance of the DS or PD, or the Ceramic Filter System.

2,500 = As defined in Table 7, SO₂ emission limit for Furnace 1 (with DS or Ceramic Filter System) during an event where the DS or Ceramic Filter System is not operating, in pounds per Day

P = Furnace-specific production threshold as defined in Table 11, in Tons of glass produced per Day

MH = Hours of Maintenance

NH = Normal Hours = 24 – MH

g. SO₂ Limit during Abnormally Low Production Rate Days. When Furnace 1 is Operating at an Abnormally Low Production Rate, Pilkington may exclude the SO₂ emissions generated during that Operating Day (or Days) from the 30-day Rolling Average Emissions Rate. During the Days excluded from the 30-day Rolling Average Emissions Rate, the 24-hour Block Emission Rate from Furnace 1 shall not exceed the following 24-hour Block limit, as demonstrated using a CEMS:

$$SO_{2\ Abn} = 1.2 \frac{lb\ SO_2}{ton} \times \left[\frac{P}{0.35} \right]$$

Where: SO_{2 Abn} = SO₂ emission limit (in pounds per Day) for Furnace 1, during an Abnormally Low Production Rate Day.

P = Furnace 1 specific production threshold as defined in Table 11, in Tons of glass produced per Day.

C. PM Emission Controls, Limits, and Compliance Schedules

11. Interim PM Emission Controls and Limits for Furnace 1.

a. Except as provided otherwise herein, by no later than 180 days after the Effective Date, Pilkington shall comply with the emission limit of 1.1 lb of PM per Ton of glass produced during the Operation of Furnace 1.

Table 8: Furnace 1 Interim PM Emission Limit and Compliance Date

Emission Control	Emission Limit	Compliance Date
Process Controls	1.1 lb of PM per Ton of glass produced	180 Days after the Effective Date

b. Compliance with the interim PM Emission Limit for Furnace 1 in Table 8 shall be demonstrated by annual stack tests. PM shall be determined using Method 5 (40 CFR Part 60 Appendix A-3). Pilkington shall conduct a stack test demonstrating compliance no later than the required compliance date in Table 8 and once annually (between eleven and thirteen calendar months following the prior performance test) thereafter.

12. Final PM Emission Controls Operation and Emission Limits for Furnace 1.

a. Final PM Emission Controls for Furnace 1. On and after March 31, 2023, or after Furnace 1 undergoes a Cold Tank Repair, whichever is earlier, Pilkington shall not Operate Furnace 1 without passing all stack gases through a PD or Ceramic Filter System, except during Furnace Startup; Control Device Startup; Malfunction of the PD or Ceramic Filter System; or Maintenance of the PD or Ceramic Filter System. During Malfunction or Maintenance of the SCR or DS installed on Furnace 1, Pilkington shall pass all stack gases through the PD.

b. Final PM Emission Limit for Furnace 1. Except as provided otherwise herein, on and after March 31, 2023, or after Furnace 1 undergoes a Cold Tank Repair, whichever is earlier, Pilkington shall comply with the emission limit of 0.45 lb of PM per Ton of glass produced during the Operation of Furnace 1.

Table 9: Furnace 1 Final PM Emission Limit and Compliance Date

Emission Control	Emission Limit	Compliance Date
PD or Ceramic Filter System	0.45 lb of PM per Ton of glass produced	March 31, 2023, or after Furnace 1 undergoes a Cold Tank Repair, whichever is earlier.

c. Compliance with the final PM emission limits at Furnace 1 shall be demonstrated through stack tests using EPA Test Method 5 (40 C.F.R. Part 60, Appendix A-3). Pilkington shall conduct an initial stack test on Furnace 1 by no later than July 1, 2023, and subsequent stack tests on an annual basis (between eleven and thirteen calendar months following the prior stack test) unless two consecutive annual stack tests show that Furnace 1's PM emissions are at or below 50% of the emission limit, in which case Pilkington shall not be required to conduct a stack test for the next year, but Pilkington must conduct a stack test within the second year. At no time may the interval between stack tests exceed twenty-five months. If a stack test shows that Furnace 1's PM emissions exceed 50% of the emission limit, Pilkington must resume annual stack tests until it again has two consecutive annual stack tests with emissions at or below 50% of the emission limit.

D. Shutdown of Furnace

13. The permanent shutdown of Furnace 1, and the Surrender of Air Permits or Air Permit Conditions for that Furnace will be deemed to satisfy all requirements of Section IV of this Consent Decree on and after the later of: (1) the date of the permanent shutdown of Furnace 1; or (2) the date of the Surrender of Air Permits or Air Permit Conditions.

14. If Pilkington elects to permanently shut down Furnace 1, Pilkington must provide written notice of the proposed permanent shutdown to the United States and EPA in the manner set forth in Section XV of this Decree (Notices). The notice shall include any written correspondence to the permitting authority related to the Surrender of Air Permits or Air Conditions for the Furnace(s).

a. Permanent Shutdown before the Effective Date. If Pilkington permanently shuts down Furnace 1 prior to the Effective Date, Pilkington shall provide written notice of the permanent shutdown by no later than the Effective Date.

b. Permanent Shutdown after the Effective Date. If Pilkington permanently shuts down or decides to permanently shut down Furnace 1 after the Effective Date, Pilkington shall provide written notice of the permanent Furnace shutdown (1) in the annual report prior to permanently shutting down the Furnace; or (2) within thirty days after the date Pilkington makes the decision to permanently shut down the Furnace, but before the shutdown occurs.

E. CEMS Installation, Calibration, Certification, Maintenance, and Operation

15. Pilkington shall install, calibrate, certify, maintain, and operate NO_x CEMS and SO₂ CEMS on Furnace 1 in accordance with the requirements found under Paragraph 16 and by no later than the dates listed in Table 10.

Table 10: CEMS Compliance Deadlines for Furnace 1

NO_x CEMS Outlet Deadline	NO_x CEMS Inlet Deadline	SO₂ CEMS Deadline
180 Days from the Effective Date	Upon startup of Furnace 1 after the rebuild or March 31, 2023, whichever is earlier.	180 Days from the Effective Date

16. Except as provided otherwise herein, Pilkington shall install, calibrate, certify, maintain, and operate all NO_x and SO₂ CEMS in accordance with the following requirements:

a. NO_x and SO₂ CEMS shall continuously monitor and record the hourly NO_x and SO₂ emission concentrations (in parts per million (ppm)) during each Operating Day at the Furnace.

b. NO_x and SO₂ CEMS shall be installed, calibrated, certified, maintained, and operated in accordance with 40 C.F.R. § 60.13, 40 C.F.R. Part 60, Appendix B (Performance Specification 2), and 40 C.F.R. Part 60, Appendix F (Quality Assurance Procedures).

c. Events that will trigger subsequent CEMS Certification include any Furnace Startup or Control Device Startup. Pilkington shall commence such subsequent CEMS Certification no later than forty-five Days after Furnace Startup commences or the Day after a Control Device Startup period concludes. If a Furnace Startup and a Control Device Startup happen at the same time, then the subsequent CEMS Certification shall not be conducted until the first Operating Day after the conclusion of the Furnace Startup period or the Control Device Startup period, whichever is later.

17. Where the Consent Decree requires the use of CEMS to determine an emission rate or compliance with an emission rate (*i.e.*, pounds per Ton, or pounds per Day), the data acquisition and handling system for the CEMS shall convert the ppm values into pounds per hour values using an O₂ CEMS or a flow monitor installed, calibrated, certified, maintained, and operated in accordance with 40 C.F.R. § 60.13, 40 C.F.R. Part 60, Appendix B (Performance Specification 2 or 6, as applicable) and 40 C.F.R. Part 60, Appendix F (Quality Assurance Procedures). At the end of each Operating Day, the data acquisition and handling system shall divide the 24-hour Block Emission Rate by the total Tons of glass produced during the Operating Day to describe the pound per Ton emission rate for the Operating Day. The resulting number shall be recorded in units of pounds of pollutant per Ton of glass produced for the applicable Operating Day.

18. CEMS Certification and CEMS Certification Events. Pilkington shall not perform any CEMS Certification (initial or subsequent) during Abnormally Low Production Rate Days, Furnace Startup, Control Device Startup, Malfunction of any Control Device, or Maintenance of any Control Device. By no later than the first Operating Day after any CEMS Certification Event concludes at a Furnace, a new CEMS Certification or subsequent CEMS Certification shall be initiated for that Furnace. If a CEMS Certification Event occurs at either Furnace, the requirement to demonstrate compliance continuously with the applicable final NO_x or SO₂ emission limit for that Furnace will be suspended until CEMS Certification or subsequent CEMS Certification is complete (provided that the seven-day test required for CEMS Certification is

commenced on the first Operating Day following the conclusion of the CEMS Certification Event).

19. Good Air Pollution Control Practices. At all times, including during Abnormally Low Production Rate Days, Furnace Startup, Control Device Startup, Malfunction, and Maintenance, Pilkington shall maintain and operate Furnace 1, all Control Devices, and any other associated air pollution control equipment in accordance with 40 C.F.R. § 60.11(d).

20. Maintenance.

a. Scheduled or Preventive Furnace Maintenance. Scheduled and preventive Maintenance on Furnace 1, including checker-raking and burning, shall not exceed ninety-six hours annually. Only scheduled or preventive Maintenance hours that occur during an Operating Day covered by the 24-hour Block Emission Rate for Maintenance (rather than the 30-day Rolling Average Emission Rate) count towards the ninety-six hour annual limit. Scheduled and preventative Maintenance on Furnace 1 shall be conducted only when Pilkington is operating downstream Control Devices required by this Consent Decree.

b. Scheduled or Preventive Maintenance on Control Devices. Any Operating Day that is exempted from the applicable 30-day Rolling Average Emission Rate, or the 30-Day Rolling Average NO_x Removal Efficiency Rate because of scheduled or preventive Maintenance being performed on a Control Device is subject to the following restrictions and must comply with the following requirements: scheduled or preventive Maintenance of Control Devices shall occur and shall be completed while the

Furnace connected to the Control Device(s) is not Operating, unless the Furnace connected to the Control Device(s) is scheduled to have a Continuous Operating Year. During a Continuous Operating Year, scheduled or preventive Maintenance on the Control Device(s) may be conducted while the Furnace connected to the Control Device(s) is Operating. All Control Device Maintenance occurring during a Continuous Operating Year must also be performed in accordance with the following requirement:

i. Bypass of any Control Device for the purpose of scheduled or preventive Maintenance shall not exceed 144 total hours per Calendar Year, per Control Device.

ii. Bypass of the SCR required as a result of bypassing the PD or DS shall count towards the 144 hour limit for the SCR.

iii. Bypass of the DS required as a result of bypassing the PD shall count towards the 144 hour limit for the DS.

iv. Bypass of the PD required as a result of bypassing the DS shall count towards the 144 hour limit.

21. Source/Stack Testing. All source/stack tests required by the Consent Decree shall be conducted in accordance with the requirements of the specified Test Method and shall be performed under representative Operating conditions or applicable state requirements for Furnace 1. Each test shall be comprised of at least three valid one-hour stack test runs. Pilkington shall discard any invalid test runs, such as those that are compromised because of sample contamination. If a test run is discarded, Pilkington shall report the results of the discarded test runs to EPA and shall provide all information

necessary to document why the test run was not valid. Pilkington shall replace the discarded test run with an additional valid test run unless EPA, in its discretion, approves a written request from Pilkington to determine Consent Decree compliance based on the two other test runs that were not discarded. Source/stack testing shall not be conducted during Abnormally Low Production Rate Days, a Furnace Startup, a Control Device Startup, a Malfunction of the Furnace or relevant Control Device, or Maintenance of the Furnace or relevant Control Device.

F. Alternative Control Technology

22. At any time before termination of the Consent Decree, Pilkington may request approval from EPA to implement other control technology (including process controls or methods) for controlling NO_x, SO₂, or PM emissions from Furnace 1 in addition to or in lieu of the Control Devices, process controls, or methods required in the Consent Decree. In seeking such approval, Pilkington must demonstrate that the proposed alternative control technology, process control, or method is capable of achieving and maintaining compliance with the final emissions limits required by Section IV of the Consent Decree. Pilkington must also demonstrate that it can achieve monitoring equal to or better than what is required in this Consent Decree. Approval or denial of such request shall be made by EPA and Pilkington may invoke dispute resolution.

G. Abnormally Low Production Rate Days

23. Table 11 lists the threshold values for an Abnormally Low Production Rate Day for Furnace 1.

Table 11: Furnace 1 Abnormally Low Production Rate Day Threshold

Abnormally Low Production Rate Day Threshold (tons/day)	Abnormally Low Production Rate (tons/hour)
328	13.7

24. If increased production capacity at Furnace 1 is authorized by a revised Permit limit, the Abnormally Low Production Rate Day Threshold will be 35% of the new permitted production (or design production, where there is no permitted production) as determined on a daily basis.

H. Recordkeeping

25. As otherwise provided herein, Pilkington shall record: (1) the hourly Inlet and Outlet NO_x concentrations (emissions in ppm) before and after the SCR or Ceramic Filter System using CEMS data; (2) the hourly SO₂ and NO_x emissions rate (lbs per hour) as calculated using CEMS data; (3) the Daily Glass Production; and (3) the daily calculation of the 30-day Rolling Average NO_x Removal Efficiency Rate, and 4) the daily calculation of the 30-day Rolling Average NO_x and SO₂ Emission Rates, as applicable.

26. For any Operating Day(s) that Pilkington excludes from the relevant 30-day Rolling Average NO_x Removal Efficiency Rate, or the 30-day Rolling Average NO_x or SO₂ Emission Rate, it shall record: (1) the date; (2) the relevant exception pursuant to which Pilkington is excluding the emissions generated during that Operating Day (or Days) (*i.e.*, Abnormally Low Production Rate Day, Furnace Startup, Control Device Startup, Malfunction of Control Device, or Maintenance of Control Device); (3) a calculation of the applicable 24-hour Block Emission Rate (in pounds of NO_x and/or SO₂

per Day; (4) the emissions recorded by the CEMS (in pounds of NO_x and/or SO₂ per Day); and (5) if it was a Malfunction, an explanation and any corrective actions taken. For any Operating Day(s) excluded for Maintenance of a Control Device or Furnace, Pilkington shall also record the total number of hours during which Maintenance occurred.

27. Recordkeeping during Furnace Startup. In addition to the recordkeeping requirements listed above, Pilkington must also keep the following records during Furnace Startup.

- a. The amount of salt cake added to the batch materials in pounds per 1,000 pounds of sand;
- b. The total natural gas usage in Furnace 1 (in million standard cubic feet); and
- c. A description of NO_x reduction techniques used during this period (if any).

V. ENVIRONMENTAL MITIGATION

28. Pilkington shall implement the Environmental Mitigation Project (Mitigation Project) described in Appendix A to this Consent Decree. The Mitigation Project shall be completed within twelve months after the Effective Date.

29. Pilkington shall maintain, and within thirty Days upon EPA's request, provide to EPA, all documents that substantiate the funds expended and work completed to implement the Mitigation Project described in this Section and Appendix A.

30. Pilkington certifies the truth and accuracy of the following:

a. That, as of the date of executing this Decree, Pilkington is not required to perform or develop the Mitigation Project by any federal, state, or local law or regulation and is not required to perform or develop the Mitigation Project by agreement, grant, or as injunctive relief awarded in any other action in any forum;

b. That the Mitigation Project is not a Mitigation Project that Pilkington was planning or intending to construct, perform or implement other than in settlement of the claims resolved in this Decree;

c. That Pilkington has not received and will not receive credit for the Mitigation Project in any other enforcement action; and

d. That Pilkington shall neither generate nor use any pollutant reductions from the Mitigation Project as netting reductions, pollutant offsets, or to apply for, obtain, trade, or sell any pollutant reduction credits.

31. Beginning with the first annual report required in Section VIII (Reporting Requirements) and continuing until completion of the Mitigation Project, Pilkington shall provide EPA with updates concerning the progress of the Mitigation Project in the annual reports required in Section VIII (Reporting Requirements) of this Consent Decree.

32. Within ninety Days following the completion of the Mitigation Project, Pilkington shall submit a report to the United States and EPA in accordance with Section XV (Notices) that documents that the Mitigation Project was completed and the following:

- a. the anticipated annual emission reductions or other environmental benefits achieved (including the emission reductions achieved for PM); and
- b. the Project Dollars incurred by Pilkington in implementing the Mitigation Project.

33. Pilkington acknowledges that it will receive credit for completion of the Mitigation Project only if Pilkington demonstrates that the Mitigation Project has been fully implemented as described in Appendix A; the required funds have been spent by Pilkington in implementing the Mitigation Project to meet all requirements of this Section of the Consent Decree and Appendix A.

VI. PERMITS

34. Where any compliance obligation under this Consent Decree requires Pilkington to obtain a federal, state, or local Permit, Pilkington shall submit timely and complete applications and take all other actions necessary or required to obtain all such Permits. Pilkington may seek relief under the provisions of Section X (Force Majeure) of this Consent Decree for any delay in the performance of any such obligation resulting from a failure to obtain, or a delay in obtaining, any Permit required to fulfill such obligation, if Pilkington has submitted timely and complete applications and has taken all other actions necessary to obtain all such Permits. If Pilkington fails to submit a timely Permit application, Pilkington shall be barred from asserting a claim under Section X (Force Majeure) of the Consent Decree that is based on delays in receiving necessary Permits.

35. For Furnace 1, adequately in advance of, but by no later than 180 Days before any applicable deadline specified in Section IV (Compliance Requirements), Pilkington shall submit a Permit application which is timely and that is complete for processing purposes pursuant to 15A NCAC 2Q.0312 to the North Carolina air permitting authority and take all other actions necessary to obtain any pre-construction, construction, and operating Permits required to install, construct, and operate Control Devices and/or CEMS required under Section IV (Compliance Requirements).

36. If not already included as part of the Permit applications described above, by no later than one year after each compliance deadline for the final emission limits specified in Section IV (Compliance Requirements), Pilkington shall also either: (1) submit a Permit application which is timely and that is complete for processing purposes pursuant to 15A NCAC 2Q.0312 to the North Carolina Department of Environmental Quality to incorporate the requirements listed in Paragraph 36.a through 36.g into a permit (other than a Title V permit) that is (i) federally enforceable; (ii) issued under the North Carolina SIP; and, (iii) issued pursuant to authority independent of the North Carolina Department of Environmental Quality's authority to issue Title V permits, so that those requirements become 'applicable requirements' within the meaning of 42 U.S.C. § 7661c(a), and 40 C.F.R. § 70.2, , and those requirements shall survive termination of this Consent Decree, or (2) request that the North Carolina Department of Environmental Quality submit the portions of the Consent Decree listed in Paragraph 36.a through 36.g to the U.S. EPA for approval under the North Carolina SIP in accordance with 42 U.S.C. § 7410, including, but not limited to, 42 U.S.C. § 7410(k).

Pilkington agrees that if Pilkington requests the North Carolina Department of Environmental Quality to submit a SIP revision to the U.S. EPA, Pilkington will not contest the submittal of any such proposed SIP revision that incorporates the terms of this Consent Decree to U.S. EPA or U.S. EPA's approval of such submittal. The permit or SIP amendment requested under this Paragraph shall incorporate and require Pilkington's compliance with the following requirements of the Consent Decree:

- a. requirements to Operate the Control Devices as specified in Paragraphs 8, 10, and 12;
- b. any applicable final emission limits, as well as the specified method of measuring and calculating emissions and averaging periods specified in Paragraphs 8, 10, 12, and 20, and relevant definitions;
- c. requirements to install, calibrate, certify, maintain, and operate NO_x and SO₂ CEMS pursuant to Paragraphs 15 through 18;
- d. requirements to operate in accordance with 40 C.F.R. § 60.11(d) pursuant to Paragraph 19;
- e. requirements for PM stack tests pursuant to Paragraph 21; and
- f. any reporting and recordkeeping requirements associated with Furnace 1 and the Control Devices pursuant to Section VIII (Reporting Requirements) or any other provision of this Consent Decree; and
- g. all of Section VII (Emission Credit Generation).

37. Upon issuance of any Permit or approval required under Paragraphs 35 or 36, or a source-specific SIP revision under Paragraph 36, Pilkington shall promptly file

any applications necessary to incorporate the requirements of that Permit or the source-specific SIP revisions into the Title V operating Permit of the Laurinburg Facility. Such application(s) for a Title V permit, or for any subsequent renewal or modifications thereof, shall expressly incorporate the Consent Decree provisions listed in Paragraph 36.a through 36.g. Pilkington shall not challenge the inclusion of requirements listed in Paragraph 36.a through 36.g in any such Permit unless such provisions are superseded by future, federally-approved requirements pursuant to the CAA, but nothing in this Consent Decree is intended nor shall it be construed to preclude Pilkington from challenging any more stringent terms should they be proposed for reasons independent of this Consent Decree.

38. The Parties agree that the incorporation of any of the requirements listed in Paragraph 36.a. through 36.g. into the Title V Permit for the Laurinburg Facility shall be done in accordance with the applicable federal, State or local rules and laws.

39. This Consent Decree shall not terminate until the requirements listed in Paragraph 36.a. through 36.g. are incorporated into a federally enforceable Permit or SIP Amendment, and also the Title V operating permit of the Laurinburg facility in accordance with Paragraph 37, such that all requirements listed in Paragraph 36.a through 36.g shall survive termination of this Consent Decree.

VII. EMISSION CREDIT GENERATION

40. Prohibitions. Pilkington shall neither generate nor use any CD Emissions Reductions: as netting reductions; as emissions offsets; or to apply for, obtain, trade, or sell any emission reduction credits. For projects achieving CD Emissions Reductions,

and projects implemented concurrently with or after either projects, controls, or actions achieving CD Emissions Reductions or the deadline for implementing such projects, controls, or actions achieving CD Emissions Reductions, whichever comes first, baseline actual emissions during any 24-month period selected by Pilkington shall be adjusted downward to exclude any portion of the baseline emissions that would have been eliminated as CD Emissions Reductions had Pilkington been complying with this Consent Decree during that 24-month period. Any plant-wide applicability limits (PALs) or PAL-like limits that apply to Furnace 1 must be adjusted downward to exclude any portion of the baseline emissions used in establishing such limit(s) that would have been eliminated as CD Emissions Reductions had Pilkington been complying with this Consent Decree during such baseline period.

41. Glass Manufacturing Exception to the Prohibition. Notwithstanding the general prohibition set forth in Paragraph 40 above, Pilkington may use past actual emissions from Furnace 1, without the downward adjustment required by Paragraph 40, as baseline actual emissions for Furnace 1 in the actual-to-projected-actual applicability test for the following projects: First, for an increase in production rate achieved in conjunction with the first Cold Tank Repair at Furnace 1 following entry of this Decree; second, for an increase in production rate achieved in conjunction with the installation of a Control Device pursuant to this Decree. Utilization of this exception is subject to each of the following conditions:

a. If use of past actual emissions from Furnace 1 as baseline actual emissions in the actual-to-projected-actual applicability test leads to the calculation of a

negative (below zero) emissions increase at that emissions unit, the emissions increase at that emissions unit shall be considered equal to zero in determining whether the project will result in a significant emissions increase;

b. Use of past actual emissions under this Exception to the Prohibition does not extend to any use of past actual emissions in determining the net emissions increase from the major stationary source. However, if past actual emissions are used under this Exception to the Prohibition, then baseline actual emissions for Furnace 1 in any subsequent netting analysis shall be based upon a rate no greater than the projected actual emissions determined as a result of the use of this Exception to the Prohibition;

c. Pilkington shall still be subject to all federal and state regulations applicable to the PSD, Non-attainment NSR, and/or Minor NSR permitting process; and,

d. Pilkington shall provide notice of such project(s) to EPA (including copies of all permit applications and other relevant documentation submitted to the permitting authority) upon submission of a permit application for the project(s) to the permitting authority, or thirty (30) days prior to implementing a project, control, or action using this Exception to the Prohibition, whichever comes first.

42. Outside the Scope of the Prohibition. Nothing in this Section VII is intended to prohibit Pilkington from seeking to:

a. Use or generate emission reductions from emissions units that are covered by this Consent Decree to the extent that the proposed emission reductions represent the difference between CD Emissions Reductions and more stringent control requirements that Pilkington may elect to accept for Furnace 1 in a permitting process, so

long as Pilkington: (1) timely reports any such use of emission reductions in accordance with Section VIII (Reporting Requirements) and (2) accepts the more stringent emission rate(s) in a federally enforceable Permit for Furnace 1;

b. Use or generate emission reductions from emissions units that are not subject to an emission limitation or control requirement pursuant to this Consent Decree; or

c. Use CD Emissions Reductions for compliance with any rules or regulations designed to address regional haze or the non-attainment status of any area (excluding PSD and non-attainment NSR rules, but including, for example, RACT rules) that apply to the facility; provided, however, that Pilkington shall not be allowed to trade or sell any CD Emissions Reductions.

VIII. REPORTING REQUIREMENTS

43. Until termination of this Consent Decree pursuant to Section XX, Pilkington shall submit to the United States and EPA a written, annual progress report by no later than March 1 of each succeeding Calendar Year.

44. Each annual report shall include the following information for the preceding Calendar Year: (1) the status of Pilkington's progress toward implementing Section IV (Compliance Requirements); (2) a description of any Section IV Compliance Requirements completed; (3) any problems encountered or anticipated in implementing Section IV (Compliance Requirements), together with implemented or proposed solutions; (4) a summary of all permitting activity pertaining to compliance with the Consent Decree including the status of any necessary Permit applications; (5) a record of

Furnace 1's daily 30-day Rolling Average Emission Rate for NO_x and SO₂, as applicable ; (6) a record of Furnace 1's daily 30-day Rolling Average NO_x Removal Efficiency Rate, as applicable; (7) the actual monthly emissions of NO_x and SO₂, from Furnace 1 measured using CEMS, and for PM emissions as estimated based on the most recent source/stack test(s); (7) the results of any source/stack testing performed at Furnace 1; (8) Daily Glass Production rates at Furnace 1; (9) monthly production of glass at Furnace 1; (10) a list of Days excluded from the 30-day Rolling Average Emission Rates for NO_x and SO₂, and the 30-day Rolling Average NO_x Removal Efficiency Rate due to an Abnormally Low Production Rate Day, Furnace Startup, Control Device Startup, Malfunction, or Maintenance; (11) the pounds of NO_x or SO₂ emitted from Furnace 1 for each Day excluded from the 30-day Rolling Averages; (12) for Day(s) excluded because of Furnace Startup, the amount of cubic feet of natural gas burned on such Day(s); (13) status of payment of any stipulated penalties due or demanded; and (14) any other information required to be recorded in Paragraphs 25–27, or 42.

45. Each annual report shall also include a description of any non-compliance with the requirements of this Consent Decree and an explanation of the violation's likely cause and of the remedial steps taken, or to be taken, to prevent or minimize the violation. If Pilkington violates, or has reason to believe that it may have violated, any requirement of this Consent Decree, Pilkington shall notify the United States and EPA of the violation and its likely duration, in writing and by telephone, fax, or email, within ten Days of the Day Pilkington first became aware of the violation or potential violation. This notice shall provide an explanation of the violation's likely cause and of the

remedial steps taken, or to be taken, to prevent or minimize such violation. If the cause of a violation cannot be fully explained at the time the report is due, Pilkington shall explain this in the report. Pilkington shall investigate the cause of the violation and shall then submit an amendment to the report, including a full explanation of the cause of the violation, within thirty Days of the Day Pilkington first becomes aware of the cause of the violation. Nothing in this Paragraph or the following Paragraph relieves Pilkington of its obligation to provide the notice required by Section X (Force Majeure) of this Consent Decree.

46. Whenever any violation of this Consent Decree or any other event affecting Pilkington's performance under this Consent Decree, or affecting the performance of Furnace 1, may pose an immediate threat to the public health or welfare or the environment, Pilkington shall notify EPA orally or by electronic email transmission as soon as possible, but in no case no later than twenty-four hours after Pilkington first knew of the violation or event. This procedure is in addition to the requirements set forth in the preceding Paragraph.

47. Pilkington shall notify EPA in writing of a proposed permanent shutdown of Furnace 1 prior to permanently shutting down Furnace 1.

48. All reports and notifications required under this Section shall be submitted in accordance with Section XV of this Consent Decree (Notices).

49. Each report or notification submitted by Pilkington under this Section shall be signed by an official of the submitting party and shall include the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

This certification requirement does not apply to emergency or similar notifications where compliance would be impractical.

50. The reporting requirements of this Consent Decree do not relieve Pilkington of any reporting obligations required by the Clean Air Act or its implementing regulations, or by any other federal, state, or local law, regulation, Permit, or other requirement.

51. Any information provided pursuant to the terms and implementation of this Consent Decree may be used by the United States in any proceeding to enforce the provisions of this Consent Decree and as otherwise permitted by law.

IX. STIPULATED PENALTIES

52. Pilkington shall be liable for stipulated penalties to the United States for violations of the Consent Decree as specified below, unless excused under Section X (Force Majeure). A violation includes failing to perform any obligation required by the terms of this Consent Decree, including any work plan or schedule approved under this Consent Decree, according to all applicable requirements of this Consent Decree, and within the specified time schedules established by or approved under this Consent Decree.

53. Emission Limits. The following stipulated penalties shall accrue per violation for each violation of any NO_x, SO₂ and/or PM interim or final emission limit specified in Section IV (Compliance Requirements):

a. Where the violation exceeds the applicable emission limit by less than or equal to 10%:

Penalty Per Violation Per Day	Period of Noncompliance
\$750	1 st through 30 th Day
\$1,500	31 st Day and beyond

b. Where the violation exceeds the applicable emission limit by more than 10%:

Penalty Per Violation Per Day	Period of Noncompliance
\$1,500	1 st through 14 th Day
\$2,250	15 th through 30 th Day
\$3,000	31 st Day and beyond

c. Emission limit violations during stack/source testing: For each stack/source test required by Section IV (Compliance Requirements) where the applicable interim or final emission limit for PM is exceeded, a stipulated penalty of \$5,000 shall accrue per stack/source test per Calendar Year.

54. Compliance Deadlines for Installing and Operating Control Devices or Alternative Primary Control Technology. The following stipulated penalties shall accrue per violation per Day for each violation of any compliance deadline specified in Section IV (Compliance Requirements) of the Consent Decree regarding the installation and operation of Control Devices or alternative Primary Control Technology:

Penalty Per Violation Per Day	Period of Noncompliance
\$2,250	1 st through 14 th Day
\$3,500	15 th through 30 th Day
\$5,000	31 st Day and beyond

55. Installation of CEMS. The following stipulated penalties shall accrue per violation per Day for each violation of any requirement identified in Section IV (Compliance Requirements) of the Consent Decree regarding the installation and operation of a CEMS by the specified deadlines:

Penalty Per Violation Per Day	Period of Noncompliance
\$300	1 st through 30 th Day
\$600	31 st through 60 th Day
\$1,200	61 st Day and beyond

56. Reporting Requirements. The following stipulated penalties shall accrue per violation per Day for each violation of the reporting requirements of Section VIII (Reporting Requirements):

Penalty Per Violation Per Day	Period of Noncompliance
\$250	1 st through 14 th Day
\$500	15 th through 30 th Day
\$1,000	31 st Day and beyond

57. Permitting Requirements. The following stipulated penalties shall accrue per violation per Day for each violation of any permitting requirement identified in Section VI (Permits) of this Consent Decree:

Penalty Per Violation Per Day	Period of Noncompliance
\$750	1 st through 14 th Day
\$1,250	15 th through 30 th Day
\$2,000	31 st Day and beyond

58. Emission Credit Generation Requirements. The following stipulated penalties shall accrue for violations of the requirements of Section VII (Emission Credit Generation) of this Consent Decree:

Pollutant for which reductions were impermissibly used or baseline was not adjusted downward	Penalty per ton of pollutant impermissibly used or counted in baseline
Nitrogen Oxides	\$25,000
Sulfur Dioxide	\$25,000
Particulate Matter	\$100,000

In addition to stipulated penalties, (1) Pilkington shall purchase and retire the amount of emissions offsets impermissibly used or sold and (2) any PSD, Non-attainment NSR, and/or synthetic Minor NSR permit improperly relying on CD Emissions Reductions in violation of Section VII (Emission Credit Generation) will be subject to reevaluation as to whether a significant emissions increase and significant net emissions increase occurred such that the project qualified as a major modification.

59. Other Violations. The following stipulated penalties shall accrue per violation per Day for each violation of any other requirement of the Consent Decree:

Penalty Per Violation Per Day	Period of Noncompliance
\$750	1 st through 14 th Day
\$1,000	15 th Day and beyond

60. Stipulated penalties under this Section shall begin to accrue on the Day after performance is due or on the Day a violation occurs, whichever is applicable, and shall continue to accrue until performance is satisfactorily completed or until the

violation ceases. Stipulated penalties shall accrue simultaneously for separate violations of this Consent Decree. Per Day penalties do not increase from one tier to the next unless the violations are continuous.

61. Pilkington shall pay any stipulated penalty within thirty Days of receipt of the written demand by the United States, unless Pilkington elects within twenty Days of receipt of the written demand to dispute the obligation in accordance with the Dispute Resolution procedure set forth in Section XI below.

62. The United States may, in the unreviewable exercise of its discretion, reduce or waive the amount of stipulated penalties otherwise due under this Consent Decree.

63. Stipulated penalties shall continue to accrue during any dispute resolution, but need not be paid until the following:

a. If the dispute is resolved by agreement or by a decision of the United States that is not appealed to the Court, Pilkington shall pay accrued penalties determined to be owing, together with interest, to the United States within thirty Days of the effective date of the agreement or Pilkington's receipt of the United States' decision or order.

b. If the dispute is appealed to the Court and the United States prevails in whole or in part, Pilkington shall pay all accrued penalties determined by the Court to be owing, together with interest, within sixty Days of receiving the Court's decision or order, except as provided in Paragraph 63.c, below.

c. If either Party appeals the District Court's decision, Pilkington shall pay all accrued penalties determined to be owing, together with interest, within fifteen Days of receiving the final appellate court decision.

64. Pilkington shall pay stipulated penalties owing to the United States by FedWire Electronic Funds Transfer ("EFT") to the U.S. Department of Justice in accordance with written instructions to be provided to Pilkington by the Financial Litigation Unit ("FLU") of the U.S. Attorney's Office for the Middle District of North Carolina. The FLU will provide payment instructions to:

Richard A. Altman
Regional Director, Architectural
Pilkington North America, Inc.
811 Madison Ave.
Toledo, OH 43604
Richard.Altman@nsg.com
(419) 247-4814

on behalf of Pilkington. At the time of payment, Pilkington shall send a copy of the EFT authorization form and the EFT transaction record, together with a transmittal letter, to the United States and EPA in accordance with Section XV of this Decree (Notices); by email to acctsreceivable.CINWD@epa.gov; and by mail to:

EPA Cincinnati Finance Office
26 Martin Luther King Drive
Cincinnati, OH 45268

This transmittal letter shall state that the payment is for the stipulated penalties owed pursuant to the Consent Decree in *United States v. Pilkington North America, Inc.*

(M.D.N.C.), shall reference the civil action number and DOJ case number 90-5-2-1-10328, and shall state for which violation(s) the penalties are being paid.

65. Pilkington shall not deduct any penalties paid under this Consent Decree pursuant to this Section in calculating its federal, state, and local income taxes.

66. If Pilkington fails to pay stipulated penalties according to the terms of this Consent Decree, Pilkington shall be liable for interest on such penalties, as provided for in 28 U.S.C. § 1961, accruing as of the date payment became due. Nothing in this Paragraph shall be construed to limit the United States from seeking any remedy otherwise provided by law for Pilkington's failure to pay any stipulated penalties.

67. Subject to the provisions of Section XIII of this Consent Decree (Effect of Settlement/Reservation of Rights), the stipulated penalties provided for in this Consent Decree shall be in addition to any other rights, remedies, or sanctions available to the United States for Pilkington's violation of this Consent Decree or applicable law, except that for any violation of relevant statutory, regulatory, or permitting requirements for which this Consent Decree provides for payment of a stipulated penalty, the United States will elect whether to seek stipulated penalties or to seek statutory penalties for such violation.

X. FORCE MAJEURE

68. "Force Majeure," for purposes of this Consent Decree, is defined as any event arising from causes beyond the control of Pilkington, of any entity controlled by Pilkington, or of Pilkington's contractors that delays or prevents the performance of any obligation under this Consent Decree despite Pilkington's best efforts to fulfill the obligation. The requirement that Pilkington exercise "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential Force Majeure event

and best efforts to address the effects of any such event: (a) as it is occurring and (b) after it has occurred in order to prevent or minimize any resulting delay to the greatest extent possible. Force Majeure does not include Pilkington's financial inability to perform any obligation under this Consent Decree.

69. If any event occurs or has occurred that may delay the performance of any obligation under this Consent Decree, whether or not caused by a Force Majeure event, Pilkington shall provide notice orally or by electronic transmission to EPA within seven Days of when Pilkington first knew that the event might cause a delay. Within fifteen Days thereafter, Pilkington shall provide in writing to EPA an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Pilkington's rationale for attributing such delay to a Force Majeure event if it intends to assert such a claim; and a statement as to whether, in the opinion of Pilkington, such event may cause or contribute to an endangerment to public health, welfare or the environment. Pilkington shall include with any notice all available documentation supporting the claim that the delay was attributable to a Force Majeure. Failure to comply with the above requirements shall preclude Pilkington from asserting any claim of Force Majeure for that event for the period of time of such failure to comply, and for any additional delay caused by such failure. Pilkington shall be deemed to know of any circumstance of which Pilkington, any entity controlled by Pilkington, or Pilkington's contractors knew or should have known.

70. If EPA agrees that the delay or anticipated delay is attributable to a Force Majeure event, the time for performance of the obligations under this Consent Decree that are affected by the Force Majeure event will be extended by EPA for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the Force Majeure event shall not, of itself, extend the time for performance of any other obligation. EPA will notify Pilkington in writing of the length of the extension, if any, for performance of the obligations affected by the Force Majeure event.

71. If EPA does not agree that the delay or anticipated delay has been or will be caused by a Force Majeure event, EPA will notify Pilkington in writing of its decision.

72. If Pilkington elects to invoke the dispute resolution procedures set forth in Section XI (Dispute Resolution), it shall do so no later than fifteen Days after receipt of EPA's notice. In any such proceeding, Pilkington shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a Force Majeure event, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Pilkington complied with the requirements of this Section. If Pilkington carries this burden, the delay at issue shall be deemed not to be a violation by Pilkington of the affected obligation of this Consent Decree identified to EPA and the Court.

XI. DISPUTE RESOLUTION

73. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes arising under or with respect to this Consent Decree. The procedures set forth in this Section do not apply to actions by the United States to enforce obligations of Pilkington that have not been disputed in accordance with this Section.

74. Except as otherwise expressly provided for in this Consent Decree, the dispute resolution procedures set forth in this Section shall be available to resolve any and all disputes arising under the Decree, provided that the Party invoking the procedures has made a good-faith attempt to resolve the matter with the other Party involved.

75. The dispute resolution procedures required herein shall be invoked upon the giving of written notice by a Party to the Consent Decree to another Party, advising the other Party of a dispute under Section XV (Notices). The notice shall describe the nature of the dispute and shall state the noticing Party's position with regard to the dispute. The Party receiving the notice shall acknowledge receipt of the notice and the Parties shall schedule a meeting to discuss the dispute informally not later than fourteen Days from the receipt of notice.

76. Informal Dispute Resolution. Disputes submitted to dispute resolution shall, in the first instance, be the subject of informal negotiations between the Parties. The period of informal negotiations shall not exceed thirty Days from the date the dispute arises, unless that period is modified by written agreement. If the Parties cannot resolve a dispute by informal negotiations, then the position advanced by the United States shall be

considered binding unless, within fourteen Days after the conclusion of the informal negotiation period, Pilkington invokes formal dispute resolution procedures as set forth below.

77. Formal Dispute Resolution. Pilkington shall invoke formal dispute resolution procedures, within the time period provided in the preceding Paragraph, by serving on the United States a written Statement of Position regarding the matter in dispute. The Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting Pilkington's position and any supporting documentation relied upon by Pilkington. The United States shall serve its Statement of Position within forty-five Days of receipt of Pilkington's Statement of Position. The United States' Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting that position and any supporting documentation relied upon by the United States. The United States' Statement of Position shall be binding on Pilkington, unless Pilkington files a motion for judicial review of the dispute in accordance with the following Paragraph.

78. Pilkington may seek judicial review of the dispute by filing with the Court and serving on the United States, in accordance with Section XV (Notices), a motion requesting judicial resolution of the dispute. The motion must be filed within forty-five Days of receipt of the United States' Statement of Position pursuant to the preceding Paragraph. The motion shall contain a written statement of Pilkington's position on the matter in dispute, including any supporting factual data, analysis, opinion, or documentation, and shall set forth the relief requested and any schedule within which the

dispute must be resolved for orderly implementation of the Consent Decree. The motion may not raise any issue not raised in informal dispute resolution pursuant to Paragraph 76, unless the United States raises a new issue of law or fact in its Statement of Position.

79. The United States shall respond to Pilkington's motion within the time period allowed by the Local Rules of this Court. Pilkington may file a reply memorandum, to the extent permitted by the Local Rules.

80. In a formal dispute resolution proceeding under this Section, the Court shall decide all disputes pursuant to applicable principles of law for resolving such disputes. In their filings with the Court, the Parties shall state their respective positions as to the applicable standard of law for resolving the particular dispute.

81. Where the nature of the dispute is such that a more timely resolution of the issue is required, the time periods set forth in this Section may be shortened upon motion of one of the Parties to the dispute or by agreement of the Parties. The Parties do not intend that the invocation of this Section by a Party shall cause the Court to draw any inferences nor establish any presumptions adverse to either Party as a result of the invocation of this Section.

82. In appropriate circumstances, as part of the resolution of any matter submitted to the Court under this Section, the Parties may agree to, or the Court may order, an extension or modification of the schedule for completion of work under the Consent Decree to account for the delay in the work that occurred as a result of dispute resolution. If appropriate, the Court may also order Pilkington to mitigate any adverse environmental impacts resulting from Pilkington's failure to timely perform any

obligation under this Consent Decree. Pilkington shall be liable for stipulated penalties for its failure thereafter to complete the work in accordance with the extended or modified schedule. Invocation of dispute resolution with respect to any of Pilkington's obligations under the Consent Decree shall not, of itself, excuse or extend the time for performance of any other obligation of Pilkington under the Consent Decree.

XII. INFORMATION COLLECTION AND RETENTION

83. The United States and its representatives, including attorneys, contractors, and consultants, shall have the right of entry into the Laurinburg Facility, at all reasonable times, upon presentation of credentials, to:

- a. monitor the progress of activities required under this Consent Decree;
- b. verify any data or information submitted to the United States in accordance with the terms of this Consent Decree;
- c. obtain samples and, upon request, splits of any samples taken by Pilkington or its representatives, contractors, or consultants;
- d. obtain documentary evidence, including photographs (which Pilkington may request copies of) and similar data; and,
- e. assess Pilkington's compliance with this Consent Decree.

84. Upon request, Pilkington shall provide EPA or its authorized representatives splits of any samples taken by Pilkington. Upon request, EPA shall provide Pilkington splits of any samples taken by EPA.

85. Pilkington shall retain, and shall instruct its contractors and agents to preserve, all non-identical copies of all documents, records, or other information (including documents, records, or other information in electronic form) in its or its contractors' or agents' possession or control, or that come into its or its contractors' or agents' possession or control, and that relate to Pilkington's performance of its obligations under this Consent Decree. These information-retention requirements shall apply at the Laurinburg Facility until three years after this Consent Decree is terminated under Section XX (Termination). This information-retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures. At any time during this information-retention period, upon request by the United States, Pilkington shall provide copies of any documents, records, or other information required to be maintained under this Paragraph.

86. At the conclusion of the information retention period provided in the preceding Paragraph, Pilkington shall notify the United States at least ninety Days prior to the destruction of any documents, records, or other information subject to the requirements of the preceding Paragraph and, upon request by the United States, Pilkington shall deliver any such documents, records, or other information to EPA. Pilkington may assert that certain documents, records, or other information is privileged under the attorney-client privilege or any other privilege recognized by federal law. If Pilkington asserts such a privilege, it shall provide the following: (1) the title of the document, record, or information; (2) the date of the document, record, or information; (3) the name and title of each author of the document, record, or information; (4) the

name and title of each addressee and recipient; (5) a description of the subject of the document, record, or information; and (6) the privilege asserted by Pilkington. However, no documents, records, or other information created or generated pursuant to the requirements of this Consent Decree shall be withheld on grounds of privilege.

87. Pilkington may also assert that information required to be provided under this Section is protected as Confidential Business Information (“CBI”) under 40 C.F.R. Part 2 and any applicable state law. As to any information that Pilkington seeks to protect as CBI, Pilkington shall follow the procedures set forth in 40 C.F.R. Part 2 and any applicable state law.

88. This Consent Decree in no way limits or affects any right of entry and inspection, or any right to obtain information, held by the United States pursuant to applicable federal or state laws, regulations, or Permits, nor does it limit or affect any duty or obligation of Pilkington to maintain documents, records, or other information imposed by applicable federal or state laws, regulations, or Permits.

XIII. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS

89. This Consent Decree resolves the civil claims of the United States for the violations alleged in the Complaint filed in this action through the Date of Lodging. This Consent Decree also resolves the civil claims of the United States for the violations alleged in the notice of violation issued to Pilkington on August 28, 2020.

90. With respect to emissions of NO_x, SO₂, and PM, entry of this Consent Decree resolves the civil liability of Pilkington to the United States for the following

claims arising from any construction or modification commenced on Furnace 1 at the Laurinburg Furnace prior to the lodging of this Consent Decree:

a. claims based on Part C or D of Subchapter I of the Clean Air Act, 42 U.S.C. §§ 7470–7492, 7501–7515, and the regulations promulgated thereunder at 40 C.F.R. § 52.21, 40 C.F.R. §§ 51.165(a) and (b), and 51.166, 40 C.F.R. Part 51, Appendix S, and 40 C.F.R. § 52.24;

b. claims based on Sections 502(a) and 504(a) of Title V of the Clean Air Act, 42 U.S.C. §§ 7661a(a) and 7661c(a), but only to the extent that such claims are based on Pilkington’s failure to obtain a Permit that reflects applicable requirements imposed under Parts C or D of Subchapter I; and

c. claims based on any applicable North Carolina state law counterparts to the provisions listed in the preceding subparagraphs of this Paragraph, including claims based on counterpart provisions of the federally-approved and enforceable North Carolina SIP.

91. The United States reserves all legal and equitable remedies available to enforce the provisions of this Consent Decree. This Consent Decree shall not be construed to limit the rights of the United States to obtain penalties or injunctive relief under the CAA or implementing regulations, or under other federal or state laws, regulations, or Permit conditions, except as expressly specified in Paragraphs 89 through 90. The United States further reserves all legal and equitable remedies to address any imminent and substantial endangerment to the public health or welfare or the

environment arising at, or posed by, the Laurinburg Facility, whether related to the violations addressed in this Consent Decree or otherwise.

92. In any subsequent administrative or judicial proceeding initiated by the United States for injunctive relief, civil penalties, other appropriate relief relating to the Laurinburg Facility or Pilkington's violations, Pilkington shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States in the subsequent proceeding were or should have been brought in the instant case, except with respect to claims that have been specifically resolved pursuant to Paragraphs 89 through 90.

93. This Consent Decree is not a Permit, or a modification of any Permit, under any federal, state, or local laws or regulations. Pilkington is responsible for achieving and maintaining complete compliance with all applicable federal, state, and local laws, regulations, and Permits; and Pilkington's compliance with this Consent Decree shall be no defense to any action commenced pursuant to any such laws, regulations, or Permits, except as set forth herein. The United States does not, by consent to the entry of this Consent Decree, warrant or aver in any manner that Pilkington's compliance with any aspect of this Consent Decree will result in compliance with provisions of the CAA, 42 U.S.C. §§ 7401, *et seq.*, or with any other provisions of federal, state, or local laws, regulations, or Permits.

94. This Consent Decree does not limit or affect the rights of Pilkington or of the United States against any third parties, not party to this Consent Decree, nor does it

limit the rights of third parties, not party to this Consent Decree, against Pilkington, except as otherwise provided by law.

95. This Consent Decree shall not be construed to create rights in, or grant any cause of action to, any third party not party to this Consent Decree.

XIV. COSTS

96. The Parties shall bear their own costs of this action, including attorneys' fees, except that if the United States is the prevailing party, it shall be entitled to collect the costs (including attorneys' fees) incurred in any action necessary to collect any portion of any stipulated penalties due but not paid by Pilkington.

XV. NOTICES

97. Unless otherwise specified herein, whenever notifications, submissions, statements of position, or communications are required by this Consent Decree, they shall be made in writing, addressed as follows, and delivered by U.S. Mail, postage pre-paid, overnight mail, or registered mail, return receipt requested. Where an e-mail address is provided below, Pilkington shall also submit all Consent Decree submissions to the designated recipient electronically. Electronic submissions will be deemed submitted on the date they are transmitted electronically and only one electronic submission is required per recipient.

To the United States by mail:

EES Case Management Unit
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611 Ben Franklin Station

Washington, D.C. 20044-7611
Re: DOJ No. 90-5-2-1-10328

To the United States by email:

eescdcopy.enrd@usdoj.gov
Re: DJ No. 90-5-2-1-10328

To EPA:

Chief
Air Enforcement Branch
U.S. Environmental Protection Agency, Region 4
Sam Nunn Atlanta Federal Center
61 Forsyth St. SW
Atlanta, GA 30303-8960

Nicole Radford
U.S. Environmental Protection Agency, Region 4
Sam Nunn Atlanta Federal Center
61 Forsyth St. SW
Atlanta, GA 30303-8960
radford.nicole@epa.gov

To Pilkington:

Richard A. Altman
Regional Director, Architectural
Pilkington North America, Inc.
811 Madison Ave.
Toledo, OH 43604
Richard.Altman@nsg.com

Office of the General Counsel, Legal Department
Pilkington North America, Inc.
811 Madison Ave.
Toledo, OH 43604

98. Any Party may, by written notice to the other Party, change its designated notice recipient or notice address provided above.

99. Notices submitted pursuant to this Section shall be deemed submitted upon mailing or e-mailing, unless otherwise provided in this Consent Decree or by mutual agreement of the Parties in writing.

XVI. SALE OR TRANSFER OF OPERATIONAL OR OWNERSHIP INTERESTS

100. If Pilkington proposes to sell or transfer an asset or an operational or ownership interest in the Laurinburg Facility to an entity unrelated to Pilkington (“Third Party”), it shall advise the Third Party in writing of the existence of this Consent Decree prior to such closing, and it shall send a copy of such written notification to the United States pursuant to Section XV (Notices) of this Consent Decree prior to such proposed closing.

101. Pilkington shall condition any transfer, in whole or in part, of ownership, operation of, or other interest in any portion of the Laurinburg Facility that is subject to the terms of this Decree upon the execution by the Third Party of a modification to the Consent Decree, making the terms and conditions of the Decree that apply to the Laurinburg Facility applicable to the Third Party. Pilkington shall submit the application for modification to the Court promptly upon such transfer, to make the terms and conditions of the Consent Decree that apply to the Laurinburg Facility applicable to the Third Party.

102. Upon approval by the Court of such modification, pursuant to Section XIX (Modification) of this Consent Decree, making the Third Party a party to this Consent Decree and liable for all the requirements of this Decree that may be applicable to the

transferred or purchased interests, Pilkington shall be released from the obligations and liabilities of this Consent Decree as to the transferred or purchased interests, provided that the environmental mitigation project pursuant to Section V (Environmental Mitigation) has been fully implemented and all Project Dollars have been expended.

103. This Consent Decree shall not be construed to impede the transfer of any interests between Pilkington and any Third Party so long as the requirements of this Consent Decree are met. This Section applies to transfers of assets or interest only, and shall not be construed to affect or apply to mergers or other corporate transactions in which the shares of Pilkington are acquired by any Third Party and the surviving corporation, by operation of law, assumes all of the assets and liabilities of Pilkington pursuant to this Consent Decree related to the Laurinburg Facility.

104. Notwithstanding the foregoing, however, Pilkington may not assign, and may not be released from, any obligation under this Consent Decree that is not specific to the purchased or transferred interests, including Section V (Environmental Mitigation),).

XVII. EFFECTIVE DATE

105. The Effective Date of this Consent Decree shall be the date upon which this Consent Decree is entered by the Court or a motion to enter the Consent Decree is granted, whichever occurs first, as recorded on the Court's docket.

XVIII. RETENTION OF JURISDICTION

106. The Court shall retain jurisdiction over this case until termination of this Consent Decree, for the purpose of: (1) resolving disputes arising under this Consent Decree pursuant to Section XI (Dispute Resolution), (2) entering orders modifying this

Decree pursuant to Section XIX (Modification), or (3) effectuating or enforcing compliance with the terms of this Consent Decree.

XIX. MODIFICATION

107. The terms of this Consent Decree, including any attached appendices, may be modified only by a subsequent written agreement signed by the United States and Pilkington. Where the modification constitutes a material change to the Consent Decree, it shall be effective only upon approval by the Court.

108. Any disputes concerning modification of this Consent Decree shall be resolved pursuant to Section XI of this Decree (Dispute Resolution). The Party seeking the modification bears the burden of demonstrating that it is entitled to the requested modification in accordance with Federal Rule of Civil Procedure 60(b).

XX. TERMINATION

109. After Pilkington has completed the requirements of Sections IV (Compliance Requirements) and VI (Permits) of this Consent Decree, has complied with all other requirements of this Consent Decree, including full funding and implementation of the environmental mitigation project, and has paid any accrued stipulated penalties as required by this Consent Decree, Pilkington may serve upon the United States a request for termination, stating that Pilkington has satisfied those requirements, together with all necessary supporting documentation. Notwithstanding Pilkington's request for termination, the permitting requirements of Paragraphs 34 through 39 and the information retention obligations of Paragraphs 85 and 86 shall remain in effect and continue until completed in accordance with the terms contained therein.

110. Following receipt by the United States of Pilkington's request for termination, the Parties shall confer informally concerning the request and any disagreement that the Parties may have as to whether Pilkington has satisfactorily complied with the requirements for terminating this Consent Decree. If the United States agrees that the Consent Decree may be terminated, the Parties shall submit, for the Court's approval, a joint stipulation terminating the Consent Decree.

111. If the United States does not agree that the Decree may be terminated, Pilkington may invoke dispute resolution under Section XI of the Consent Decree. However, Pilkington shall not seek dispute resolution of any dispute regarding termination until ninety (90) Days after service of its request for termination.

XXI. PUBLIC PARTICIPATION

112. This Consent Decree shall be lodged with the Court for a period of not less than thirty Days for public notice and comment in accordance with 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent if the comments regarding the Consent Decree disclose facts or considerations indicating that the Consent Decree is inappropriate, improper, or inadequate. Pilkington consents to entry of this Consent Decree without further notice and agrees not to withdraw from or oppose entry of this Consent Decree by the Court or to challenge any provision of the Consent Decree, unless the United States has notified Pilkington in writing that it no longer supports entry of the Consent Decree.

XXII. SIGNATORIES/SERVICE

113. Each undersigned representative of Pilkington and the Assistant Attorney General for the Environment and Natural Resources Division of the Department of Justice certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind the Party he or she represents to this document.

114. This Consent Decree may be signed in counterparts, and its validity shall not be challenged on that basis. Pilkington agrees to accept service of process by mail with respect to all matters arising under or relating to this Consent Decree and to waive the formal service requirements set forth in Rules 4 and 5 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons. Pilkington need not file an answer or other responsive pleading to the Complaint in this action unless or until the Court expressly declines to enter this Decree, in which case Pilkington's responsive pleading to the Complaint would be due thirty Days following the Court's order.

XXIII. INTEGRATION

115. This Consent Decree constitutes the final, complete, and exclusive agreement and understanding between the Parties with respect to the settlement embodied in the Consent Decree and supersedes all prior agreements and understandings, whether oral or written, concerning the settlement embodied herein. No other document, nor any representation, inducement, agreement, understanding, or promise, constitutes any part of

this Consent Decree or the settlement it represents, nor shall it be used in construing the terms of the Consent Decree.

XXIV. APPENDICES

116. The following appendices are attached to and incorporated as part of this Consent Decree:

“Appendix A” is the description of the environmental mitigation project.

XXV. FINAL JUDGMENT

117. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment of the Court as to the United States and Pilkington North America, Inc.

XXVI. HEADINGS

118. Headings to the Sections and sub-Sections of this Consent Decree are provided for convenience and do not affect the meaning or interpretation of the provisions of this Consent Decree.

XXVII. 26 U.S.C. SECTION 162(f)(2)(a)(ii) IDENTIFICATION

119. For purposes of the identification requirement of Section 162(f)(2)(A)(ii) of the Internal Revenue Code, 26 U.S.C. § 162(f)(2)(A)(ii), performance of Section II (Applicability), Paragraph 4; Section IV (Compliance Requirements), Paragraphs 7–12, 14–19, 21–22, and 25–27; Section V (Environmental Mitigation), Paragraphs 28–29, 31–32, and related Appendix A; Section VI (Permits), Paragraphs 34–37; Section VIII (Reporting Requirements), Paragraphs 43–45 (except with respect to the payment of

stipulated penalties) and 47–49; Section XII (Information Collection and Retention), Paragraphs 83–86, is restitution or required to come into compliance with the law.

Dated and entered this ____ day of _____, 2021.

UNITED STATES DISTRICT JUDGE
Middle District of North Carolina

Signature Page to the Consent Decree in *United States v. Pilkington North America, Inc.*

FOR PLAINTIFF THE UNITED STATES OF AMERICA:



Date: 1/13/2021

ELLEN MAHAN
Deputy Section Chief
Environmental Enforcement Section
Environment and Natural Resources Division
United States Department of Justice



Date: 1/14/2021

STEFAN J. BACHMAN
Trial Attorney
Environmental Enforcement Section
Environment & Natural Resources Division
United States Department of Justice
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Washington, DC 20044
Stefan.Bachman@usdoj.gov
(202) 616-6536

Signature Page to the Consent Decree in *United States v. Pilkington North America, Inc.*

FOR PLAINTIFF THE UNITED STATES OF AMERICA:

MATTHEW G.T. MARTIN
United States Attorney
Middle District of North Carolina



Date: 1/7/2021

Brandon D. Zeller
Assistant United States Attorney
U.S. Attorney's Office
Middle District of North Carolina
101 South Edgeworth Street, 4th Floor
Greensboro, NC 27401
(336) 333-5351

Signature Page to the Consent Decree in *United States v. Pilkington North America, Inc.*

**FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4:**

Leif Palmer

Date: November 5, 2020

LEIF PALMER
Regional Counsel
U.S. Environmental Protection Agency
Region 4

Gretchen M. Frizzell

Date: November 5, 2020

GRETCHEN M. FRIZZELL
Attorney-Advisor
Office of Regional Counsel
U.S. Environmental Protection Agency
Region 4

Signature Page to the Consent Decree in *United States v. Pilkington North America, Inc.*

FOR THE DEFENDANT PILKINGTON NORTH AMERICA, INC.:



RICHARD A. ALTMAN
Regional Director, Architectural
Pilkington North America, Inc.
811 Madison Avenue
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(419) 247-4814

Date: 9-25-2020



JOHN W. CARROLL
Troutman Pepper Hamilton Sanders LLP
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Harrisburg, PA 17108-1181
John.Carroll@Troutman.com
717-255-1159

Date: 9/25/20

CONSENT DECREE APPENDIX A
United States v. Pilkington North America, Inc.
Mitigation Project – Laurinburg Cullet Conveyor Dust Elimination

Background

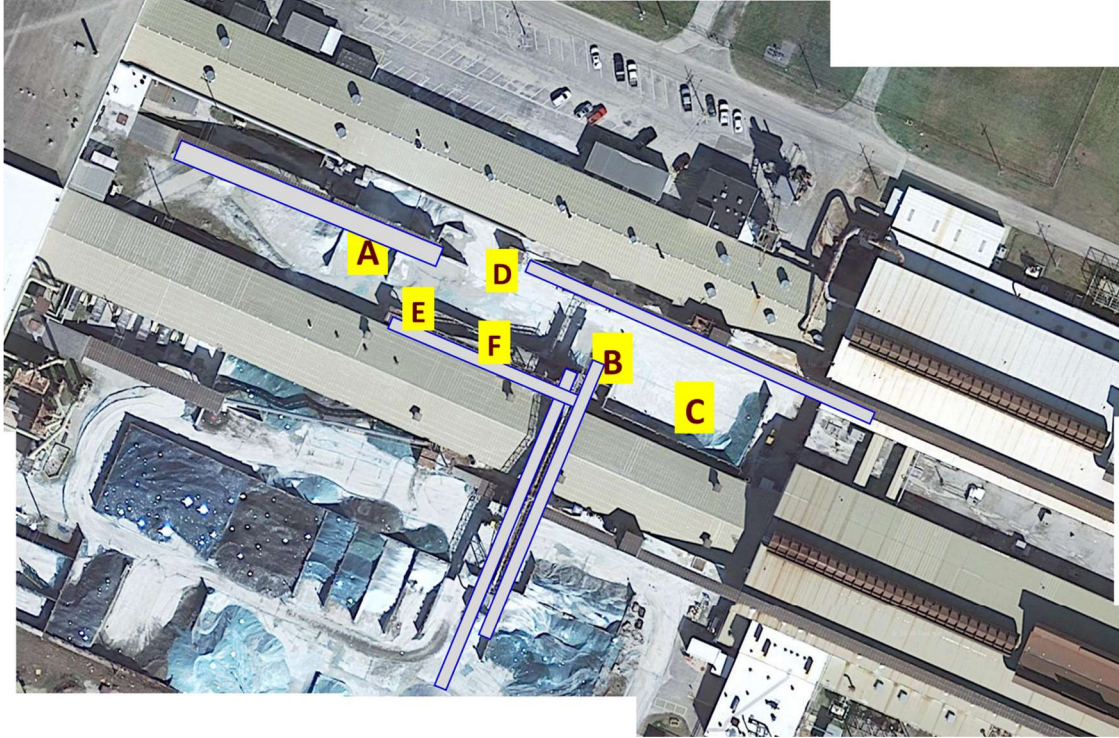
This mitigation project minimizes the creation of fugitive dust and particulate matter (PM) and operation of a diesel front-end loader at the Laurinburg Facility's outside cullet handling processes by installing new cullet conveyors to eliminate four drop points, which will improve air quality and diminish the potential for fugitive dust. The cullet transfer process currently requires cullet (small pieces of glass) to be discharged onto handling piles outside on the ground from which it is moved by the diesel front-end loader. During routine operation this mitigation project would allow for direct transfer of cullet from the cutting operation to the furnace feed hopper for remelting via covered conveyors and thus eliminate the need to move the material by the diesel front-end loader.

Cullet is continuously generated by each float line; this modification would allow cullet handling to be reduced by a minimum of 50% overall. With the elimination of these discharge points, airborne dust and diesel emissions would be significantly reduced.

Scope of Mitigation Project

This project will mitigate the PM created through the transfer of cullet by installing three new covered conveyors which will eliminate four cullet transfer piles.

The Laurinburg Facility's current cullet yard operations are as depicted in the image below:

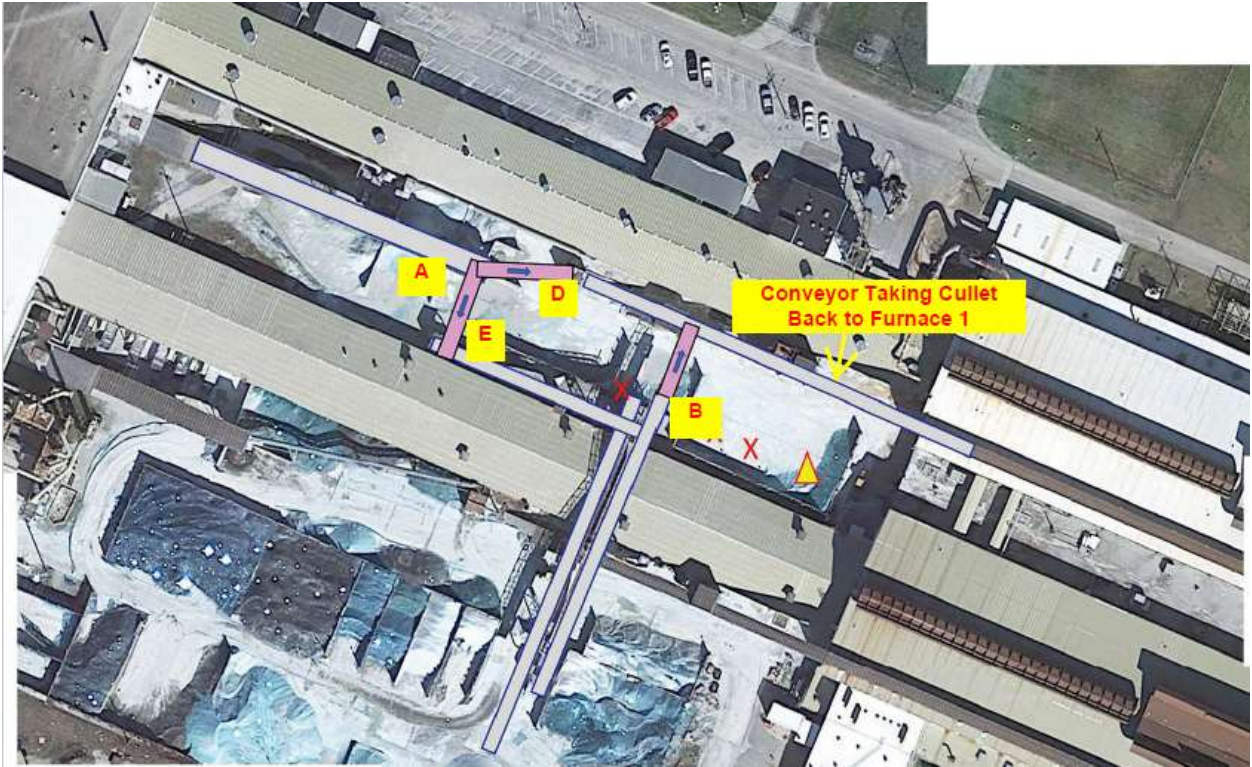


Under this configuration, the cullet yard currently operates as follows:

- Cullet generated from Furnace 1 is dropped by a conveyor to a bunker at Point A.
- Cullet generated from the Furnace 2 cullet yard is transferred to Point B by a transfer conveyor. Cullet deposited at Point B is moved by a front-end loader to points C, D, or F.
- Point D is the cullet bin that feeds the cullet return conveyor taking cullet back to Furnace 1. Point D accepts cullet moved by front-end loader truck from Points A, B, C or F.
- Point E is the cullet bin that feeds the cullet return conveyor taking cullet back to Furnace 2. Point E accepts cullet moved by front-end loader truck from piles A, F, or C.
- Points C and F are temporary cullet storage piles.

The mitigation project entails installing three fully-covered belt conveyors between the following locations:

- Point A to Point E
- Point A to Point D, and,
- Point B to the return conveyor taking cullet back to Furnace 1.



The mitigation project will reduce the usage of a front-end loader transferring the cullet in the middle yard by over 80%. The project will reduce total fugitive PM emissions by 92% (from 2.28 tons/year to 0.17 tons/year).

This system will significantly reduce the dust that is created during the discharge and manual handling of cullet at several key points in the handling and transfer process, thereby improving air quality and minimizing the potential for fugitive emissions. The total cost of the project is expected to be at least \$100,000, and Pilkington will spend no less than \$100,000 to implement the project.

As of the time of execution of the Consent Decree, the equipment needed for implementing the project has been ordered. The conveyors are expected to be installed and commissioned in Summer 2020 and to begin operating in Fall 2020.