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June 8, 2012

Mr. Jeff Felker
Showa Denko Carbon, Inc.
478 Ridge Road
Ridgeville, South Carolina 29472

Re: Construction Permit No. 0900-0025-CZ

Dear Mr. Felker:

Enclosed is Construction Permit No. 0900-0025-CZ. This construction permit is being issued in accordance with the plans, specifications and other information submitted in the construction permit application, as amended.

In addition to this permit to construct, a permit to operate is required in accordance with *South Carolina Regulation 61-62, Air Pollution Control Regulations and Standards*. The regulations require a written request for a new or revised operating permit to cover any new or altered source, postmarked no later than fifteen (15) days after the actual date of initial startup of each new or altered source unless a more stringent time frame is required.

Please note the emissions limitations and operational requirements contained within this permit. It is important for you and/or an authorized representative responsible for the overall operation of this facility to read this issued permit carefully and to understand all requirements. If any errors or omissions are discovered, please notify Sheila Watts of my staff, via e-mail at wattssg@dhec.sc.gov, or call (803) 898-1161 immediately.

Pursuant to the South Carolina Administrative Procedures Act, any Department decision involving the issuance, denial, suspension, or revocation of a permit or certification may be appealed by the applicant, permittee, licensee, or affected person. Please see the enclosed "Notice of Appeal Procedure" for guidelines on filing an appeal.

Sincerely,

Elizabeth J. Basil
Director, Engineering Services Division
Bureau of Air Quality

EJB:sw:kal
Enclosure

cc: Wendy Boswell, Region 7, Charleston EQC Office
Permit File: 0900-0025
ec: John W. McLure, P.E., GEL Engineering, LLC (jwm@gel.com)
Michael Shroup, Source Evaluation Section

Notice of Appeal Procedure
Pursuant to S.C. Code Section 44-1-60

1. This decision of the S.C. Department of Health and Environmental Control (Department) becomes the final agency decision 15 calendar days after notice of the decision has been mailed or otherwise sent to the applicant, permittee, licensee and affected persons who have requested in writing to be notified, unless a written request for final review accompanied by a filing fee in the amount of \$100 is filed with the Department by the applicant, permittee, licensee, or affected person.
2. An applicant, permittee, licensee, or affected person who wishes to appeal this decision must file a timely written request for final review with the Clerk of the Board at the following address or by facsimile at 803-898-3393. A filing fee in the amount of \$100 made payable to SC DHEC must also be received by the Clerk within the time allowed for filing a request for final review. However, if a request for final review is filed by facsimile, the filing fee may be mailed to the Clerk of the Board if the envelope is postmarked within the time allowed for filing a request for final review.

Clerk of the Board
SC DHEC
2600 Bull Street
Columbia, SC 29201

3. In order to be timely, a request for final review must be received by the Clerk of the Board within 15 calendar days after notice of the decision has been mailed or otherwise sent to persons entitled to receive notice. If the 15th day occurs on a weekend or State holiday, the request is due to be received by the Clerk of the Board on the next working day. The request for final review must be received by the Clerk of the Board by 5:00 p.m. on the date it is due. A request for final review will be returned to the requestor if the filing fee is not received on time as described above.
4. The request for final review should include the following:
 - a. the grounds on which the Department's decision is challenged and the specific changes sought in the decision
 - b. a statement of any significant issues or factors the Board should consider in deciding whether to conduct a final review conference
 - c. a copy of the Department's decision for which review is requested
5. If a timely request for final review is filed with the Clerk of the Board, the Clerk will provide additional information regarding procedures. If the Board declines in writing to schedule a final review conference, the Department's decision becomes the final agency decision and an applicant, permittee, licensee, or affected person may request a contested case hearing before the Administrative Law Court within 30 calendar days after notice is mailed that the Board declined to hold a final review conference.

The above information is provided as a courtesy; parties are responsible for complying with all applicable legal requirements.



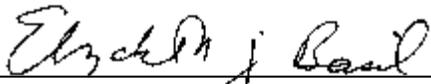
**Office of Environmental Quality Control
Bureau of Air Quality
PSD and NESHAP (40 CFR 63)
Construction Permit**

**Showa Denko Carbon, Inc.
478 Ridge Road
Ridgeville, South Carolina 29472**

Pursuant to the provisions of the *Pollution Control Act*, Sections 48-1-50(5) and 48-1-110(a), the 1976 *Code of Laws of South Carolina*, as amended, and *South Carolina Regulation 61-62, Air Pollution Control Regulations and Standards*, the Bureau of Air Quality authorizes the construction of this facility and the equipment specified herein in accordance with the plans, specifications, and other information submitted in the construction permit application received on June 14, 2011, as amended.

The construction and subsequent operation of this facility is subject to and conditioned upon the terms, limitations, standards, and schedules contained herein or as specified by this permit and its accompanying attachments.

**Permit Number: 0900-0025-CZ
Issue Date: June 8, 2012**



**Director, Engineering Services Division
Bureau of Air Quality**

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PART 1 - APPLICABILITY (S.C. Regulation 61-62.1, Section II)

Condition Number	Condition
1.1	Except as allowed under S.C. Regulation 61-62.1, Section II(A)(1) paragraphs (c) and (d), any person who plans to construct, alter or add to a source of air contaminants, including installation of any device for the control of air contaminant discharges, shall first obtain a construction permit from the Department prior to commencement of construction.
1.2	The owner/operator shall obtain Bureau authorization, as required under S.C. Regulation 61-62.1, Section II(A), prior to making modifications not covered under this construction permit.
1.3	No construction permits shall be required for the sources listed as exempt from the requirement to obtain a construction permit in S.C. Regulations 61-62.1, Section II(B); however, modifications at these facilities may trigger the requirement to obtain a construction permit.
1.4	All official correspondence, plans, permit applications, and written statements are an integral part of the permit. Any false information or misrepresentation in the application for a construction permit may be grounds for permit revocation.

PART 2 - GENERAL REQUIREMENTS

This part describes conditions and provisions applicable to all sources. Specific source category conditions and requirements are contained in Part 5 of this permit.

PART 2.A - PERMIT EXPIRATION AND EXTENSION (S.C. Regulation 61-62.1, Section II(A)(4))

Condition Number	Condition
2.A.1	Approval to construct shall become invalid if construction; a. is not commenced within 18 months after receipt of such approval, b. if discontinued for a period of 18 months or more, or c. if construction is not completed within a reasonable time as considered by the Department.
2.A.2	The Department may extend the construction permit for an additional 18-month period upon a satisfactory showing that an extension is justified. This request must be made prior to the permit expiration.
2.A.3	This provision does not apply to the time period between construction of the approved phases of a phased construction project; each phase must commence construction within 18 months of the projected and approved commencement date.

PART 2.B - PERMIT TO OPERATE (S.C. Regulation 61-62.1 Section II (A) & (F))

Condition Number	Condition
2.B.1	Any source that is required to obtain an air quality construction permit issued by the Department must obtain an operating permit when the new or altered source is placed into operation and shall comply with the requirements of S.C. Regulation 61-62.1 Section II(F).
2.B.2	If construction is certified as provided in S.C. Regulation 61-62.1 Section II(F)(2), the permittee may operate the source in compliance with the terms and conditions of the construction permit until the operating permit is issued by the Department.
2.B.3	The owner/operator or professional engineer in charge of the project shall certify that, to the best of his/her knowledge and belief and as a result of periodic observation during construction, the construction under application has been completed in accordance with the specifications agreed upon in the construction permit issued by the Department.
2.B.4	If construction is not built as specified in the permit application and associated construction permit(s), the owner/operator must submit to the Department a complete description of modifications that are at variance with the documentation of the construction permitting determination prior to commencing operation.

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PART 2.B - PERMIT TO OPERATE (S.C. Regulation 61-62.1 Section II (A) & (F))

Condition Number	Condition
2.B.5	Construction variances that would trigger additional requirements that have not been addressed prior to start of operation shall be considered construction without a permit.
2.B.6	The owner/operator shall submit written notification to the Director of Engineering Services and the Regional Air Section Manager of the date construction is commenced, postmarked no later than 30 days after such date.
2.B.7	The owner/operator shall submit written notification to the Director of Engineering Services and the Regional Air Section Manager of the actual date of initial startup of each new or altered source, postmarked within 15 days after such date.

PART 2.C - FEE ASSESSMENT AND PAYMENT (S.C. Regulation 61-30)

Condition Number	Condition
2.C.1	The permittee shall pay permit fees to the Department in accordance with the requirements of S.C. Regulation 61-30, Environmental Protection Fees.

PART 2.D - DUTY TO COMPLY (S.C. Regulation 61-62.1, Section II)

Condition Number	Condition
2.D.1	S.C. Regulation 61-62.1, Section II will not supersede any State or Federal requirements nor special permit conditions, unless this regulation would impose a more restrictive emission limit. The owner or operator shall comply with all terms, conditions, and limitations of any Department-issued permit for sources or activities at its facility. A source's permit status may change upon promulgation of new regulatory requirements.

PART 2.E - INSPECTION AND ENTRY (S.C. Regulation 61-62.1, Section II(O))

Condition Number	Condition
2.E.1	Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Department or an authorized representative to perform the following: <ol style="list-style-type: none">1. Enter the facility where emissions-related activity is conducted, or where records must be kept under the conditions of the permit.2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit.3. Inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.4. As authorized by the Federal Clean Air Act and/or the S.C. Pollution Control Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

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PART 3 - FACILITY WIDE GENERAL REQUIREMENTS

This part describes conditions and provisions applicable facility wide. Specific source category conditions and requirements are contained in Part 5 of this permit.

Condition Number	Condition
3.1	<p>In accordance with SC Regulation 61-62.1, Section II(J), for sources not required to have continuous emissions monitors, any malfunction of air pollution control equipment or system, process upset or other equipment failure which results in discharges of air contaminants lasting for one hour or more and which are greater than those discharges described for normal operation in the permit application shall be reported to the Department's local Environmental Quality Control (EQC) Regional office within twenty-four (24) hours after the beginning of the occurrence. The contact information for the local EQC Regional office can be found at http://www.scdhec.gov/environment/envserv/regions.htm.</p> <p>The owner or operator shall also submit a written report within thirty (30) days of the occurrence. This report shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality (BAQ) and shall include as a minimum, the following:</p> <ol style="list-style-type: none"> 1. The identity of the stack and/or emission point where the excess emissions occurred; 2. The magnitude of excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the excess emissions; 3. The time and duration of excess emissions; 4. The identity of the equipment causing the excess emissions; 5. The nature and cause of such excess emissions; 6. The steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunction; 7. The steps taken to limit the excess emissions; and, 8. Documentation that the air pollution control equipment, process equipment, or processes were at all times maintained and operated, to the maximum extent practicable, in a manner consistent with good practice for minimizing emissions.
3.2	<p>Air dispersion modeling (or other method) has demonstrated that this facility's operation will not interfere with the attainment and maintenance of any state or federal ambient air standard. Any changes in the parameters used in the air dispersion modeling may require a review by the facility to determine continuing compliance with these standards. These potential changes include any decrease in stack height, decrease in stack velocity, increase in stack diameter, decrease in stack exit temperature, increase in building height or building additions, increase in emission rates, decrease in distance between stack and property line, changes in vertical stack orientation, and installation of a rain cap that impedes vertical flow. Parameters that are not required in the determination will not invalidate the demonstration if they are modified. The emission rates used in the determination are listed in Attachment A of this permit. Higher emission rates may be administratively incorporated into Attachment A of this permit provided a demonstration using these higher emission rates shows the attainment and maintenance of any state or federal ambient air quality standard or with any other applicable requirement. Variations from the input parameters in the demonstration shall not constitute a violation unless the maximum allowable ambient concentrations identified in the standard are exceeded. This is a State Only enforceable requirement.</p>
3.3	<p>The owner/operator shall maintain this facility at or below the emission rates as listed in Attachment A, not to exceed the pollutant limitations of this construction permit. Should the facility wish to increase the emission rates listed in Attachment A, not to exceed the pollutant limitations in the body of this permit, it may do so by the administrative process specified in condition 3.2.</p>
3.4	<p>The owner/operator shall submit a written request to the Director of the Engineering Services Division for a new or revised operating permit to cover any new or altered source postmarked no later than fifteen (15) days after the actual date of initial startup of each new or altered source unless a more stringent time frame is required by regulation. The request should be made using the appropriate Title V modification form. The modification request required by S.C. Regulation 61-62.70.7 shall serve as the request to operate for the purposes of S.C. Regulation 61-62.1 Section II(F)(3).</p>

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PART 4 - PROJECT DESCRIPTION

Permission is hereby granted to modify the existing facility to accommodate an increased production of finished graphite electrodes from 45,000 to 85,000 metric tons per year. The expansion will involve installing new equipment and the increased throughput of some existing equipment. Modifications that involve installing new equipment are for the following new processes; 1) Mill, Mix, and Extrusion; (2) Bake/Rebake; (3) Pitch Impregnation; and (4) Graphitizing. Modifications that involve increased throughput of existing equipment are for the following existing processes; (1) Rebake Load and Unload/Graphitizing; (2) Bake Load and Unload and Baked Electrode Cleaning; (3) Pitch Impregnation; (4) Insulating Media Receiving; (5) Cleaning and Inspection; and (6) Machining and Shipping.

An emergency generator, fueled by ultra low sulfur diesel, will be provided for emergency power.

PART 5 - CONSTRUCTION PERMIT REQUIREMENTS

PART 5.A - GENERIC CONDITIONS

Condition Number	Equipment/Control Device ID	Condition
5.A.1	All	In accordance with S.C. Regulation 61-62.1, Section II(J), a copy of the Department issued construction and/or operating permit must be kept readily available at the facility at all times. A permittee shall maintain such operational records; make reports; install, use, and maintain monitoring equipment or methods; sample and analyze emissions or discharges in accordance with prescribed methods, at locations, intervals, and procedures as the Department shall prescribe; and provide such other information as the Department reasonably may require. All records required to demonstrate compliance with the limits established under this permit shall be maintained on site for a period of at least five (5) years and shall be made available to a Department representative upon request.
5.A.2	All	The owner/operator shall maintain on file all measurements including continuous monitoring system or monitoring device performance measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required in a permanent form suitable for inspection by Department personnel.
5.A.3	All	All gauges shall be readily accessible and easily read by operating personnel and Department personnel (i.e. on ground level or easily accessible roof level). Monitoring parameter readings (i.e., pressure drop readings, etc.) and inspection checks shall be maintained in logs (written or electronic), along with any corrective action taken when deviations occur. Each incidence of operation outside the operational ranges, including date and time, cause, and corrective action taken, shall be recorded and kept on site. Exceedance of operational range shall not be considered a violation of an emission limit of this permit, unless the exceedance is also accompanied by other information demonstrating that a violation of an emission limit has taken place. Reports of these incidences shall be submitted semiannually. If no incidences occurred during the reporting period then a letter shall indicate such. Any alternative method for monitoring control device performance must be preapproved by the Bureau and shall be incorporated into the permit as set forth in S.C. Regulation 61-62.70.7.

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PART 5.A - GENERIC CONDITIONS

Condition Number	Equipment/Control Device ID	Condition
5.A.4	E-110-2-4275-01 CD-210-2-4333-01 CD-310-2-4333-01 E-310-2-4275-01	In accordance with SC Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration and based on BACT analysis, the following good combustion practices apply : 1) Good air/fuel mixing in the combustion zone; 2) Sufficient residence time to complete combustion; 3) Proper fuel gas supply system design and operation in order to minimize the effect of contaminants and fluctuations in pressure and flow on the fuel gas quality delivered to combustion units; 4) Operator and maintenance practices including good burner maintenance and operation; 5) High temperatures and low oxygen levels in the primary combustion zone; and 6) Overall excess oxygen levels high enough to complete combustion while maximizing thermal efficiency.
5.A.5	E-210-2-4271-18/32 E-310-2-4272-21	In accordance with SC Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration and based on BACT analysis, the following good combustion practices apply : 1) Good air/fuel mixing in the combustion zone; 2) Sufficient residence time to complete combustion; 3) Proper fuel gas supply system design and operation in order to minimize the effect of contaminants and fluctuations in pressure and flow on the fuel gas quality delivered to combustion units; 4) Operator and maintenance practices including good burner maintenance and operation; and 5) High temperatures and low oxygen levels in the primary combustion zone.
5.A.6	All	When source tests are required, all test plans, notifications and final reports shall be submitted to the Bureau of Air Quality’s Source Evaluation Section according to S.C. Regulation 61-62.1 Section IV. A protocol shall be submitted to the Source Test Evaluation Section of this Bureau for approval indicating the proposed initial source test date and test procedure at least 45 days prior to the proposed test date. The Bureau must be notified at least two weeks prior to a source test so that a Bureau Representative may be present, and the final test report must be submitted no later than 30 days after completion of on-site testing. Test methods, unless specified elsewhere in the permit, shall be approved by the Department.
5.A.7	All	The owner or operator shall install and maintain a bag leak detection system (BLDS) on each module of the baghouses, as outlined below: 1. A BLDS shall be installed and operate for each exhaust stack of the fabric filter. 2. Each BLDS shall be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations and, as appropriate, in accordance with the guidance provided in EPA-454/R-98-015, September 1997. 3. The BLDS shall be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of down to 0.01 mg/cubic meter. 4. The BLDS shall be equipped with a device to continuously record the output signal from the sensor, every 15 seconds. 5. The BLDS must be equipped with an alarm system that will alert an operator automatically when an increase in relative particulate matter emissions over a preset level is detected. The alarm must be located such that the alert is detected and recognized easily by an operator. 6. Where multiple bag leak detectors are required, the system's instrumentation and alarm may be shared among detectors.

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PART 5.A - GENERIC CONDITIONS

Condition Number	Equipment/Control Device ID	Condition
		<p>7. For each BLDS, the owner or operator must initiate procedures to determine the cause of every alarm within 8 hours of the alarm. The owner or operator must alleviate the cause of the alarm within 24 hours of the alarm by taking whatever corrective action(s) are necessary. Corrective actions may include, but are not limited to the following:</p> <ul style="list-style-type: none"> (i) Inspecting the fabric filter for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in particulate matter emissions; (ii) Sealing off defective bags or filter media; (iii) Replacing defective bags or filter media or otherwise repairing the control device; (iv) Sealing off a defective fabric filter compartment; (v) Cleaning the bag leak detection system probe or otherwise repairing the bag leak detection system; or (vi) Shutting down the process producing the particulate matter emissions. <p>The baghouses shall be in place and operational whenever processes controlled by the baghouses are running, except during periods of baghouse malfunction or mechanical failure.</p> <p>A BLDS monitoring plan, with supporting documentation and quality assurance procedures, shall be submitted to the Bureau for approval within 180 days of start up. Each incidence of corrective action taken shall be recorded and kept on site for five (5) years. Reports of these incidences shall be submitted semiannually. If no incidences occurred during the reporting period then a letter shall indicate such.</p>
5.A.8	All	All source tests are required to demonstrate compliance with the emission limits and verify emissions used in the modeling demonstration. This requirement does not include the initial screening test listed in Condition 5.B.3.b(9).

PART 5.B - LIMITATIONS, MONITORING AND REPORTING

PART 5.B.1.a - EQUIPMENT FOR NEW MILL, MIX, AND EXTRUSION PROCESS

Equipment ID	Equipment Description	Control Device ID	Emission Point ID
E-110-2-4203-15	Green Scrap Service Bin No. 1&2; store green scrap	CD-110-2-4345-02	S-110-2-4349-05
E-110-2-4216-06	Green Scrap Weigh Scale; weigh green scrap for appropriate feed to mixers	CD-110-2-4345-02	S-110-2-4349-05
E-110-2-4203-01	Service Bin Nos. 1&2; store coke of specific size and specific material	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4203-03	Service Bin Nos. 3&4; store coke of specific size and specific material	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4203-07	Service Bin Nos. 5&6; store coke of specific size and specific material	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4203-09	Service Bin Nos. 7&8; store coke of specific size and specific material	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4203-11	Service Bin Nos. 9&10; store coke of specific size and specific material	CD-110-2-4345-01	S-110-2-4349-04

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PART 5.B - LIMITATIONS, MONITORING AND REPORTING

PART 5.B.1.a - EQUIPMENT FOR NEW MILL, MIX, AND EXTRUSION PROCESS

Equipment ID	Equipment Description	Control Device ID	Emission Point ID
E-110-2-4203-13	Service Bin Nos. 11&12; store coke of specific size and specific material	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4203-15	Service Bin Nos. 13&14; store coke of specific size and specific material	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4223-02	Coarse Coke Bucket Elevator	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4223-03	Fines Coke Bucket Elevator	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4202-02	Inside Coke Crusher Bin; sort coke of various size	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4291-02	Double Roll Crusher; crush coke to finer size	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4221-02	Primary Coarse Coke Screen; sort coke to various size	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4221-03	Secondary Coarse Coke Screen; sort coke to various sizes	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4221-04	Fines Screen; sort coke to various sizes	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4202-03	Cage Impactor Crusher Bin	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4293-01	Cage Impactor Crusher; crush coke to finer size	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4216-01	Coke Weigh Scale No. 1; weigh coke for appropriate feed to mixers	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4216-02	Coke Weigh Scale No. 2; weigh coke for appropriate feed to mixers	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4216-03	Coke Weigh Scale No. 3; weigh coke for appropriate feed to mixers	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4216-04	Coke Weigh Scale No. 4; weigh coke for appropriate feed to mixers	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4232-01	Mixer Feed System Pan Conveyor	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4227-29	Scale No. 1 Retractable Spout	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4227-30	Scale No. 2 Retractable Spout	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4227-31	Scale No. 3 Retractable Spout	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4227-32	Scale No. 4 Retractable Spout	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4204-01	Pre-heat Hopper No. 1; preheats coke before discharge to mixers	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4204-02	Pre-heat Hopper No. 2; preheats coke before discharge to mixers	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4205-11	Coke Silo #11; store recycled coke of various sizes	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4223-04	Recycle Coke Bucket Elevator; transports coke from silo #11 through coarse coke loop	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4221-08	Coarse Belt Conveyor; transfer point between existing 110 and 110-2 buildings	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4221-09	Fines Belt Conveyor; transfer point between existing 110 and 110-2 buildings	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4221-23	Recycle Belt Conveyor; transfers material to coke silo #11	CD-110-2-4345-01	S-110-2-4349-04
E-110-2-4202-04	Mill Feed Bin	CD-110-2-4345-22	S-110-2-4345-22
E-110-2-4202-05	Iron Oxide Bin; store iron oxide	CD-110-2-4345-24	S-110-2-4345-24
E-110-2-4216-05	Iron Oxide Scale; weigh iron oxide for appropriate feed to mixers	CD-110-2-4345-24	S-110-2-4345-24

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PART 5.B - LIMITATIONS, MONITORING AND REPORTING

PART 5.B.1.a - EQUIPMENT FOR NEW MILL, MIX, AND EXTRUSION PROCESS

Equipment ID	Equipment Description	Control Device ID	Emission Point ID
E-110-2-4253-01/ E-110-2-4253-02/ E-110-2-4253-03/ E-110-2-4253-04	Mixer Nos. 1 – 4	CD-110-4345-28	S-110-2-4349-03
E-110-2-4221-10	Mixer Discharge Belt	CD-110-4345-28	S-110-2-4349-03
E-110-2-4222-20	Screw Spreader	CD-110-4345-28	S-110-2-4349-03
E-110-2-4221-11	Cooling Belt Position 1	CD-110-4345-28	S-110-2-4349-03
E-110-2-4221-12	Cooling Belt Position 2	CD-110-4345-28	S-110-2-4349-03
E-110-2-4253-05	Homogenizer	CD-110-4345-28	S-110-2-4349-03
E-110-2-4221-13	Homogenizer Discharge Belt	CD-110-4345-28	S-110-2-4349-03
E-110-2-4283-03	Coke Silo #2 Vibrating Feeder	CD-110-2-4345-03	S-110-2-4349-06
E-110-2-4283-04	Coke Silo #3 Vibrating Feeder	CD-110-2-4345-03	S-110-2-4349-06
E-110-2-4283-06	Coke Silo #4 Vibrating Feeder	CD-110-2-4345-03	S-110-2-4349-06
E-110-2-4283-07	Coke Silo #5 Vibrating Feeder	CD-110-2-4345-03	S-110-2-4349-06
E-110-2-4283-20	Coke Silo #1 Vibrating Feeder	CD-110-2-4345-03	S-110-2-4349-06
E-110-2-4283-24	Coke Silo #8 Vibrating Feeder	CD-110-2-4345-03	S-110-2-4349-06
E-110-2-4283-25	Coke Silo #7 Vibrating Feeder	CD-110-2-4345-03	S-110-2-4349-06
E-110-2-4205-09	Coke Silo #9; vibrating feeder x 2	CD-110-2-4345-03	S-110-2-4349-06
E-110-2-4205-10	Coke Silo #10; vibrating feeder x 2	CD-110-2-4345-03	S-110-2-4349-06
E-110-2-4221-03	Coarse Belt Conveyor; transfer point between silo conveyor and transfer conveyor	CD-110-2-4345-03	S-110-2-4349-06
E-110-2-4221-05	Fines Belt Conveyor; transfer point between silo conveyor and connecting conveyor	CD-110-2-4345-03	S-110-2-4349-06
E-110-2-4221-07	Fines Belt Conveyor; transfer point between connecting conveyor and transfer conveyor	CD-110-2-4345-03	S-110-2-4349-06
E-110-2-4275-01	Hot Oil Heater (5 million Btu/hr)	N/A	S-110-2-4349-01
E-110-25	Binder Pitch Tank	CD-110-14	S-110-14

N/A = Not Applicable

PART 5.B.2.a - CONTROL DEVICES FOR NEW MILL, MIX, AND EXTRUSION PROCESS

Control Device ID	Control Device Description	Pollutant(s) Controlled
CD-110-2-4345-02	Baghouse	Filterable PM, PM ₁₀ , PM _{2.5}
CD-110-2-4345-01	Baghouse	Filterable PM, PM ₁₀ , PM _{2.5}
CD-110-2-4345-22	Baghouse	Filterable PM, PM ₁₀ , PM _{2.5}
CD-110-2-4345-24	Baghouse	Filterable PM, PM ₁₀ , PM _{2.5}
CD-110-4345-28	Dry Fume Scrubber/Baghouse	PM, PM ₁₀ , PM _{2.5} , VOC
CD-110-2-4345-03	Baghouse	Filterable PM, PM ₁₀ , PM _{2.5}
CD-110-14	Vent Condenser	VOC

PART 5.B.3.a - CONDITIONS FOR NEW MILL, MIX, AND EXTRUSION PROCESS

Condition Number	Equipment/Control Device ID	Regulated Pollutant/Standard	Conditions						
5.B.3.a(1)	See Conditions Table	PM PM ₁₀ PM _{2.5}	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration and based on a BACT analysis, the PSD limit for filterable PM, filterable PM₁₀, and filterable PM_{2.5} has been established. See below for limits that apply to specific equipment:</p>						
			<table border="1"> <thead> <tr> <th data-bbox="662 575 907 611">Equipment ID</th> <th data-bbox="907 575 1144 611">Control Device ID</th> <th data-bbox="1144 575 1523 611">Limit</th> </tr> </thead> <tbody> <tr> <td data-bbox="662 611 907 705">E-110-2-4203-15, E-110-2-4216-06</td> <td data-bbox="907 611 1144 705">CD-110-2-4345-02</td> <td data-bbox="1144 611 1523 705">0.005 gr/dscf (Filterable PM) 0.005 gr/dscf (Filterable PM₁₀) 0.005 gr/dscf (Filterable PM_{2.5})</td> </tr> </tbody> </table>	Equipment ID	Control Device ID	Limit	E-110-2-4203-15, E-110-2-4216-06	CD-110-2-4345-02	0.005 gr/dscf (Filterable PM) 0.005 gr/dscf (Filterable PM ₁₀) 0.005 gr/dscf (Filterable PM _{2.5})
			Equipment ID	Control Device ID	Limit				
			E-110-2-4203-15, E-110-2-4216-06	CD-110-2-4345-02	0.005 gr/dscf (Filterable PM) 0.005 gr/dscf (Filterable PM ₁₀) 0.005 gr/dscf (Filterable PM _{2.5})				
			<table border="1"> <tbody> <tr> <td data-bbox="662 705 907 1703">E-110-2-4203-01, E-110-2-4203-03, E-110-2-4203-07, E-110-2-4203-09, E-110-2-4203-11, E-110-2-4203-13, E-110-2-4203-15, E-110-2-4223-02, E-110-2-4223-03, E-110-2-4202-02, E-110-2-4291-02, E-110-2-4221-02, E-110-2-4221-03, E-110-2-4221-04, E-110-2-4202-03, E-110-2-4293-01, E-110-2-4216-01, E-110-2-4216-02, E-110-2-4216-03, E-110-2-4216-04, E-110-2-4232-01, E-110-2-4227-29, E-110-2-4227-30, E-110-2-4227-31, E-110-2-4227-32, E-110-2-4204-01, E-110-2-4202-02, E-110-2-4205-11, E-110-2-4223-04, E-110-2-4221-08, E-110-2-4221-09, E-110-2-4221-23</td> <td data-bbox="907 705 1144 1703">CD-110-2-4345-01</td> <td data-bbox="1144 705 1523 1703">0.005 gr/dscf (Filterable PM) 0.005 gr/dscf (Filterable PM₁₀) 0.005 gr/dscf (Filterable PM_{2.5})</td> </tr> </tbody> </table>	E-110-2-4203-01, E-110-2-4203-03, E-110-2-4203-07, E-110-2-4203-09, E-110-2-4203-11, E-110-2-4203-13, E-110-2-4203-15, E-110-2-4223-02, E-110-2-4223-03, E-110-2-4202-02, E-110-2-4291-02, E-110-2-4221-02, E-110-2-4221-03, E-110-2-4221-04, E-110-2-4202-03, E-110-2-4293-01, E-110-2-4216-01, E-110-2-4216-02, E-110-2-4216-03, E-110-2-4216-04, E-110-2-4232-01, E-110-2-4227-29, E-110-2-4227-30, E-110-2-4227-31, E-110-2-4227-32, E-110-2-4204-01, E-110-2-4202-02, E-110-2-4205-11, E-110-2-4223-04, E-110-2-4221-08, E-110-2-4221-09, E-110-2-4221-23	CD-110-2-4345-01	0.005 gr/dscf (Filterable PM) 0.005 gr/dscf (Filterable PM ₁₀) 0.005 gr/dscf (Filterable PM _{2.5})			
E-110-2-4203-01, E-110-2-4203-03, E-110-2-4203-07, E-110-2-4203-09, E-110-2-4203-11, E-110-2-4203-13, E-110-2-4203-15, E-110-2-4223-02, E-110-2-4223-03, E-110-2-4202-02, E-110-2-4291-02, E-110-2-4221-02, E-110-2-4221-03, E-110-2-4221-04, E-110-2-4202-03, E-110-2-4293-01, E-110-2-4216-01, E-110-2-4216-02, E-110-2-4216-03, E-110-2-4216-04, E-110-2-4232-01, E-110-2-4227-29, E-110-2-4227-30, E-110-2-4227-31, E-110-2-4227-32, E-110-2-4204-01, E-110-2-4202-02, E-110-2-4205-11, E-110-2-4223-04, E-110-2-4221-08, E-110-2-4221-09, E-110-2-4221-23	CD-110-2-4345-01	0.005 gr/dscf (Filterable PM) 0.005 gr/dscf (Filterable PM ₁₀) 0.005 gr/dscf (Filterable PM _{2.5})							
<table border="1"> <tbody> <tr> <td data-bbox="662 1703 907 1797">E-110-2-4202-04</td> <td data-bbox="907 1703 1144 1797">CD-110-2-4345-22</td> <td data-bbox="1144 1703 1523 1797">0.005 gr/dscf (Filterable PM) 0.005 gr/dscf (Filterable PM₁₀) 0.005 gr/dscf (Filterable PM_{2.5})</td> </tr> </tbody> </table>	E-110-2-4202-04	CD-110-2-4345-22	0.005 gr/dscf (Filterable PM) 0.005 gr/dscf (Filterable PM ₁₀) 0.005 gr/dscf (Filterable PM _{2.5})						
E-110-2-4202-04	CD-110-2-4345-22	0.005 gr/dscf (Filterable PM) 0.005 gr/dscf (Filterable PM ₁₀) 0.005 gr/dscf (Filterable PM _{2.5})							
<table border="1"> <tbody> <tr> <td data-bbox="662 1797 907 1892">E-110-2-4202-05, E-110-2-4216-05</td> <td data-bbox="907 1797 1144 1892">CD-110-2-4345-24</td> <td data-bbox="1144 1797 1523 1892">0.005 gr/dscf (Filterable PM) 0.005 gr/dscf (Filterable PM₁₀) 0.005 gr/dscf (Filterable PM_{2.5})</td> </tr> </tbody> </table>	E-110-2-4202-05, E-110-2-4216-05	CD-110-2-4345-24	0.005 gr/dscf (Filterable PM) 0.005 gr/dscf (Filterable PM ₁₀) 0.005 gr/dscf (Filterable PM _{2.5})						
E-110-2-4202-05, E-110-2-4216-05	CD-110-2-4345-24	0.005 gr/dscf (Filterable PM) 0.005 gr/dscf (Filterable PM ₁₀) 0.005 gr/dscf (Filterable PM _{2.5})							

PART 5.B.3.a - CONDITIONS FOR NEW MILL, MIX, AND EXTRUSION PROCESS

Condition Number	Equipment/Control Device ID	Regulated Pollutant/Standard	Conditions								
				E-110-2-4253-01, E-110-2-4253-02, E-110-2-4253-03, E-110-2-4253-04, E-110-2-4221-10, E-110-2-4222-20, E-110-2-4221-11, E-110-2-4221-12, E-110-2-4253-05, E-110-2-4221-13	CD-110-4345-28	0.005 gr/dscf (Filterable PM) 0.005 gr/dscf (Filterable PM ₁₀) 0.005 gr/dscf (Filterable PM _{2.5})					
				E-110-2-4283-03, E-110-2-4283-04, E-110-2-4283-06, E-110-2-4283-07, E-110-2-4283-20, E-110-2-4283-24, E-110-2-4283-25, E-110-2-4205-09, E-110-2-4205-10, E-110-2-4221-03, E-110-2-4221-05, E-110-2-4221-07	CD-110-2-4345-03	0.005 gr/dscf (Filterable PM) 0.005 gr/dscf (Filterable PM ₁₀) 0.005 gr/dscf (Filterable PM _{2.5})					
			<p>State Only: No</p> <p>Testing: An initial source test for filterable PM, PM₁₀, and PM_{2.5} emissions shall be conducted within 180 days after startup and every three (3) years thereafter. An initial source test to verify no condensable PM₁₀ and PM_{2.5} emissions are present shall be conducted within 180 days after startup.</p> <p>Monitoring/Record Keeping/Reporting/Other: See Generic Condition 5.A.7.</p>								
5.B.3.a(2)	All (except E-110-2-4275-01)	PM	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 4 - Emissions from Process Industries, Section VIII - Other Manufacturing, particulate matter emissions shall be limited to the rate specified by use of the following equation: for process weight rates less than or equal to 30 tons per hour ($E = 4.10P^{0.67}$) where E = the allowable emission rate in pounds per hour and P = process weight rate in tons per hour. As such, each process's allowable particulate matter emission limit is limited to the amount shown in the table below at its nominal production rating:</p> <table border="1" data-bbox="651 1625 1409 1724"> <thead> <tr> <th data-bbox="651 1625 1021 1688">Process</th> <th data-bbox="1021 1625 1216 1688">PM Allowable (lb/hr)</th> <th data-bbox="1216 1625 1409 1688">Process Weight Rate (tons/hr)</th> </tr> </thead> <tbody> <tr> <td data-bbox="651 1688 1021 1724">New Mill, Mix, and Extrusion</td> <td data-bbox="1021 1688 1216 1724">28.43</td> <td data-bbox="1216 1688 1409 1724">18</td> </tr> </tbody> </table> <p>State Only: No</p> <p>Testing: None</p>			Process	PM Allowable (lb/hr)	Process Weight Rate (tons/hr)	New Mill, Mix, and Extrusion	28.43	18
Process	PM Allowable (lb/hr)	Process Weight Rate (tons/hr)									
New Mill, Mix, and Extrusion	28.43	18									

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PART 5.B.3.a - CONDITIONS FOR NEW MILL, MIX, AND EXTRUSION PROCESS

Condition Number	Equipment/Control Device ID	Regulated Pollutant/Standard	Conditions
			<p>Monitoring/Record Keeping/Reporting/Other: See Generic Condition 5.A.7.</p>
5.B.3.a(3)	All (except E-110-2-4275-01)	Opacity	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 4 - Emissions from Process Industries, Section IX - Visible Emissions (Where Not Specified Elsewhere), where construction or modification began after December 31, 1985, emissions (including fugitive emissions) shall not exhibit an opacity greater than 20%, each.</p> <p>State Only: No</p> <p>Testing: None</p> <p>Monitoring/Record Keeping/Reporting/Other: The permittee shall perform a visual inspection on a daily basis. Visual Inspection means a qualitative observation of opacity during daylight hours where the inspector records results in a log, noting color, duration, density (heavy or light), cause and corrective action taken for any abnormal emissions. The observer does not need to be certified to conduct valid visual inspections. However, at a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, and observer position relative to lighting, wind, and the presence of uncombined water. Logs shall be kept to record all visual inspections, including cause and corrective action taken for any abnormal emissions and visual inspections from date of recording. For all cause and corrective actions taken for any abnormal emissions and visual inspections, the owner/operator shall submit semiannual reports.</p>

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PART 5.B.3.a - CONDITIONS FOR NEW MILL, MIX, AND EXTRUSION PROCESS

Condition Number	Equipment/ Control Device ID	Regulated Pollutant/ Standard	Conditions								
5.B.3.a(4)	See Conditions Table	VOC	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration and based on a BACT analysis, the PSD limits for VOCs have been established. See below for limits that apply to specific equipment.</p> <table border="1" data-bbox="545 516 1515 863"> <thead> <tr> <th data-bbox="545 516 789 548">Equipment ID</th> <th data-bbox="789 516 1062 548">Control Device ID</th> <th data-bbox="1062 516 1276 548">Pollutant</th> <th data-bbox="1276 516 1515 548">Limit</th> </tr> </thead> <tbody> <tr> <td data-bbox="545 548 789 863">E-110-2-4253-01, E-110-2-4253-02, E-110-2-4253-03, E-110-2-4253-04, E-110-2-4221-10, E-110-2-4222-20, E-110-2-4221-11, E-110-2-4221-12, E-110-2-4253-05, E-110-2-4221-13</td> <td data-bbox="789 548 1062 863">CD-110-4345-28</td> <td data-bbox="1062 548 1276 863">VOC</td> <td data-bbox="1276 548 1515 863">0.071 lb/hr</td> </tr> </tbody> </table> <p>State Only: No</p> <p>Testing: An initial source test for VOC emissions shall be conducted within 180 days after startup and every three (3) years thereafter. Less frequent source testing for VOC may be done if at least two (2) consecutive stack tests shows that the emissions are at or below 75% of the emission limitation, and if there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. In this case no source testing will be required for the next four (4) years. A source test shall be conducted during the fifth year and no more than 60 months after the previous source test.</p> <p>Monitoring/Record Keeping/Reporting/Other: The owner/operator shall install and maintain gauges to monitor rotary vane rpm (coke flow) and fan amperage (air flow) on the fume scrubber. Each parameter shall be recorded daily during source operation. The fume scrubber shall be in place and operational whenever processes controlled by the fume scrubber are running, except during periods of condenser malfunction or mechanical failure. Records of recorded parameters shall be kept on-site and made available to the Department upon request.</p>	Equipment ID	Control Device ID	Pollutant	Limit	E-110-2-4253-01, E-110-2-4253-02, E-110-2-4253-03, E-110-2-4253-04, E-110-2-4221-10, E-110-2-4222-20, E-110-2-4221-11, E-110-2-4221-12, E-110-2-4253-05, E-110-2-4221-13	CD-110-4345-28	VOC	0.071 lb/hr
Equipment ID	Control Device ID	Pollutant	Limit								
E-110-2-4253-01, E-110-2-4253-02, E-110-2-4253-03, E-110-2-4253-04, E-110-2-4221-10, E-110-2-4222-20, E-110-2-4221-11, E-110-2-4221-12, E-110-2-4253-05, E-110-2-4221-13	CD-110-4345-28	VOC	0.071 lb/hr								
5.B.3.a(5)	E-110-25/ CD-110-14	VOC	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration and based on a BACT analysis, the PSD limit for VOC has been established at 0.40 lb/hr.</p> <p>State Only: No</p> <p>Testing: None</p> <p>Monitoring/Record Keeping/Reporting/Other: The owner/operator shall utilize work practice standards consisting of the inspection and cleaning of the condenser coils on a semiannual basis. The vent condenser shall be in place and operational whenever processes controlled by the vent condenser are running, except during periods of condenser malfunction or mechanical failure. Records shall be kept on-site, verifying that the work practice standards are met and made available to the Department upon request.</p>								

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PART 5.B.3.a - CONDITIONS FOR NEW MILL, MIX, AND EXTRUSION PROCESS

Condition Number	Equipment/Control Device ID	Regulated Pollutant/Standard	Conditions																				
5.B.3.a(6)	E-110-2-4275-01	PM PM ₁₀ PM _{2.5} CO NO _x VOC CO _{2e}	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration and based on a BACT analysis, the hot oil heater (E-110-2-4275-01) is subject to good combustion practices and the following PSD limits:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Pollutant</th> <th>lb/million Btu</th> </tr> </thead> <tbody> <tr> <td>Filterable PM</td> <td>0.0022</td> </tr> <tr> <td>Filterable PM₁₀</td> <td>0.0022</td> </tr> <tr> <td>Filterable PM_{2.5}</td> <td>0.0022</td> </tr> <tr> <td>Condensable PM₁₀</td> <td>0.0056</td> </tr> <tr> <td>Condensable PM_{2.5}</td> <td>0.0056</td> </tr> <tr> <td>CO</td> <td>0.082</td> </tr> <tr> <td>NO_x</td> <td>0.10</td> </tr> <tr> <td>VOC</td> <td>0.012</td> </tr> <tr> <td>CO_{2e}</td> <td>3,093 TPY</td> </tr> </tbody> </table> <p>State Only: No</p> <p>Testing: None</p> <p>Monitoring/Record Keeping/Reporting/Other: Initially, vendor information verifying compliance with the PSD NO_x limit must be submitted to the Department within 180 days after startup and then kept on-site. See Facility Wide Condition 5.C.3.</p>	Pollutant	lb/million Btu	Filterable PM	0.0022	Filterable PM ₁₀	0.0022	Filterable PM _{2.5}	0.0022	Condensable PM ₁₀	0.0056	Condensable PM _{2.5}	0.0056	CO	0.082	NO _x	0.10	VOC	0.012	CO _{2e}	3,093 TPY
Pollutant	lb/million Btu																						
Filterable PM	0.0022																						
Filterable PM ₁₀	0.0022																						
Filterable PM _{2.5}	0.0022																						
Condensable PM ₁₀	0.0056																						
Condensable PM _{2.5}	0.0056																						
CO	0.082																						
NO _x	0.10																						
VOC	0.012																						
CO _{2e}	3,093 TPY																						
5.B.3.a(7)	E-110-2-4275-01	PM SO ₂ Opacity	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 1 – Fuel Burning Operations, the hot oil heater (E-110-2-4275-01) is subject to an opacity limit no greater than 20%, a PM limit of 0.6 lbs PM/million Btu heat input, and a SO₂ limit of 3.5 lbs SO₂/million Btu heat input.</p> <p>State Only: No</p> <p>Testing: None</p> <p>Monitoring/Record Keeping/Reporting/Other: See Facility Wide Condition 5.C.3.</p>																				

PART 5.B.1.b. - EQUIPMENT FOR NEW BAKE/REBAKE PROCESS

Equipment ID	Equipment Description	Control Device ID	Emission Point ID
E-210-2-4271-18/32	Fifteen (15), 18 million Btu/hr Carbottom Furnaces (each)	CD-210-2-4333-01	S-210-2-4333-01

PART 5.B.2.b - CONTROL DEVICES FOR NEW BAKE/REBAKE PROCESS

Control Device ID	Control Device Description	Pollutant(s) Controlled
CD-210-2-4333-01	16 million Btu/hr Thermal Oxidizer	PM, PM ₁₀ , PM _{2.5} , CO, VOC, CH ₄

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PART 5.B.3.b - CONDITIONS FOR NEW BAKE/REBAKE PROCESS

Condition Number	Equipment /Control Device ID	Regulated Pollutant/ Standard	Conditions						
5.B.3.b(1)	E-210-2-4271-18/32	PM	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 4 - Emissions from Process Industries, Section VIII - Other Manufacturing, particulate matter emissions shall be limited to the rate specified by use of the following equation: for process weight rates less than or equal to 30 tons per hour ($E = 4.10P^{0.67}$) where E = the allowable emission rate in pounds per hour and P = process weight rate in tons per hour. As such, each process's allowable particulate matter emission limit is limited to the amount shown in the table below at its nominal production rating:</p> <table border="1" data-bbox="651 653 1409 747"> <thead> <tr> <th data-bbox="651 653 1019 716">Process</th> <th data-bbox="1019 653 1216 716">PM Allowable (lb/hr)</th> <th data-bbox="1216 653 1409 716">Process Weight Rate (tons/hr)</th> </tr> </thead> <tbody> <tr> <td data-bbox="651 716 1019 747">New Bake/Rebake</td> <td data-bbox="1019 716 1216 747">23.91</td> <td data-bbox="1216 716 1409 747">13.9</td> </tr> </tbody> </table> <p>State Only: No</p> <p>Testing: None</p> <p>Monitoring/Record Keeping/Reporting/Other: The owner/operator shall install and maintain combustion zone and/or afterburner temperature indicators on the thermal oxidizer. All temperature indicators shall be readily accessible for verification by operating personnel and Department personnel (i.e. on ground level or easily accessible roof level). Temperature readings shall be recorded at least every fifteen (15) minutes and maintained on site. The thermal oxidizer shall be in place and operational whenever processes controlled by the thermal oxidizer are running, except during periods of thermal oxidizer malfunction or mechanical failure. Operational ranges for the monitored parameters (adequate temperature to allow for sufficient excess combustion) shall be established to provide a reasonable assurance of compliance. These operational ranges for the monitored parameters shall be derived from stack test data, vendor certification, and/or operational history and visual inspections, which demonstrate the proper operation of the equipment in compliance. The operating ranges may be updated pending Bureau approval. Each incidence of operation outside these operational ranges, including date and time, cause, and corrective action taken, shall be recorded and kept on site for five (5) years. Reports of these incidences shall be submitted semiannually. These semiannual reports shall include temperature readings. If no incidences occurred during the reporting period then a letter shall indicate such. See Facility Wide Condition 5.C.3.</p>	Process	PM Allowable (lb/hr)	Process Weight Rate (tons/hr)	New Bake/Rebake	23.91	13.9
Process	PM Allowable (lb/hr)	Process Weight Rate (tons/hr)							
New Bake/Rebake	23.91	13.9							

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PART 5.B.3.b - CONDITIONS FOR NEW BAKE/REBAKE PROCESS

Condition Number	Equipment /Control Device ID	Regulated Pollutant/ Standard	Conditions
5.B.3.b(2)	E-210-2-4271-18/32 CD-210-2-4333-01	Opacity	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 4 - Emissions from Process Industries, Section IX - Visible Emissions (Where Not Specified Elsewhere), where construction or modification began after December 31, 1985, emissions (including fugitive emissions) shall not exhibit an opacity greater than 20%, each.</p> <p>State Only: No</p> <p>Testing: None</p> <p>Monitoring/Record Keeping/Reporting/Other: The permittee shall perform a visual inspection on a daily basis. Visual Inspection means a qualitative observation of opacity during daylight hours where the inspector records results in a log, noting color, duration, density (heavy or light), cause and corrective action taken for any abnormal emissions. The observer does not need to be certified to conduct valid visual inspections. However, at a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, and observer position relative to lighting, wind, and the presence of uncombined water. Logs shall be kept to record all visual inspections, including cause and corrective action taken for any abnormal emissions and visual inspections from date of recording. For all cause and corrective actions taken for any abnormal emissions and visual inspections, the owner/operator shall submit semiannual reports.</p>
5.B.3.b(3)	CD-210-2-4333-01	PM Opacity	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 3 – Waste Combustion/Reduction, a 0.5 lb PM per million Btu heat input limit and an opacity limit no greater than 20% has been established.</p> <p>State Only: Yes</p> <p>Testing: None</p> <p>Monitoring/Record Keeping/Reporting/Other: The permittee shall perform a visual inspection on a daily basis. Visual Inspection means a qualitative observation of opacity during daylight hours where the inspector records results in a log, noting color, duration, density (heavy or light), cause and corrective action taken for any abnormal emissions. The observer does not need to be certified to conduct valid visual inspections. However, at a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, and observer position relative to lighting, wind, and the presence of uncombined water. Logs shall be kept to record all visual inspections, including cause and corrective action taken for any abnormal emissions and visual inspections from date of recording. For all cause and corrective actions taken for any abnormal emissions and visual inspections, the owner/operator shall submit semiannual reports.</p>
5.B.3.b(4)	All	PM PM ₁₀ PM _{2.5}	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration and based on a BACT analysis, the carbottom furnaces (E-210-2-4271-18/32) and thermal oxidizer (CD-CE-210-2-4333-01) are subject to good combustion practices and a PSD limit of 4.14 lb/hr (each) for filterable PM, filterable PM₁₀, and filterable PM_{2.5} and a PSD limit of 2.85 lb/hr (each) for condensable PM₁₀ and condensable PM_{2.5}.</p> <p>State Only: No</p>

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PART 5.B.3.b - CONDITIONS FOR NEW BAKE/REBAKE PROCESS

Condition Number	Equipment /Control Device ID	Regulated Pollutant/ Standard	Conditions
			<p>Testing: An initial source test of the thermal oxidizer for filterable PM, PM₁₀, and PM_{2.5} emissions and condensable PM₁₀ and PM_{2.5} emissions shall be conducted within 180 days after startup and every three (3) years thereafter. Less frequent source testing for filterable and condensable particulate matter may be done if at least two (2) consecutive stack tests shows that the emissions are at or below 75% of the emission limitation, and if there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. In this case no source testing will be required for the next four (4) years. A source test shall be conducted during the fifth year and no more than 60 months after the previous source test.</p> <p>Monitoring/Record Keeping/Reporting/Other: The owner/operator shall install and maintain combustion zone and/or afterburner temperature indicators on the thermal oxidizer. All temperature indicators shall be readily accessible for verification by operating personnel and Department personnel (i.e. on ground level or easily accessible roof level). Temperature readings shall be recorded at least every fifteen (15) minutes and maintained on site. The thermal oxidizer shall be in place and operational whenever processes controlled by the thermal oxidizer are running, except during periods of thermal oxidizer malfunction or mechanical failure. Operational ranges for the monitored parameters (adequate temperature to allow for sufficient excess combustion) shall be established to provide a reasonable assurance of compliance. These operational ranges for the monitored parameters shall be derived from stack test data, vendor certification, and/or operational history and visual inspections, which demonstrate the proper operation of the equipment in compliance. The operating ranges may be updated pending Bureau approval. Each incidence of operation outside these operational ranges, including date and time, cause, and corrective action taken, shall be recorded and kept on site for five (5) years. Reports of these incidences shall be submitted semiannually. These semiannual reports shall include temperature readings. If no incidences occurred during the reporting period then a letter shall indicate such. See Facility Wide Condition 5.C.3.</p>

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PART 5.B.3.b - CONDITIONS FOR NEW BAKE/REBAKE PROCESS

Condition Number	Equipment /Control Device ID	Regulated Pollutant/ Standard	Conditions
5.B.3.b(5)	All	CO	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration and based on BACT analysis, the carbottom furnaces (E-210-2-4271-18/32) and thermal oxidizer (CD-210-2-4333-01) are subject to good combustion practices and a PSD limit of 2.0 lb/hr for CO.</p> <p>State Only: No</p> <p>Testing: An initial source test for CO emissions shall be conducted within 180 days after startup and every three (3) years thereafter. A source test of the Thermal Oxidizer shall be performed every three (3) years after the initial performance test. Less frequent source testing for CO from the sources may be conducted if at least two (2) consecutive performance tests show that the emissions are at or below 75% of the emission limitation, and if there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. In this case, no performance testing will be required for the next four (4) years. A performance test shall be conducted during the fifth year and no more than 60 months after the previous performance test.</p> <p>Monitoring/Record Keeping/Reporting/Other: The owner/operator shall install and maintain combustion zone and/or afterburner temperature indicators on the thermal oxidizer. All temperature indicators shall be readily accessible for verification by operating personnel and Department personnel (i.e. on ground level or easily accessible roof level). Temperature readings shall be recorded at least every fifteen (15) minutes and maintained on site. The thermal oxidizer shall be in place and operational whenever processes controlled by the thermal oxidizer are running, except during periods of thermal oxidizer malfunction or mechanical failure. Operational ranges for the monitored parameters (adequate temperature to allow for sufficient excess combustion) shall be established to provide a reasonable assurance of compliance. These operational ranges for the monitored parameters shall be derived from stack test data, vendor certification, and/or operational history and visual inspections, which demonstrate the proper operation of the equipment in compliance. The operating ranges may be updated pending Bureau approval. Each incidence of operation outside these operational ranges, including date and time, cause, and corrective action taken, shall be recorded and kept on site for five (5) years. Reports of these incidences shall be submitted semiannually. These semiannual reports shall include temperature readings. If no incidences occurred during the reporting period then a letter shall indicate such. See Facility Wide Condition 5.C.3.</p>

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PART 5.B.3.b - CONDITIONS FOR NEW BAKE/REBAKE PROCESS

Condition Number	Equipment /Control Device ID	Regulated Pollutant/ Standard	Conditions
5.B.3.b(6)	All	NO _x	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration and based on BACT analysis, the carbottom furnaces (E-210-2-4271-18/32) and thermal oxidizer (CD-CE-210-2-4333-01) are subject to good combustion practices and a PSD limit of 75.22 lb/hr for NO_x.</p> <p>State Only: No</p> <p>Testing: An initial source test for NO_x emissions shall be conducted within 180 days after startup. A source test of the Thermal Oxidizer shall be performed every three (3) years after the initial performance test. Less frequent source testing for NO_x emissions may be conducted if at least two (2) consecutive performance tests show that the emissions are at or below 75% of the emission limitation, and if there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. In this case, no performance testing will be required for the next four (4) years. A performance test shall be conducted during the fifth year and no more than 60 months after the previous performance test.</p> <p>Monitoring/Record Keeping/Reporting/Other: The owner/operator shall demonstrate compliance with the NO_x limit on a 1-hour rolling average basis, as established by a 1-hr NO_x source test and by the verification of the installation of low NO_x burners on the carbottom furnaces and the thermal oxidizer. The vendor information shall be submitted to the Department within 180 days after startup and then kept on-site. See Facility Wide Condition 5.C.3 and 5.C.6.</p>
5.B.3.b(7)	All	VOC	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration and based on BACT analysis, the carbottom furnaces (E-210-2-4271-18/32) and thermal oxidizer (CD-CE-210-2-4333-01) are subject to good combustion practices and a PSD limit of 17.30 lb/hr for VOC.</p> <p>State Only: No</p> <p>Testing: An initial source test for VOC as VOC emissions shall be conducted within 180 days after startup and every three (3) years thereafter. During the initial performance test, the facility shall continuously monitor the firebox temperature during each of the required one (1) hour test runs. The minimum firebox temperature must then be established as the average of the three minimum 15-minute firebox temperatures monitored during each of the three (3), one (1) hour test runs. A source test of the Thermal Oxidizer shall be performed every three (3) years after the initial performance test. Less frequent source testing for VOC emissions from the source may be conducted if at least two (2) consecutive performance tests show that the emissions are at or below 75% of the emission limitation, and if there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. In this case, no performance testing will be required for the next four (4) years. A performance test shall be conducted during the fifth year and no more than 60 months after the previous performance test.</p> <p>Monitoring/Record Keeping/Reporting/Other: To demonstrate continuous compliance with the VOC emission limitations for the Thermal Oxidizer, the owner/operator will record the 3-hour block average of all recorded firebox temperature readings, and maintain the 3-hour block average temperature above the minimum temperature established during the</p>

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PART 5.B.3.b - CONDITIONS FOR NEW BAKE/REBAKE PROCESS

Condition Number	Equipment /Control Device ID	Regulated Pollutant/ Standard	Conditions
			<p>performance test. The firebox temperature indicator monitoring system must measure and record a temperature reading at least every fifteen minutes.</p> <p>Each continuous parameter monitoring system (CPMS) for the Thermal Oxidizer must be capable of completing a minimum of one cycle of operation (sampling, analyzing, and recording) for each successive 15-minute period.</p> <p>At all times, the owner/operator must maintain the monitoring equipment including, but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.</p> <p>Record the results of each inspection, calibration, and validation check.</p> <p>For each temperature monitoring device, the facility must meet the following requirements:</p> <ul style="list-style-type: none"> (1) Locate the temperature sensor in a position that provides a representative temperature. (2) Use a temperature sensor with a minimum accuracy of 4°F or 0.75 percent of the temperature value, whichever is larger. (3) Perform an electronic calibration at least semiannually according to the procedures in the manufacturer's owners manual. Following the electronic calibration, conduct a temperature sensor validation check in which a second or redundant temperature sensor placed nearby the process temperature sensor must yield a reading within 30°F of the process temperature sensor's reading. (4) Conduct calibration and validation checks any time the sensor exceeds the manufacturer's specified maximum operating temperature range or install a new temperature sensor. (5) At least quarterly, inspect all components for integrity and all electrical connections for continuity, oxidation, and galvanic corrosion. <p>All temperature indicators shall be readily accessible for verification by operating personnel and Department personnel (i.e. on ground level or easily accessible roof level). Temperature readings shall be recorded at least every fifteen (15) minutes and maintained on site. The thermal oxidizer shall be in place and operational whenever processes controlled by the thermal oxidizer are running, except during periods of thermal oxidizer malfunction or mechanical failure. Each incidence of operation outside established operational ranges, including date and time, cause, and corrective action taken, shall be recorded and kept on site for five (5) years. Reports of these incidences shall be submitted semiannually. These semiannual reports shall include temperature readings. If no incidences occurred during the reporting period then a letter shall indicate such. See Facility Wide Condition 5.C.3.</p>

PART 5.B.3.b - CONDITIONS FOR NEW BAKE/REBAKE PROCESS

Condition Number	Equipment /Control Device ID	Regulated Pollutant/ Standard	Conditions
5.B.3.b(8)	All	CO ₂ e	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration and based on BACT analysis, the carbottom furnaces (E-210-2-4271-18/32) and thermal oxidizer (CD-CE-210-2-4333-01) are subject to good combustion practices, operation of the thermal oxidizer, process optimization and a PSD limit of 200,009 TPY for CO₂e.</p> <p>State Only: No</p> <p>Testing: An initial source test for CO₂ emissions shall be conducted within 180 days after startup and every three (3) years thereafter. A source test of the Thermal Oxidizer shall be performed every three (3) years after the initial performance test. Less frequent source testing for CO₂ from the sources may be conducted if at least two (2) consecutive performance tests show that the emissions are at or below 75% of the emission limitation, and if there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. In this case, no performance testing will be required for the next four (4) years. A performance test shall be conducted during the fifth year and no more than 60 months after the previous performance test.</p> <p>Monitoring/Record Keeping/Reporting/Other: Compliance with the above limit will be demonstrated by calculating CO₂e emissions based on raw material and fuel usage records along with initial and subsequent performance testing on a 12-month rolling sum. See Facility Wide Condition 5.C.3.</p> <p>Process Optimization practices will be developed and maintained in an Operations and Maintenance Manual (O & M Manual) which specifies proper optimization practices, training, maintenance and repair.</p> <p>As a minimum this O & M Manual shall include:</p> <ol style="list-style-type: none"> 1. Proper furnace scheduling and control to temperature ramp rate 2. Monitoring of thermal oxidizer temperature and oxygen levels 3. Operator and maintenance practices, including training in the proper sealing of each furnace prior to operation 4. Optimum product yield <p>The original O & M Plan shall be submitted to the Department within 180 days of startup. This O & M Manual will be updated as required to reflect changes in operations, equipment, and emissions.</p>

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PART 5.B.3.b - CONDITIONS FOR NEW BAKE/REBAKE PROCESS

Condition Number	Equipment /Control Device ID	Regulated Pollutant/ Standard	Conditions
5.B.3.b(9)	E-210-2-4271-18/32	NO _x VOC	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration and based on BACT analysis, a representative Clean Air Stack on one of the carbottom furnaces shall be screened within 180 days after startup to verify no NO_x, or VOC emissions are present.</p> <p>State Only: No</p> <p>Testing: An initial screening for NO_x, and VOC emissions shall be conducted within 180 days after startup.</p> <p>Monitoring/Record Keeping/Reporting/Other: All test plans, notifications and final reports shall be submitted to the Bureau of Air Quality’s Source Evaluation Section according to SC Regulation 61-62.1 Section IV. A protocol shall be submitted to the Source Test Evaluation Section of this Bureau for approval indicating the proposed initial source test date and test procedure at least 45 days prior to the proposed test date. The Bureau must be notified at least two weeks prior to a source test so that a Bureau Representative may be present, and the final test report must be submitted no later than 30 days after completion of on-site testing, or as approved in a site specific test plan.</p>

PART 5.B.1.c. - EQUIPMENT FOR EXISTING REBAKE LOAD AND UNLOAD/GRAPHITIZING PREPARATION PROCESS

Equipment ID	Equipment Description	Control Device ID	Emission Point ID
E-220-01	End Facing Machine; prepare electrode face	CD-220-01	S-220-01
E-220-02	Basket Cleaner; clean rebake baskets	CD-220-01	S-220-01
E-220-03	Pitch Coke Crusher; crush pitch chips from basket cleaner	CD-220-01	S-220-01
E-220-04	Pitch Coke Storage Silo; store crushed pitch chips	CD-220-01	S-220-01
E-220-05	By Product Loading Station; load petroleum pitch to transport vehicles as product	CD-220-01	S-220-01
E-220-06	Storage Bin; store pitch coke	CD-220-01	S-220-01

PART 5.B.2.c - CONTROL DEVICES FOR EXISTING REBAKE LOAD AND UNLOAD/GRAPHITIZING PREPARATION PROCESS

Control Device ID	Control Device Description	Pollutant(s) Controlled
CD-220-01	Carborundum Co. Model HP1015-S Baghouse	PM, PM ₁₀ , PM _{2.5}

PART 5.B.3.c – CONDITIONS FOR EXISTING REBAKE LOAD AND UNLOAD/GRAPHITIZING PREPARATION PROCESS

Condition Number	Equipment /Control Device ID	Regulated Pollutant/ Standard	Conditions						
5.B.3.c(1)	All	PM	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 4 - Emissions from Process Industries, Section VIII - Other Manufacturing, particulate matter emissions shall be limited to the rate specified by use of the following equation: for process weight rates less than or equal to 30 tons per hour ($E = 4.10P^{0.67}$) where E = the allowable emission rate in pounds per hour and P = process weight rate in tons per hour. As such, each process's allowable particulate matter emission limit is limited to the amount shown in the table below at its nominal production rating:</p> <table border="1" data-bbox="651 716 1409 842"> <thead> <tr> <th data-bbox="656 722 1019 779">Process</th> <th data-bbox="1024 722 1214 779">PM Allowable (lb/hr)</th> <th data-bbox="1219 722 1404 779">Process Weight Rate (tons/hr)</th> </tr> </thead> <tbody> <tr> <td data-bbox="656 785 1019 842">Existing Rebake Load and Unload/Graphitizing Preparation</td> <td data-bbox="1024 785 1214 842">36.54</td> <td data-bbox="1219 785 1404 842">26.18</td> </tr> </tbody> </table> <p>State Only: No</p> <p>Testing: None</p> <p>Monitoring/Record Keeping/Reporting/Other: See Generic Condition 5.A.7.</p>	Process	PM Allowable (lb/hr)	Process Weight Rate (tons/hr)	Existing Rebake Load and Unload/Graphitizing Preparation	36.54	26.18
Process	PM Allowable (lb/hr)	Process Weight Rate (tons/hr)							
Existing Rebake Load and Unload/Graphitizing Preparation	36.54	26.18							
5.B.3.c(2)	All	Opacity	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 4 - Emissions from Process Industries, Section IX - Visible Emissions (Where Not Specified Elsewhere), where construction or modification began after December 31, 1985, emissions (including fugitive emissions) shall not exhibit an opacity greater than 20%,each.</p> <p>State Only: No</p> <p>Testing: None</p> <p>Monitoring/Record Keeping/Reporting/Other: The permittee shall perform a visual inspection on a daily basis. Visual Inspection means a qualitative observation of opacity during daylight hours where the inspector records results in a log, noting color, duration, density (heavy or light), cause and corrective action taken for any abnormal emissions. The observer does not need to be certified to conduct valid visual inspections. However, at a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, and observer position relative to lighting, wind, and the presence of uncombined water. Logs shall be kept to record all visual inspections, including cause and corrective action taken for any abnormal emissions and visual inspections from date of recording. For all cause and corrective actions taken for any abnormal emissions and visual inspections, the owner/operator shall submit semiannual reports.</p>						

PART 5.B.3.c – CONDITIONS FOR EXISTING REBAKE LOAD AND UNLOAD/GRAPHITIZING PREPARATION PROCESS

Condition Number	Equipment /Control Device ID	Regulated Pollutant/ Standard	Conditions
5.B.3.c(3)	All	PM PM ₁₀ PM _{2.5}	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration and based on BACT analysis, a PSD limit of 0.005 gr/dscf has been established for filterable PM, filterable PM₁₀, and filterable PM_{2.5}.</p> <p>State Only: No</p> <p>Testing: An initial source test for filterable PM, PM₁₀, and PM_{2.5} emissions shall be conducted within 180 days after startup of this project and every three (3) years thereafter. An initial source test to verify no condensable PM₁₀ and PM_{2.5} emissions are present shall be conducted within 180 days after startup of this project.</p> <p>Monitoring/Record Keeping/Reporting/Other: See Generic Condition 5.A.7.</p>

PART 5.B.1.d. - EQUIPMENT FOR EXISTING BAKE LOAD AND UNLOAD AND BAKED ELECTRODE CLEANING PROCESS

Equipment ID	Equipment Description	Control Device ID	Emission Point ID
E-250-02	Sand Storage Bin; store used sand from recycle system	CD-250-01	S-250-01
E-250-03	Sagger Loading System; load sagger can with sand and electrode	CD-250-02	S-250-02
E-250-04	Sagger Unloading System; remove electrode and sand from sagers	CD-250-02	S-250-02
E-250-06	Sagger Cleaning; clean sagger cans for reuse	CD-250-04	S-250-04
E-250-07	Electrode Cleaner; remove residual sand from electrode/surface preparation	CD-250-04	S-250-04

PART 5.B.2.d - CONTROL DEVICES FOR EXISTING BAKE LOAD AND UNLOAD AND BAKED ELECTRODE CLEANING PROCESS

Control Device ID	Control Device Description	Pollutant(s) Controlled
CD-250-01	Carborundum Co. Model W16 HPS-7B Bin Vent Filter	Filterable PM, PM ₁₀ , PM _{2.5}
CD-250-02	Carborundum Co. Model HP1015-S Baghouse	Filterable PM, PM ₁₀ , PM _{2.5}
CD-250-04	LSTC Air Vent Filter, Model 551 STC81, Style III Baghouse	Filterable PM, PM ₁₀ , PM _{2.5}

PART 5.B.3.d - CONDITIONS FOR EXISTING BAKE LOAD AND UNLOAD AND BAKED ELECTRODE CLEANING PROCESS

Condition Number	Equipment /Control Device ID	Regulated Pollutant/ Standard	Conditions
5.B.3.d(1)	All	PM	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 4 - Emissions from Process Industries, Section VIII - Other Manufacturing, particulate matter emissions shall be limited to the rate specified by use of the following equation: for process weight rates less than or equal to 30 tons per hour ($E = 4.10P^{0.67}$) where E = the allowable emission rate in pounds per hour and P = process weight rate in tons per hour. As such, each process's allowable particulate matter emission limit is limited to the amount shown in the table below at</p>

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PART 5.B.3.d - CONDITIONS FOR EXISTING BAKE LOAD AND UNLOAD AND BAKED ELECTRODE CLEANING PROCESS

Condition Number	Equipment /Control Device ID	Regulated Pollutant/ Standard	Conditions						
			<p>its nominal production rating:</p> <table border="1" data-bbox="651 495 1409 625"> <thead> <tr> <th data-bbox="656 501 1019 562">Process</th> <th data-bbox="1019 501 1214 562">PM Allowable (lb/hr)</th> <th data-bbox="1214 501 1404 562">Process Weight Rate (tons/hr)</th> </tr> </thead> <tbody> <tr> <td data-bbox="656 562 1019 625">Existing Bake Load and Unload and Baked Electrode Cleaning</td> <td data-bbox="1019 562 1214 625">35.41</td> <td data-bbox="1214 562 1404 625">24.98</td> </tr> </tbody> </table> <p>State Only: No</p> <p>Testing: None</p> <p>Monitoring/Record Keeping/Reporting/Other: See Generic Condition 5.A.7.</p>	Process	PM Allowable (lb/hr)	Process Weight Rate (tons/hr)	Existing Bake Load and Unload and Baked Electrode Cleaning	35.41	24.98
Process	PM Allowable (lb/hr)	Process Weight Rate (tons/hr)							
Existing Bake Load and Unload and Baked Electrode Cleaning	35.41	24.98							
5.B.3.d(2)	All	Opacity	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 4 - Emissions from Process Industries, Section IX - Visible Emissions (Where Not Specified Elsewhere), where construction or modification began after December 31, 1985, emissions (including fugitive emissions) shall not exhibit an opacity greater than 20%, each</p> <p>State Only: No</p> <p>Testing: None</p> <p>Monitoring/Record Keeping/Reporting/Other: The permittee shall perform a visual inspection on a daily basis. Visual Inspection means a qualitative observation of opacity during daylight hours where the inspector records results in a log, noting color, duration, density (heavy or light), cause and corrective action taken for any abnormal emissions. The observer does not need to be certified to conduct valid visual inspections. However, at a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, and observer position relative to lighting, wind, and the presence of uncombined water. No periodic monitoring for opacity will be required during periods of burning natural gas or propane only. Logs shall be kept to record all visual inspections, including cause and corrective action taken for any abnormal emissions and visual inspections from date of recording. For all cause and corrective actions taken for any abnormal emissions and visual inspections, the owner/operator shall submit semiannual reports.</p>						

PART 5.B.3.d - CONDITIONS FOR EXISTING BAKE LOAD AND UNLOAD AND BAKED ELECTRODE CLEANING PROCESS

Condition Number	Equipment /Control Device ID	Regulated Pollutant/ Standard	Conditions
5.B.3.d(3)	All	PM PM ₁₀ PM _{2.5}	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration and based on BACT analysis, a PSD limit of 0.005 gr/dscf has been established for filterable PM, filterable PM₁₀, and filterable PM_{2.5}.</p> <p>State Only: No</p> <p>Testing: An initial source test for filterable PM, PM₁₀, and PM_{2.5} emissions shall be conducted within 180 days after startup of this project and every three (3) years thereafter. An initial source test to verify no condensable PM₁₀ and PM_{2.5} emissions are present shall be conducted within 180 days after startup of this project.</p> <p>Monitoring/Record Keeping/Reporting/Other:. See Generic Condition 5.A.7.</p>

PART 5.B.1.e. - EQUIPMENT FOR NEW PITCH IMPREGNATION PROCESS

Equipment ID	Equipment Description	Control Device ID	Emission Point ID
E-310-2-4272-21	One (1) Preheater, 12.0 million Btu/hr	N/A	S-310-2-4349-23 S-310-2-4349-24
E-310-2-4201-01	One (1) Autoclave/Spray Cooler/Cooling Bath	CD-310-2-4333-01	S-310-2-4349-02
E-310-2-4275-01	Hot Oil Heater (5 million Btu/hr)	N/A	S-310-02-4349-01

N/A = Not Applicable

PART 5.B.2.e - CONTROL DEVICES FOR NEW PITCH IMPREGNATION PROCESS

Control Device ID	Control Device Description	Pollutant(s) Controlled
CD-310-2-4333-01	7.5 million Btu/hr Thermal Oxidizer	VOC

PART 5.B.3.e - CONDITIONS FOR NEW PITCH IMPREGNATION PROCESS

Condition Number	Equipment /Control Device ID	Regulated Pollutant/ Standard	Conditions																		
5.B.3.e(1)	E-310-2-4272-21; E-310-2-4201-01/CD-310-2-4333-01	Opacity	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 4 - Emissions from Process Industries, Section IX - Visible Emissions (Where Not Specified Elsewhere), where construction or modification began after December 31, 1985, emissions (including fugitive emissions) shall not exhibit an opacity greater than 20%, each.</p> <p>State Only: No</p> <p>Testing: None</p> <p>Monitoring/Record Keeping/Reporting/Other: The permittee shall perform a visual inspection on a daily basis. Visual Inspection means a qualitative observation of opacity during daylight hours where the inspector records results in a log, noting color, duration, density (heavy or light), cause and corrective action taken for any abnormal emissions. The observer does not need to be certified to conduct valid visual inspections. However, at a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, and observer position relative to lighting, wind, and the presence of uncombined water. Logs shall be kept to record all visual inspections, including cause and corrective action taken for any abnormal emissions and visual inspections from date of recording. For all cause and corrective actions taken for any abnormal emissions and visual inspections, the owner/operator shall submit semiannual reports.</p>																		
5.B.3.e(2)	E-310-2-4272-21	PM PM ₁₀ PM _{2.5} CO NO _x VOC	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration and based on a BACT analysis, the preheater (E-310-2-4272-21) is subject to good combustion practices and the following PSD limits:</p> <table border="1" data-bbox="748 1234 1313 1528"> <thead> <tr> <th>Pollutant</th> <th>lb/million Btu</th> </tr> </thead> <tbody> <tr> <td>Filterable PM</td> <td>0.0023</td> </tr> <tr> <td>Filterable PM₁₀</td> <td>0.0023</td> </tr> <tr> <td>Filterable PM_{2.5}</td> <td>0.0023</td> </tr> <tr> <td>Condensable PM₁₀</td> <td>0.0056</td> </tr> <tr> <td>Condensable PM_{2.5}</td> <td>0.0056</td> </tr> <tr> <td>CO</td> <td>0.083</td> </tr> <tr> <td>NO_x</td> <td>0.10</td> </tr> <tr> <td>VOC</td> <td>0.011</td> </tr> </tbody> </table> <p>State Only: No</p> <p>Testing: None</p> <p>Monitoring/Record Keeping/Reporting/Other: Initially, vendor information verifying compliance with the PSD NO_x limit must be submitted to the Department within 180 days after startup and then kept on-site. See Facility Wide Condition 5.C.3.</p>	Pollutant	lb/million Btu	Filterable PM	0.0023	Filterable PM ₁₀	0.0023	Filterable PM _{2.5}	0.0023	Condensable PM ₁₀	0.0056	Condensable PM _{2.5}	0.0056	CO	0.083	NO _x	0.10	VOC	0.011
Pollutant	lb/million Btu																				
Filterable PM	0.0023																				
Filterable PM ₁₀	0.0023																				
Filterable PM _{2.5}	0.0023																				
Condensable PM ₁₀	0.0056																				
Condensable PM _{2.5}	0.0056																				
CO	0.083																				
NO _x	0.10																				
VOC	0.011																				

PART 5.B.3.e - CONDITIONS FOR NEW PITCH IMPREGNATION PROCESS

Condition Number	Equipment /Control Device ID	Regulated Pollutant/ Standard	Conditions								
5.B.3.e(3)	E-310-2-4201-01/CD-310-2-4333-01; E-310-2-4272-21; E-310-2-4275-01	CO ₂ e	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration and based on BACT analysis, the thermal oxidizer (CD-310-2-4333-01) on the autoclave/spray cooler/cooling bath (E-310-2-4201-01), impregnation preheater (E-310-2-4272-21) and hot oil heater (E-310-2-4275-01) are subject to good combustion practices and a CO₂e limits:.</p> <table border="1" data-bbox="748 577 1312 800"> <thead> <tr> <th data-bbox="748 577 1060 640">Source</th> <th data-bbox="1060 577 1312 640">CO₂e emission limit (TPY)</th> </tr> </thead> <tbody> <tr> <td data-bbox="748 640 1060 674">Impregnation preheater</td> <td data-bbox="1060 640 1312 674">7,424</td> </tr> <tr> <td data-bbox="748 674 1060 707">Impregnation hot oil heater</td> <td data-bbox="1060 674 1312 707">3,093</td> </tr> <tr> <td data-bbox="748 707 1060 800">Autoclave/spray cooler/cooling bath thermal oxidizer</td> <td data-bbox="1060 707 1312 800">8,973</td> </tr> </tbody> </table> <p>State Only: No</p> <p>Testing: An initial source test of CO₂ emissions shall be conducted within 180 days after startup and every three (3) years thereafter. A source test of the Thermal Oxidizer shall be performed every three (3) years after the initial performance test. Less frequent source testing for CO₂ from these two sources may be conducted if at least two (2) consecutive performance tests show that the emissions are at or below 75% of the emission limitation, and if there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. In this case, no performance testing will be required for the next four (4) years. A performance test shall be conducted during the fourth year and no more than 60 months after the previous performance test.</p> <p>Monitoring/Record Keeping/Reporting/Other: Compliance with the above limits will be demonstrated by calculating CO₂e emissions based on raw material and fuel usage records along with initial and subsequent performance testing on a 12-month rolling sum. See Facility Wide Condition 5.C.3.</p>	Source	CO ₂ e emission limit (TPY)	Impregnation preheater	7,424	Impregnation hot oil heater	3,093	Autoclave/spray cooler/cooling bath thermal oxidizer	8,973
Source	CO ₂ e emission limit (TPY)										
Impregnation preheater	7,424										
Impregnation hot oil heater	3,093										
Autoclave/spray cooler/cooling bath thermal oxidizer	8,973										

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PART 5.B.3.e - CONDITIONS FOR NEW PITCH IMPREGNATION PROCESS

Condition Number	Equipment /Control Device ID	Regulated Pollutant/ Standard	Conditions
5.B.3.e(4)	CD-310-2-4333-01	PM Opacity	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 3 – Waste Combustion/Reduction, a 0.5 lb PM per million BTU heat input limit and an opacity limit no greater than 20% has been established.</p> <p>State Only: Yes</p> <p>Testing: None</p> <p>Monitoring/Record Keeping/Reporting/Other: The permittee shall perform a visual inspection on a daily basis. Visual Inspection means a qualitative observation of opacity during daylight hours where the inspector records results in a log, noting color, duration, density (heavy or light), cause and corrective action taken for any abnormal emissions. The observer does not need to be certified to conduct valid visual inspections. However, at a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, and observer position relative to lighting, wind, and the presence of uncombined water. Logs shall be kept to record all visual inspections, including cause and corrective action taken for any abnormal emissions and visual inspections from date of recording. For all cause and corrective actions taken for any abnormal emissions and visual inspections, the owner/operator shall submit semiannual reports.</p>
5.B.3.e(5)	E-310-2-4201-01/CD-310-2-4333-01	VOC	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration and based on BACT analysis, the PSD limit for VOC has been established at 3.083 lb/hr.</p> <p>State Only: No</p> <p>Testing: An initial source test for VOC as VOC emissions shall be conducted within 180 days after startup and every three (3) years thereafter. During the initial performance test, the facility shall continuously monitor the firebox temperature during each of the required one (1) hour test runs. The minimum firebox temperature must then be established as the average of the three minimum 15-minute firebox temperatures monitored during each of the three (3), one (1) hour test runs. A source test of the Thermal Oxidizer shall be performed every three (3) years after the initial performance test. Less frequent source testing for VOC emissions from the source may be conducted if at least two (2) consecutive performance tests show that the emissions are at or below 75% of the emission limitation, and if there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. In this case, no performance testing will be required for the next four (4) years. A performance test shall be conducted during the fifth year and no more than 60 months after the previous performance test.</p> <p>Monitoring/Record Keeping/Reporting/Other: To demonstrate continuous compliance with the VOC emission limitations for the Thermal Oxidizer, the owner/operator will record the 3-hour block average of all recorded firebox temperature readings, and maintain the 3-hour block average temperature above the minimum temperature established during the performance test. The firebox temperature indicator monitoring system must measure and record a temperature reading at least every fifteen minutes.</p> <p>Each continuous parameter monitoring system (CPMS) for the Thermal Oxidizer must be capable of completing a minimum of one cycle of operation (sampling, analyzing, and</p>

PART 5.B.3.e - CONDITIONS FOR NEW PITCH IMPREGNATION PROCESS

Condition Number	Equipment /Control Device ID	Regulated Pollutant/ Standard	Conditions
			<p>recording) for each successive 15-minute period.</p> <p>At all times, the owner/operator must maintain the monitoring equipment including, but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.</p> <p>Record the results of each inspection, calibration, and validation check.</p> <p>For each temperature monitoring device, the facility must meet the following requirements:</p> <ol style="list-style-type: none"> (1) Locate the temperature sensor in a position that provides a representative temperature. (2) Use a temperature sensor with a minimum accuracy of 4°F or 0.75 percent of the temperature value, whichever is larger. (3) Perform an electronic calibration at least semiannually according to the procedures in the manufacturer's owners manual. Following the electronic calibration, conduct a temperature sensor validation check in which a second or redundant temperature sensor placed nearby the process temperature sensor must yield a reading within 30°F of the process temperature sensor's reading. (4) Conduct calibration and validation checks any time the sensor exceeds the manufacturer's specified maximum operating temperature range or install a new temperature sensor. (5) At least quarterly, inspect all components for integrity and all electrical connections for continuity, oxidation, and galvanic corrosion. <p>All temperature indicators shall be readily accessible for verification by operating personnel and Department personnel (i.e. on ground level or easily accessible roof level). Temperature readings shall be recorded at least every fifteen (15) minutes and maintained on site. The thermal oxidizer shall be in place and operational whenever processes controlled by the thermal oxidizer are running, except during periods of thermal oxidizer malfunction or mechanical failure. Each incidence of operation outside established operational ranges, including date and time, cause, and corrective action taken, shall be recorded and kept on site for five (5) years. Reports of these incidences shall be submitted semiannually. These semiannual reports shall include temperature readings. If no incidences occurred during the reporting period then a letter shall indicate such. See Facility Wide Condition 5.C.3.</p>
5.B.3.e(6)	E-310-2-4275-01	PM SO ₂ Opacity	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 1 – Fuel Burning Operations, the hot oil heater (E-310-2-4275-01) is subject to an opacity limit no greater than 20%, a PM limit of 0.6 lbs PM/million Btu heat input, and a SO₂ limit of 3.5 lbs SO₂/million Btu heat input.</p> <p>State Only: No</p> <p>Testing: None</p> <p>Monitoring/Record Keeping/Reporting/Other: See Facility Wide Condition 5.C.3.</p>

PART 5.B.3.e - CONDITIONS FOR NEW PITCH IMPREGNATION PROCESS

Condition Number	Equipment /Control Device ID	Regulated Pollutant/ Standard	Conditions																		
5.B.3.e(7)	E-310-2-4275-01	PM PM ₁₀ PM _{2.5} CO NO _x VOC	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration and based on a BACT analysis, the hot oil heater (E-310-2-4275-01) is subject to good combustion practices and the following PSD limits:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Pollutant</th> <th>lb/million Btu</th> </tr> </thead> <tbody> <tr> <td>Filterable PM</td> <td>0.0022</td> </tr> <tr> <td>Filterable PM₁₀</td> <td>0.0022</td> </tr> <tr> <td>Filterable PM_{2.5}</td> <td>0.0022</td> </tr> <tr> <td>Condensable PM₁₀</td> <td>0.0056</td> </tr> <tr> <td>Condensable PM_{2.5}</td> <td>0.0056</td> </tr> <tr> <td>CO</td> <td>0.082</td> </tr> <tr> <td>NO_x</td> <td>0.10</td> </tr> <tr> <td>VOC</td> <td>0.012</td> </tr> </tbody> </table> <p>State Only: No</p> <p>Testing: None</p> <p>Monitoring/Record Keeping/Reporting/Other: Initially, vendor information verifying compliance with the PSD NO_x limit must be submitted to the Department within 180 days after startup and then kept on-site. See Facility Wide Condition 5.C.3.</p>	Pollutant	lb/million Btu	Filterable PM	0.0022	Filterable PM ₁₀	0.0022	Filterable PM _{2.5}	0.0022	Condensable PM ₁₀	0.0056	Condensable PM _{2.5}	0.0056	CO	0.082	NO _x	0.10	VOC	0.012
Pollutant	lb/million Btu																				
Filterable PM	0.0022																				
Filterable PM ₁₀	0.0022																				
Filterable PM _{2.5}	0.0022																				
Condensable PM ₁₀	0.0056																				
Condensable PM _{2.5}	0.0056																				
CO	0.082																				
NO _x	0.10																				
VOC	0.012																				

PART 5.B.1.f - EQUIPMENT FOR EXISTING PITCH IMPREGNATION PROCESS

Equipment ID	Equipment Description	Control Device ID	Emission Point ID
E-310-04	40,000 Gallon Impregnation Pitch Storage Tank; store impregnation pitch from delivery truck	CD-310-07	S-310-07
E-310-09	25,345 Gallon Impregnation Pitch Storage Tank; store melted pitch	CD-310-08	S-310-08
E-310-10	25,345 Gallon Impregnation Pitch Storage Tank; store melted pitch	CD-310-09	S-310-09

PART 5.B.2.f - CONTROL DEVICES FOR EXISTING PITCH IMPREGNATION PROCESS

Control Device ID	Control Device Description	Pollutant(s) Controlled
CD-310-07	Vent Condenser	VOC
CD-310-08	Vent Condenser	VOC
CD-310-09	Vent Condenser	VOC

PART 5.B.3.f - CONDITIONS FOR EXISTING PITCH IMPREGNATION PROCESS

Condition Number	Equipment /Control Device ID	Regulated Pollutant/ Standard	Conditions
5.B.3.f(1)	All	Opacity	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 4 - Emissions from Process Industries, Section IX - Visible Emissions (Where Not Specified Elsewhere), where construction or modification began after December 31, 1985, emissions (including fugitive emissions) shall not exhibit an opacity greater than 20%, each.</p> <p>State Only: No</p> <p>Testing: None</p> <p>Monitoring/Record Keeping/Reporting/Other: The permittee shall perform a visual inspection on a daily basis. Visual Inspection means a qualitative observation of opacity during daylight hours where the inspector records results in a log, noting color, duration, density (heavy or light), cause and corrective action taken for any abnormal emissions. The observer does not need to be certified to conduct valid visual inspections. However, at a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, and observer position relative to lighting, wind, and the presence of uncombined water. No periodic monitoring for opacity will be required during periods of burning natural gas or propane only. Logs shall be kept to record all visual inspections, including cause and corrective action taken for any abnormal emissions and visual inspections from date of recording. For all cause and corrective actions taken for any abnormal emissions and visual inspections, the owner/operator shall submit semiannual reports.</p>
5.B.3.f(2)	All	VOC	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration and based on BACT analysis, a PSD limit of 0.055 TPY (total) for VOCs has been established.</p> <p>State Only: No</p> <p>Testing: None</p> <p>Monitoring/Record Keeping/Reporting/Other: The owner/operator shall utilize work practice standards consisting of the inspection and cleaning of the condenser coils on a semiannual basis. The vent condenser shall be in place and operational whenever processes controlled by the vent condenser are running, except during periods of condenser malfunction or mechanical failure. Records shall be kept on-site, verifying that the work practice standards are met and made available to the Department upon request.</p>

PART 5.B.1.g. - EQUIPMENT FOR EXISTING INSULATING MEDIA RECEIVING PROCESS

Equipment ID	Equipment Description	Control Device ID	Emission Point ID
E-410-01	Insulating Media Unloading Station; unload insulating media from delivery truck	CD-410-01	S-410-01
E-410-02	Insulating Media Silo; store insulating media	CD-410-01	S-410-01
E-420-03	Transport Hopper Loading – hopper is transferred via forklift from building 410 to building 430	CD-410-01/CD-430-02	S-410-01/S-430-02

PART 5.B.2.g - CONTROL DEVICES FOR EXISTING INSULATING MEDIA RECEIVING PROCESS

Control Device ID	Control Device Description	Pollutant(s) Controlled
CD-410-01	Carborundum Co. Model HP1015-TH Baghouse	PM, PM ₁₀ , PM _{2.5}
CD-430-02	Mikropul Model 109-8-231 Baghouse	PM, PM ₁₀ , PM _{2.5}

PART 5.B.3.g - CONDITIONS FOR EXISTING INSULATING MEDIA RECEIVING PROCESS

Condition Number	Equipment /Control Device ID	Regulated Pollutant/ Standard	Conditions						
5.B.3.g(1)	All	PM	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 4 - Emissions from Process Industries, Section VIII - Other Manufacturing, particulate matter emissions shall be limited to the rate specified by use of the following equation: for process weight rates less than or equal to 30 tons per hour ($E = 4.10P^{0.67}$) where E = the allowable emission rate in pounds per hour and P = process weight rate in tons per hour. As such, each process's allowable particulate matter emission limit is limited to the amount shown in the table below at its nominal production rating:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Process</th> <th>PM Allowable (lb/hr)</th> <th>Process Weight Rate (tons/hr)</th> </tr> </thead> <tbody> <tr> <td>Existing Insulating Media Receiving</td> <td>9.42</td> <td>3.46</td> </tr> </tbody> </table> <p>State Only: No</p> <p>Testing: None</p> <p>Monitoring/Record Keeping/Reporting/Other: See Generic Condition 5.A.7.</p>	Process	PM Allowable (lb/hr)	Process Weight Rate (tons/hr)	Existing Insulating Media Receiving	9.42	3.46
Process	PM Allowable (lb/hr)	Process Weight Rate (tons/hr)							
Existing Insulating Media Receiving	9.42	3.46							

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PART 5.B.3.g - CONDITIONS FOR EXISTING INSULATING MEDIA RECEIVING PROCESS

Condition Number	Equipment /Control Device ID	Regulated Pollutant/ Standard	Conditions
5.B.3.g(2)	All	Opacity	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 4 - Emissions from Process Industries, Section IX - Visible Emissions (Where Not Specified Elsewhere), where construction or modification began after December 31, 1985, emissions (including fugitive emissions) shall not exhibit an opacity greater than 20%, each.</p> <p>State Only: No</p> <p>Testing: None</p> <p>Monitoring/Record Keeping/Reporting/Other: The permittee shall perform a visual inspection on a daily basis. Visual Inspection means a qualitative observation of opacity during daylight hours where the inspector records results in a log, noting color, duration, density (heavy or light), cause and corrective action taken for any abnormal emissions. The observer does not need to be certified to conduct valid visual inspections. However, at a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, and observer position relative to lighting, wind, and the presence of uncombined water. Logs shall be kept to record all visual inspections, including cause and corrective action taken for any abnormal emissions and visual inspections from date of recording. For all cause and corrective actions taken for any abnormal emissions and visual inspections, the owner/operator shall submit semiannual reports.</p>
5.B.3.g(3)	All	PM PM ₁₀ PM _{2.5}	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration and based on BACT analysis, a PSD limit of 0.005 gr/dscf has been established for filterable PM, filterable PM₁₀, and filterable PM_{2.5}.</p> <p>State Only: No</p> <p>Testing: An initial source test for filterable PM, PM₁₀, and PM_{2.5} emissions shall be conducted within 180 days after startup of this project and every three (3) years thereafter. An initial source test to verify no condensable PM₁₀ and PM_{2.5} emissions are present shall be conducted within 180 days after startup of this project.</p> <p>Monitoring/Record Keeping/Reporting/Other: See Generic Condition 5.A.7.</p>

PART 5.B.1.h - EQUIPMENT FOR NEW GRAPHITIZING PROCESS

Equipment ID	Equipment Description	Control Device ID	Emission Point ID
E-460-4271-01/10	Ten (10) Graphitizing Furnaces; graphitize electrodes	CD-460-4349-03/ N/A for Roof Monitor	S-460-4349-03/ Roof Monitor
E-460-4349-02	Sodium Carbonate Storage Bin (supports SO ₂ scrubber system)	CD-460-4349-02	S-460-4349-02
E-460-4225-01	Gulper System; feed/remove insulating media to graphitizing furnaces	CD-460-02	S-460-02
E-460-4202-01	Insulating Media Dust Bin; stores fines of insulating media	CD-460-02	S-460-02
E-460-4202-06	Insulating Media Dust Bin; load insulating media fines to truck	CD-460-02	S-460-02

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PART 5.B.1.h - EQUIPMENT FOR NEW GRAPHITIZING PROCESS

Equipment ID	Equipment Description	Control Device ID	Emission Point ID
E-460-4202-02	Insulating Media Recycle (gulper system)	CD-460-04	Internal Vent

N/A = Not Applicable

PART 5.B.2.h - CONTROL DEVICES FOR NEW GRAPHITIZING PROCESS

Control Device ID	Control Device Description	Pollutant(s) Controlled
CD-460-4349-03	Wet Scrubber	PM, PM ₁₀ , PM _{2.5} , SO ₂
CD-460-4349-02	Baghouse	Filterable PM, PM ₁₀ , PM _{2.5}
CD-460-02	Baghouse	Filterable PM, PM ₁₀ , PM _{2.5}
CD-460-04	Baghouse	Filterable PM, PM ₁₀ , PM _{2.5}

PART 5.B.3.h - CONDITIONS FOR NEW GRAPHITIZING PROCESS

Condition Number	Equipment/Control Device ID	Regulated Pollutant/Standard	Conditions
5.B.3.h(1)	E-460-4271-01/10 CD-460-4349-03 E-460-4202-02 CD-460-04	PM PM ₁₀ PM _{2.5}	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration and based on a BACT analysis, the graphitizing furnaces (E-460-4271-01/10), wet scrubber (CD-460-4349-03), insulating media recycle (E-460-4202-02), and baghouse (CD-460-04) are subject to a PSD limit of 4.19 lb/hr for filterable PM, 4.15 lb/hr filterable PM₁₀, and 4.12 lb/hr filterable PM_{2.5} and a PSD limit of 2.65 lb/hr (each) for condensable PM, condensable PM₁₀, and condensable PM_{2.5}.</p> <p>State Only: No</p> <p>Testing: An initial source test for filterable PM, PM₁₀, and PM_{2.5} emissions and condensable PM₁₀ and PM_{2.5} emissions shall be conducted within 180 days after startup and every three (3) years thereafter. See Facility Wide Condition 5.C.4.</p> <p>Monitoring/Record Keeping/Reporting/Other: The owner/operator shall install and maintain liquid pressure indicators on each scrubber module. Each parameter shall be recorded each shift during source operation. The scrubber shall be in place and operational whenever processes controlled by the scrubber are running, except during periods of scrubber malfunction or mechanical failure. Prior to the first source test, the facility shall use manufacturer’s recommendations for operational ranges. These operational ranges for the monitored parameters shall be derived from stack test data, which demonstrate the proper operation of the equipment in compliance. These ranges, with supporting documentation and quality assurance procedures, shall be submitted to the Bureau for approval within 180 days of startup. The operating ranges may be updated using this procedure, following Bureau approval.</p>

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PART 5.B.3.h - CONDITIONS FOR NEW GRAPHITIZING PROCESS

Condition Number	Equipment/Control Device ID	Regulated Pollutant/Standard	Conditions
5.B.3.h(2)	E-460-4271-01/10	NO _x	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration and based on BACT analysis, a PSD limit of 2.5 lb/hr for NO_x (total for exhaust from the roof monitor and exhaust from the graphitizing stack) has been established.</p> <p>State Only: No</p> <p>Testing: An initial source test for NO_x emissions shall be conducted on the stack and roof monitor within 180 days after startup and every three (3) years thereafter. See Facility Wide Condition 5.C.4.</p> <p>Monitoring/Record Keeping/Reporting/Other: The owner/operator shall demonstrate compliance with the NO_x limit on a 1-hour rolling average basis, as established by a 1-hr NO_x source test and by the verification of the installation of low NO_x burners on the carbottom furnaces and the thermal oxidizer. The vendor information shall be submitted to the Department within 180 days after startup and then kept on-site. See Facility Wide Condition 5.C.6.</p>
5.B.3.h(3)	E-460-4271-01/10	CO	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration and based on BACT analysis, a PSD limit of 1,690 lb/hr for CO (total for exhaust from the roof monitor and exhaust from the graphitizing stack) has been established.</p> <p>State Only: No</p> <p>Testing: An initial source test for CO emissions shall be conducted on the stack and roof monitor within 180 days after startup. A stack test for CO emissions from the roof monitor shall be conducted every three (3) years thereafter. See Facility Wide Condition 5.C.4 and 5.C.5.</p> <p>Monitoring/Record Keeping/Reporting/Other: The owner or operator of the graphitizing furnaces shall install, calibrate, maintain, and operate a continuous emission monitor system (CEMS) for measuring CO mass emissions discharged to the atmosphere from the stack and record the output of the system. The CEMS shall consist of a CO monitor that meets 40 CFR, Appendix B, Performance Specification 4 and a flow monitor that meets 40 CFR, Appendix B, Performance Specification 6. The CEMS shall report mass emissions on a 30 day rolling average basis. The monitors must be installed and performance specification testing completed within 180 days after startup of the furnaces. Relative accuracy tests for the CO and flow monitors shall be conducted on an annual basis. For missing CO data, 40 CFR 60 Part 75 procedures shall be used. To determine compliance with the applicable CO emission limit, the owner or operator shall combine the results of the most recent stack testing results from the roof monitor system (lb/hr), with the CEMS results (lb/hr). Compliance with the CO limit shall be demonstrated on a 30 day rolling averaging period and semiannual reports shall be submitted to the Department.</p>

PART 5.B.3.h - CONDITIONS FOR NEW GRAPHITIZING PROCESS

Condition Number	Equipment/Control Device ID	Regulated Pollutant/Standard	Conditions
5.B.3.h(4)	E-460-4271-01/10	CO ₂ e	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration and based on BACT analysis, the graphitizing furnaces are subject to a process optimization plan, insulating media carbon content of 90% or less and a PSD limit of 32,852 TPY for CO₂e.</p> <p>State Only: No</p> <p>Testing: An initial source test for CO₂ emissions shall be conducted within 180 days after startup and every three (3) years thereafter. Less frequent source testing for CO₂ may be conducted if at least two (2) consecutive performance tests show that the emissions are at or below 75% of the emission limitation, and if there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. In this case, no performance testing will be required for the next four (4) years. A performance test shall be conducted during the fifth year and no more than 60 months after the previous performance test.</p> <p>Monitoring/Record Keeping/Reporting/Other: Compliance with the above limit will be demonstrated by calculating CO₂e emissions based on raw material and fuel usage records along with initial and subsequent performance testing on a 12-month rolling sum. See Facility Wide Condition 5.C.3.</p> <p>The owner/operator shall maintain records for carbon content (% by weight) of insulating media on a monthly basis. These records shall be maintained on site and made available to the Department upon request.</p> <p>Process Optimization practices will be developed and maintained in an Operations and Maintenance Manual (O & M Manual) which specifies proper optimization practices, training, maintenance and repair.</p> <p>As a minimum this O & M Manual shall include:</p> <ol style="list-style-type: none"> 1. Proper furnace scheduling to minimize power demand 2. Operator and maintenance practices, including training in effective furnace packing 3. Optimum product yield <p>The original O & M Plan shall be submitted to the Department within 180 days of startup. This O & M Manual will be updated as required to reflect changes in operations, equipment, and emissions.</p>

PART 5.B.3.h - CONDITIONS FOR NEW GRAPHITIZING PROCESS

Condition Number	Equipment/Control Device ID	Regulated Pollutant/Standard	Conditions												
5.B.3.h(5)	See Conditions Table	PM PM ₁₀ PM _{2.5}	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration and based on a BACT analysis, the PSD limit for filterable PM, filterable PM₁₀, and filterable PM_{2.5} has been established. See below for limits that apply to specific equipment:</p> <table border="1" data-bbox="605 577 1458 894"> <thead> <tr> <th>Equipment ID</th> <th>Control Device ID</th> <th>Limit</th> </tr> </thead> <tbody> <tr> <td>E-460-4349-02</td> <td>CD-460-4349-02</td> <td>0.005 gr/dscf (Filterable PM) 0.005 gr/dscf (Filterable PM₁₀) 0.005 gr/dscf (Filterable PM_{2.5})</td> </tr> <tr> <td>E-460-4225-01, E-460-4202-01, E-460-4202-06</td> <td>CD-460-02</td> <td>0.005 gr/dscf (Filterable PM) 0.005 gr/dscf (Filterable PM₁₀) 0.005 gr/dscf (Filterable PM_{2.5})</td> </tr> <tr> <td>E-460-4202-02</td> <td>CD-460-04</td> <td>0.005 gr/dscf (Filterable PM) 0.005 gr/dscf (Filterable PM₁₀) 0.005 gr/dscf (Filterable PM_{2.5})</td> </tr> </tbody> </table> <p>State Only: No</p> <p>Testing: An initial source test for filterable PM, PM₁₀, and PM_{2.5} emissions shall be conducted within 180 days after startup and every three (3) years thereafter. An initial source test to verify no condensable PM₁₀ and PM_{2.5} emissions are present shall be conducted within 180 days after startup.</p> <p>Monitoring/Record Keeping/Reporting/Other: See Generic Condition 5.A.7.</p>	Equipment ID	Control Device ID	Limit	E-460-4349-02	CD-460-4349-02	0.005 gr/dscf (Filterable PM) 0.005 gr/dscf (Filterable PM ₁₀) 0.005 gr/dscf (Filterable PM _{2.5})	E-460-4225-01, E-460-4202-01, E-460-4202-06	CD-460-02	0.005 gr/dscf (Filterable PM) 0.005 gr/dscf (Filterable PM ₁₀) 0.005 gr/dscf (Filterable PM _{2.5})	E-460-4202-02	CD-460-04	0.005 gr/dscf (Filterable PM) 0.005 gr/dscf (Filterable PM ₁₀) 0.005 gr/dscf (Filterable PM _{2.5})
Equipment ID	Control Device ID	Limit													
E-460-4349-02	CD-460-4349-02	0.005 gr/dscf (Filterable PM) 0.005 gr/dscf (Filterable PM ₁₀) 0.005 gr/dscf (Filterable PM _{2.5})													
E-460-4225-01, E-460-4202-01, E-460-4202-06	CD-460-02	0.005 gr/dscf (Filterable PM) 0.005 gr/dscf (Filterable PM ₁₀) 0.005 gr/dscf (Filterable PM _{2.5})													
E-460-4202-02	CD-460-04	0.005 gr/dscf (Filterable PM) 0.005 gr/dscf (Filterable PM ₁₀) 0.005 gr/dscf (Filterable PM _{2.5})													
5.B.3.h(6)	All	PM	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 4 - Emissions from Process Industries, Section VIII - Other Manufacturing, particulate matter emissions shall be limited to the rate specified by use of the following equation: for process weight rates less than or equal to 30 tons per hour ($E = 4.10P^{0.67}$) where E = the allowable emission rate in pounds per hour and P = process weight rate in tons per hour. As such, each process's allowable particulate matter emission limit is limited to the amount shown in the table below at its nominal production rating:</p> <table border="1" data-bbox="651 1503 1409 1600"> <thead> <tr> <th>Process</th> <th>PM Allowable (lb/hr)</th> <th>Process Weight Rate (tons/hr)</th> </tr> </thead> <tbody> <tr> <td>New Graphitizing</td> <td>13.94</td> <td>6.2</td> </tr> </tbody> </table> <p>State Only: No</p> <p>Testing: None</p> <p>Monitoring/Record Keeping/Reporting/Other: See Generic Condition 5.A.7.</p>	Process	PM Allowable (lb/hr)	Process Weight Rate (tons/hr)	New Graphitizing	13.94	6.2						
Process	PM Allowable (lb/hr)	Process Weight Rate (tons/hr)													
New Graphitizing	13.94	6.2													

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PART 5.B.3.h - CONDITIONS FOR NEW GRAPHITIZING PROCESS

Condition Number	Equipment/Control Device ID	Regulated Pollutant/Standard	Conditions
5.B.3.h(7)	All	Opacity	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 4 - Emissions from Process Industries, Section IX - Visible Emissions (Where Not Specified Elsewhere), where construction or modification began after December 31, 1985, emissions (including fugitive emissions) shall not exhibit an opacity greater than 20%, each.</p> <p>State Only: No</p> <p>Testing: None</p> <p>Monitoring/Record Keeping/Reporting/Other: The permittee shall perform a visual inspection on a daily basis. Visual Inspection means a qualitative observation of opacity during daylight hours where the inspector records results in a log, noting color, duration, density (heavy or light), cause and corrective action taken for any abnormal emissions. The observer does not need to be certified to conduct valid visual inspections. However, at a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, and observer position relative to lighting, wind, and the presence of uncombined water. Logs shall be kept to record all visual inspections, including cause and corrective action taken for any abnormal emissions and visual inspections from date of recording. For all cause and corrective actions taken for any abnormal emissions and visual inspections, the owner/operator shall submit semiannual reports.</p>

PART 5.B.1.i - EQUIPMENT FOR EXISTING CLEANING AND INSPECTION PROCESS

Equipment ID	Equipment Description	Control Device ID	Emission Point ID
E-490-01	Electrode Cleaning Machine; remove residual insulating media from electrode	CD-490-01B	S-490-01B

PART 5.B.2.i - CONTROL DEVICES FOR EXISTING CLEANING AND INSPECTION PROCESS

Control Device ID	Control Device Description	Pollutant(s) Controlled
CD-490-01B	SLY ST J-811-10 Baghouse	Filterable PM, PM ₁₀ , PM _{2.5}

PART 5.B.3.i - CONDITIONS FOR EXISTING CLEANING AND INSPECTION PROCESS

Condition Number	Equipment /Control Device ID	Regulated Pollutant/ Standard	Conditions						
5.B.3.i(1)	All	PM	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 4 - Emissions from Process Industries, Section VIII - Other Manufacturing, particulate matter emissions shall be limited to the rate specified by use of the following equation: for process weight rates less than or equal to 30 tons per hour ($E = 4.10P^{0.67}$) where E = the allowable emission rate in pounds per hour and P = process weight rate in tons per hour. As such, each process's allowable particulate matter emission limit is limited to the amount shown in the table below at its nominal production rating:</p> <table border="1" data-bbox="651 684 1409 814"> <thead> <tr> <th data-bbox="651 684 1019 747">Process</th> <th data-bbox="1019 684 1214 747">PM Allowable (lb/hr)</th> <th data-bbox="1214 684 1409 747">Process Weight Rate (tons/hr)</th> </tr> </thead> <tbody> <tr> <td data-bbox="651 747 1019 814">Existing Cleaning and Inspection</td> <td data-bbox="1019 747 1214 814">35.43</td> <td data-bbox="1214 747 1409 814">25</td> </tr> </tbody> </table> <p>State Only: No</p> <p>Testing: None</p> <p>Monitoring/Record Keeping/Reporting/Other: See Generic Condition 5.A.7.</p>	Process	PM Allowable (lb/hr)	Process Weight Rate (tons/hr)	Existing Cleaning and Inspection	35.43	25
Process	PM Allowable (lb/hr)	Process Weight Rate (tons/hr)							
Existing Cleaning and Inspection	35.43	25							
5.B.3.i(2)	All	Opacity	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 4 - Emissions from Process Industries, Section IX - Visible Emissions (Where Not Specified Elsewhere), where construction or modification began after December 31, 1985, emissions (including fugitive emissions) shall not exhibit an opacity greater than 20%, each.</p> <p>State Only: No</p> <p>Testing: None</p> <p>Monitoring/Record Keeping/Reporting/Other: The permittee shall perform a visual inspection on a daily basis. Visual Inspection means a qualitative observation of opacity during daylight hours where the inspector records results in a log, noting color, duration, density (heavy or light), cause and corrective action taken for any abnormal emissions. The observer does not need to be certified to conduct valid visual inspections. However, at a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, and observer position relative to lighting, wind, and the presence of uncombined water. No periodic monitoring for opacity will be required during periods of burning natural gas or propane only. Logs shall be kept to record all visual inspections, including cause and corrective action taken for any abnormal emissions and visual inspections from date of recording. For all cause and corrective actions taken for any abnormal emissions and visual inspections, the owner/operator shall submit semiannual reports.</p>						

PART 5.B.3.i - CONDITIONS FOR EXISTING CLEANING AND INSPECTION PROCESS

Condition Number	Equipment /Control Device ID	Regulated Pollutant/ Standard	Conditions
5.B.3.i(3)	All	PM PM ₁₀ PM _{2.5}	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration and based on BACT analysis, a PSD limit of 0.005 gr/dscf has been established for filterable PM, filterable PM₁₀, and filterable PM_{2.5}.</p> <p>State Only: No</p> <p>Testing: An initial source test for filterable PM, PM₁₀, and PM_{2.5} emissions shall be conducted within 180 days after startup of this project and every three (3) years thereafter. An initial source test to verify no condensable PM₁₀ and PM_{2.5} emissions are present shall be conducted within 180 days after startup of this project.</p> <p>Monitoring/Record Keeping/Reporting/Other: See Generic Condition 5.A.7.</p>

PART 5.B.1.j. - EQUIPMENT FOR EXISTING MACHINING AND SHIPPING PROCESS

Equipment ID	Equipment Description	Control Device ID	Emission Point ID
E-510-01	Station No. 1 – rough bore and face ends; machining/finishing of electrodes	CD-510-01	S-510-01
E-510-02	Station No. 2 – finish turn OD and face ends; machining/finishing of electrodes	CD-510-05	S-510-05
E-510-03	Station No. 3 – threading; machining/finishing of electrodes	CD-510-01	S-510-01
E-510-06	Graphite Chip Screen; screen graphite chips to various sizes	CD-510-01	S-510-01
E-510-07	Graphite Storage Bin #1; store graphite of specific size	CD-510-01	S-510-01
E-510-08	Graphite Storage Bin #2; store graphite of specific size	CD-510-01	S-510-01
E-510-09	Graphite Storage Bin #3; store graphite of specific size	CD-510-01	S-510-01
E-520-10	Powderizer System; screen graphite chips to specific sizes	CD-510-06	S-510-06
E-520-12	Cyclone Collector; collects fines from graphite dust	CD-510-06	S-510-06
E-520-13	Bag Packer; packs fines from cyclone collector	CD-510-06	S-510-06

PART 5.B.2.j - CONTROL DEVICES FOR EXISTING MACHINING AND SHIPPING PROCESS

Control Device ID	Control Device Description	Pollutant(s) Controlled
CD-510-01	Carborundum Co. Model HP1015 Baghouse	Filterable PM, PM ₁₀ , PM _{2.5}
CD-510-05	TONT DALDSON DFT 4-32 Baghouse	Filterable PM, PM ₁₀ , PM _{2.5}
CD-510-06	MAC 96A VR14 Style III Baghouse	Filterable PM, PM ₁₀ , PM _{2.5}

PART 5.B.3.j - CONDITIONS FOR EXISTING MACHINING AND SHIPPING PROCESS

Condition Number	Equipment /Control Device ID	Regulated Pollutant/ Standard	Conditions						
5.B.3.j(1)	All	PM	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 4 - Emissions from Process Industries, Section VIII - Other Manufacturing, particulate matter emissions shall be limited to the rate specified by use of the following equation: for process weight rates less than or equal to 30 tons per hour ($E = 4.10P^{0.67}$) where E = the allowable emission rate in pounds per hour and P = process weight rate in tons per hour. As such, each process's allowable particulate matter emission limit is limited to the amount shown in the table below at its nominal production rating:</p> <table border="1" data-bbox="651 684 1409 814"> <thead> <tr> <th data-bbox="651 684 1021 747">Process</th> <th data-bbox="1021 684 1216 747">PM Allowable (lb/hr)</th> <th data-bbox="1216 684 1409 747">Process Weight Rate (tons/hr)</th> </tr> </thead> <tbody> <tr> <td data-bbox="651 747 1021 814">Existing Machining and Shipping</td> <td data-bbox="1021 747 1216 814">35.43</td> <td data-bbox="1216 747 1409 814">25</td> </tr> </tbody> </table> <p>State Only: No</p> <p>Testing: None</p> <p>Monitoring/Record Keeping/Reporting/Other: See Generic Condition 5.A.7.</p>	Process	PM Allowable (lb/hr)	Process Weight Rate (tons/hr)	Existing Machining and Shipping	35.43	25
Process	PM Allowable (lb/hr)	Process Weight Rate (tons/hr)							
Existing Machining and Shipping	35.43	25							
5.B.3.j(2)	All	Opacity	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 4 - Emissions from Process Industries, Section IX - Visible Emissions (Where Not Specified Elsewhere), where construction or modification began after December 31, 1985, emissions (including fugitive emissions) shall not exhibit an opacity greater than 20%, each.</p> <p>State Only: No</p> <p>Testing: None</p> <p>Monitoring/Record Keeping/Reporting/Other: The permittee shall perform a visual inspection on a daily basis. Visual Inspection means a qualitative observation of opacity during daylight hours where the inspector records results in a log, noting color, duration, density (heavy or light), cause and corrective action taken for any abnormal emissions. The observer does not need to be certified to conduct valid visual inspections. However, at a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, and observer position relative to lighting, wind, and the presence of uncombined water. No periodic monitoring for opacity will be required during periods of burning natural gas or propane only. Logs shall be kept to record all visual inspections, including cause and corrective action taken for any abnormal emissions and visual inspections from date of recording. For all cause and corrective actions taken for any abnormal emissions and visual inspections, the owner/operator shall submit semiannual reports.</p>						

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PART 5.B.3.j - CONDITIONS FOR EXISTING MACHINING AND SHIPPING PROCESS

Condition Number	Equipment /Control Device ID	Regulated Pollutant/ Standard	Conditions
5.B.3.j(3)	All	PM PM ₁₀ PM _{2.5}	<p>Limits/Standards: In accordance with SC Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration and based on BACT analysis, a PSD limit of 0.005 gr/dscf has been established for filterable PM, filterable PM₁₀, and filterable PM_{2.5}.</p> <p>State Only: No</p> <p>Testing: An initial source test for filterable PM, PM₁₀, and PM_{2.5} emissions shall be conducted within 180 days after startup of this project and every three (3) years thereafter. An initial source test to verify no condensable PM₁₀ and PM_{2.5} emissions are present shall be conducted within 180 days after startup of this project.</p> <p>Monitoring/Record Keeping/Reporting/Other: See Generic Condition 5.A.7.</p>

PART 5.C. - CONDITIONS FOR FACILITY WIDE - LIMITATIONS, MONITORING AND REPORTING

Condition Number	Regulated Pollutant/ Standard	Conditions
5.C.1	PM PM ₁₀ PM _{2.5} SO ₂ CO NO _x VOC CO _{2e}	<p>The 1,500 kW diesel-fired emergency generator (E-240-2-4365-01) is permitted to burn only diesel as fuel. The owner/operator shall record monthly fuel consumption, including fuel grade and supplier certification of sulfur content of the fuel. Fuel oil sulfur content shall be less than or equal to 0.0015 percent by weight. Acceptable fuel oil certification can be ensured by following Department guidance entitled “Guidance for Fuel Oil Certifications” issued on August 12, 2004 and any subsequent revisions. Fuel oil supplier certification shall be obtained for each batch of oil received and stored on site and made available to the Department upon request. The diesel-fired emergency generator is limited to a maximum operating limit of 100 hours per year (for maintenance purposes only). The owner/operator must record the actual operating hours monthly. Reports of the recorded hours of operation shall be submitted semiannually. An annual tune-up is required for the diesel-fired emergency generator.</p>
5.C.2	PM PM ₁₀ PM _{2.5} SO ₂ CO NO _x VOC CO _{2e}	<p>The facility is limited to a maximum production rate of 85,000 metric tons per year of graphite electrodes. The owner/operator shall record the actual production rates on a monthly basis, and a twelve-month rolling sum shall be calculated. Reports of the production rate and the twelve-month rolling sum shall be submitted semiannually.</p>
5.C.3	PM PM ₁₀ PM _{2.5} SO ₂ CO NO _x VOC CO _{2e}	<p>All combustion sources (except for the diesel emergency generator) are permitted to burn only natural gas or propane as fuel. All thermal oxidizers are permitted to burn only natural gas or propane as fuel, as auxiliary fuel. The use of any other substances as fuel is prohibited without prior written approval from the Department. Natural gas and propane fuel usage shall be monitored, recorded on a monthly basis and kept on site. An annual tune-up is required for all combustion sources. Annual tune-up information shall be kept on site and made available to the Department upon request.</p>

PART 5.C. - CONDITIONS FOR FACILITY WIDE - LIMITATIONS, MONITORING AND REPORTING

Condition Number	Regulated Pollutant/ Standard	Conditions										
5.C.4	PM PM ₁₀ PM _{2.5} SO ₂ CO NO _x CO ₂	<p>Simultaneous source testing of the stack exhaust and roof monitor exhaust from the new graphitizing furnaces shall be conducted under worst case conditions and relative to the averaging period specified in the permit for filterable PM, filterable PM₁₀, filterable PM_{2.5}, condensable PM₁₀, and condensable PM_{2.5} limits.</p> <p>Simultaneous source testing of the stack exhaust and roof monitor exhaust from the new graphitizing furnaces shall be conducted for an entire batch cycle relative to the averaging period specified in the permit for SO₂, CO, NO_x, and CO₂ limits.</p>										
5.C.5	SO ₂	<p>In accordance with S.C. Regulation 61-62.5, Standard 7, Prevention of Significant Deterioration (PSD) and S.C. Regulation 61-62.70.3(a)(1), the facility is defined as a major source for SO₂ emissions. The facility has netted out of PSD for SO₂. The new and existing graphitizing furnaces will have wet scrubbers in place. The facility will be able to demonstrate compliance by meeting the following conditions:</p> <p>1) The following raw material sulfur contents have been established for the facility:</p> <table border="1" data-bbox="479 890 1451 1052"> <thead> <tr> <th>Raw Material</th> <th>Maximum Sulfur Content (% by weight)</th> </tr> </thead> <tbody> <tr> <td>Needle Coke</td> <td>0.565</td> </tr> <tr> <td>Binder Pitch</td> <td>0.65</td> </tr> <tr> <td>Impregnation Pitch</td> <td>1.0</td> </tr> <tr> <td>Insulating Media</td> <td>0.78</td> </tr> </tbody> </table> <p>(i) The owner/operator shall maintain records for sulfur content (% by weight) for each batch received of needle coke, binder pitch, impregnation pitch, and insulating media. These records shall be maintained on site and made available to the Department upon request.</p> <p>2) The owner/operator shall install and maintain liquid pressure indicators on each scrubber module. Each parameter shall be recorded each shift during source operation. The scrubbers shall be in place and operational whenever processes controlled by the scrubbers are running, except during periods of scrubber malfunction or mechanical failure. Prior to the first source test, the facility shall use manufacturer's recommendations for operational ranges. These operational ranges for the monitored parameters shall be derived from stack test data, which demonstrate the proper operation of the equipment in compliance. These ranges, with supporting documentation and quality assurance procedures, shall be submitted to the Bureau for approval within 180 days of startup. The operating ranges may be updated using this procedure, following Bureau approval. Each incidence of operation outside these operational ranges, including date and time, cause, and corrective action taken, shall be recorded and kept on site for five (5) years. Reports of these incidences shall be submitted semiannually. These semiannual reports shall include daily pressure drop readings. If no incidences occurred during the reporting period then a letter shall indicate such.</p> <p>3) An initial source test for SO₂ emissions shall be conducted on the stack and roof monitor of the new graphitizing furnaces within 180 days after startup and every three (3) years thereafter. See Facility Wide Condition 5.C.5.</p> <p>4) An initial source test for SO₂ emissions shall be conducted on the stacks of the existing graphitizing furnaces within 180 days after startup of this project and every three (3) years thereafter. See Facility Wide Condition 5.C.5.</p> <p>5) The results of these initial and subsequent source tests shall be used to verify and establish emission</p>	Raw Material	Maximum Sulfur Content (% by weight)	Needle Coke	0.565	Binder Pitch	0.65	Impregnation Pitch	1.0	Insulating Media	0.78
Raw Material	Maximum Sulfur Content (% by weight)											
Needle Coke	0.565											
Binder Pitch	0.65											
Impregnation Pitch	1.0											
Insulating Media	0.78											

PART 5.C. - CONDITIONS FOR FACILITY WIDE - LIMITATIONS, MONITORING AND REPORTING

Condition Number	Regulated Pollutant/ Standard	Conditions										
		factors, verify emissions used in air dispersion modeling, and verify emission assumptions and netting analysis calculations. Semi-annual reports shall be submitted to the Department that includes monthly SO ₂ emission calculations and a 12-month rolling sum.										
5.C.6	NO _x	<p>In accordance with SC Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration and based on BACT analysis, the following raw material nitrogen contents have been established for the facility:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th align="center">Raw Material</th> <th align="center">Maximum Nitrogen Content (% by weight)</th> </tr> </thead> <tbody> <tr> <td align="center">Needle Coke</td> <td align="center">0.24</td> </tr> <tr> <td align="center">Binder Pitch</td> <td align="center">0.89</td> </tr> <tr> <td align="center">Impregnation Pitch</td> <td align="center">1.14</td> </tr> <tr> <td align="center">Insulating Media</td> <td align="center">Initial sampling as specified below</td> </tr> </tbody> </table> <p>(i) The owner/operator shall maintain records for nitrogen content (% by weight) for each batch received of needle coke, binder pitch, and impregnation pitch. The owner/operator shall perform an initial analysis for nitrogen content for the insulating media within 180 days of start up of this project, in order to verify emissions and assumptions utilized. These records shall be maintained on site and made available to the Department upon request. Any exceedances of the raw material nitrogen content limits shall be submitted semiannually to the Department. If no exceedances occurred during the reporting period then a letter shall be submitted to the Department indicating such.</p>	Raw Material	Maximum Nitrogen Content (% by weight)	Needle Coke	0.24	Binder Pitch	0.89	Impregnation Pitch	1.14	Insulating Media	Initial sampling as specified below
Raw Material	Maximum Nitrogen Content (% by weight)											
Needle Coke	0.24											
Binder Pitch	0.89											
Impregnation Pitch	1.14											
Insulating Media	Initial sampling as specified below											

PART 6 - ADDITIONAL CONDITIONS

PART 6.A - OPERATIONAL FLEXIBILITY

Condition Number	Conditions
N/A	N/A

N/A = Not Applicable

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PART 6.B - OTHER

Condition Number	Conditions
6.B.1	<p>Showa Denko Carbon, Inc. will construct and maintain perimeter fencing on their property boundary. This fencing will be completed prior to start of operation of the expansion and the facility shall certify to the construction of the fence in their operating permit request.</p> <p>The facility shall cause to be posted on both sides of the road at both ends of the road as it crosses the Showa Denko property signage that states,</p> <ul style="list-style-type: none"> a- the property is private; b- access is restricted; c- vehicles may not stop, stand or park; d- loitering is prohibited. <p>The signs must be clearly visible and legible to any vehicle. Weathered or damaged signs shall be replaced immediately. The facility shall monitor the Showa Denko owned portion of Haven Road to ensure there is no loitering and that no authorized vehicle stops, stands, or parks. Monitoring on that portion of the road includes,</p> <ul style="list-style-type: none"> a- Surveillance cameras to monitor for loitering or any prohibited or unauthorized vehicle activity; b- Staff assigned to monitoring the road and cameras and who would be trained and responsible for responding to any situation where an authorized vehicle was not traversing the road in an appropriate amount of time; c- Written procedures for responding to any loitering or unauthorized vehicle issues. <p>Incidents will be recorded and maintained on site for a period of 5 years. Records shall include the date of the incident, action taken, and the amount of time any non-Showa Denko personnel remained on that portion of the road.</p>

N/A = Not Applicable

PART 7 - NESHAP REQUIREMENTS

PART 7.A - NESHAP PERIODIC REPORTING SCHEDULE SUMMARY

NESHAP Part	NESHAP Subpart	Compliance Monitoring Report Submittal Frequency	Reporting Period	Report Due Date
63	ZZZZ	Initial Only	One Time	Upon startup
63	B	Semiannual	January 1 through June 30 and July 1 through December 31	January 30 and July 30

Note:

1. This table summarizes only the periodic compliance reporting schedule. Additional reports may be required. See specific NESHAP Subpart for additional reporting requirements and associated schedule.
2. This reporting schedule does not supersede any other reporting requirements including but not limited to 40 CFR Part 60, 40 CFR Part 61, and/or 40 CFR Part 63.
3. Refer to condition 7.D.12 for the initial reporting frequency.

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PART 7.B - NESHAP - GENERAL REQUIREMENTS

Condition Number	Condition
7.B.1	All NESHAP notifications and reports shall be sent to the South Carolina Department of Health and Environmental Control - Bureau of Air Quality (SCDHEC - BAQ) at the following address: SCDHEC - BAQ Air Toxics Section 2600 Bull Street Columbia, SC 29201
7.B.2	All NESHAP notifications and the cover letter to periodic reports shall be sent to the United States Environmental Protection Agency (US EPA) at the following address: US EPA, Region 4 Air, Pesticides and Toxics Management Division 61 Forsyth Street Atlanta, GA 30303

PART 7.C - NESHAP PART 63 SUBPART ZZZZ - AFFECTED SOURCES

SUBPART ZZZZ – NESHAP for Stationary Reciprocating Internal Combustion Engines

Equipment ID	Affected Source Description	MACT Control Device	Non-MACT Control Device
E-240-2-4365-01	New Diesel Fuel-Fired 1,500 kW Emergency Generator	N/A	N/A

Part 7.C lists the affected sources as identified in the facility's Notice of Compliance Status and the permit application.
N/A = Not Applicable

PART 7.C - NESHAP PART 63 SUBPART ZZZZ - CONDITIONS

SUBPART ZZZZ – NESHAP for Stationary Reciprocating Internal Combustion Engines (RICE)

Condition Number	Equipment/ Control Device ID	Condition
7.C.1	E-240-2-4365-01	The engine has been defined as an affected source, in accordance with 40 CFR 63 Subpart ZZZZ. In accordance with 40 CFR 63.6640(f), a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that was installed on or after June 12, 2006 shall meet be the requirements of Subpart ZZZZ for an emergency stationary RICE. The requirements of this part will be met by meeting the requirements of 40 CFR 60 Subpart III. No further requirements apply for such engines under this part.

PART 7.D - NESHAP PART 63 SUBPART B - AFFECTED SOURCES

SUBPART B – Requirements For Control Technology Determinations For Major Sources In Accordance With Clean Air Act Sections, Sections 112(g)

Equipment ID	Affected Source Description	MACT Control Device	Non-MACT Control Device
Mill, Mix and Extrusion (New)			
E-110-2-4253-01	Mixer No. 1	CD-110-4345-28	N/A
E-110-2-4253-02	Mixer No. 2		

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PART 7.D - NESHAP PART 63 SUBPART B - AFFECTED SOURCES
SUBPART B – Requirements For Control Technology Determinations For Major Sources In Accordance
With Clean Air Act Sections, Sections 112(g)

Equipment ID	Affected Source Description	MACT Control Device	Non-MACT Control Device
E-110-2-4253-03	Mixer No. 3		
E-110-2-4253-04	Mixer No. 4		
E-110-2-4221-10	Mixer Discharge Belt		
E-110-2-4222-20	Screw Spreader		
E-110-2-4221-11	Cooling Belt position 1		
E-110-2-4221-12	Cooling Belt position 2		
E-110-2-4253-05	Homogenizer		
E-110-2-4221-13	Homogenizer Discharge Belt		
E-110-2-4275-01	Hot Oil Heater (5 million Btu/hr)	N/A	N/A
E-110-25	Binder Pitch Tank	CD-110-14	N/A
Bake/Rebake Process (New)			
E-210-2-4271-18/32	Carbottom Furnaces Nos. 18-32 + Incinerator	CD-210-2-4333-01	N/A
Pitch Impregnation (New)			
E-310-2-4272-21	Preheater (6.0 million Btu/hr x 2 zones)	N/A	N/A
E-310-2-4201-01	Autoclave/spray cooler/cooling bath	CD-310-2-4333-01	
-	Fume Incinerator (Control Device)	CD-310-2-4333-01	
E-310-2-4275-01	Hot Oil Heater (5 million Btu/hr)	N/A	
Graphitizing Furnaces (new)			
E-460-4271-01/10	Graphitizing Furnaces (total of 10)	Utilizing metallurgical coke as the only insulating media or utilizing an alternate insulating media as approved by the Department	N/A

Part 7.D lists the affected sources as identified in the facility's Notice of Compliance Status and the permit application.
N/A = Not Applicable

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PART 7.D - NESHAP PART 63 SUBPART B - CONDITIONS
SUBPART B – Requirements For Control Technology Determinations For Major Sources In Accordance With Clean Air Act Sections, Sections 112(g)

Condition Number	Equipment /Control Device ID	Condition
General Requirements		
7.D.1	All	The owner/operator shall comply with 40 CFR 63 <i>National Emission Standards for Hazardous Air Pollutants (NESHAP) for Source Categories</i> , Subpart A <i>General Provisions</i> and Subpart B <i>Requirements for Control Technology Determinations for Major Sources</i> in accordance with the CAA, Section 112(g) and SC Regulation 61-62.63, Subparts A and B, as applicable.
7.D.2	All	All provisions contained in this NOMA shall be federally enforceable upon the effective date of issuance of such notice, as provided by SC Regulations 61-63.43(j) and 63.43(g)(3).
7.D.3	All	This NOMA applies to the proposed Mill, Mix and Extrusion process, fifteen (15) Carbottom Furnaces (Nos. 18-32), the proposed Autoclave/Spray Cooler/Cooling Bath and the proposed ten (10) graphitizing furnaces to be located at Showa Denko Carbon, Inc., 478 Ridge Road, Ridgeville, SC 29472.
7.D.4	All	All official correspondence, plans, permit applications, and written statements are an integral part of this NOMA.
7.D.5	All	The owner/operator shall submit written notification to the Director of the Engineering Services Division and the Regional Air Section Manager of the date construction is commenced, postmarked no later than 30 days after such date, and written notification of the actual date of initial startup of each new or altered source, postmarked within 15 days after such date.
7.D.6	All	The owner or operator shall comply with all terms, conditions, and limitations of this NOMA.
MACT Emission Limits		

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PART 7.D - NESHAP PART 63 SUBPART B - CONDITIONS
SUBPART B – Requirements For Control Technology Determinations For Major Sources In Accordance With Clean Air Act Sections, Sections 112(g)

Condition Number	Equipment /Control Device ID	Condition			
7.D.7	CD-110-4345-28; CD-110-14; CD-210-2-4333-01; E-460-4271-01/10	Pursuant to 40 CFR 63.43(g) and SC Regulation 61-63.43(g)(1) MACT determination, the owner/operator shall not discharge or cause to be discharged into the atmosphere any emissions of POM in excess of the limits listed below:			
		New Process/Source	Work Practice Standards	Emission Limit (lb/hr)	Control Efficiency (%)
		Mill, Mix and Extrusion	N/A	0.071 lb/hr (total from Dry Fume Scrubber/Baghouse)	N/A
		Mill, Mix and Extrusion	Work practice standards for the vent condenser, controlling the Binder Pitch Tank	N/A	N/A
		Bake/Rebake (Carbottom Furnaces)	N/A	14.17 (total from TO)	99
		Pitch Impregnation (Autoclaves/Spray Cooler/Cooling bath)	N/A	3.00 (total from TO)	99
		Graphitizing Furnaces	Utilizing metallurgical coke as the only insulating media or utilizing an alternate insulating media as approved by the Department	N/A	N/A
General Compliance Requirements					
7.D.8	All	The owner/operator must be in compliance with the emissions limitations listed in condition 7.D.7 including operating limits, at all times. Compliance is demonstrated when the emission rate of POM is equal to or less than the emission limit, when work practice standards are met for the vent condensers, and when the insulating media of the graphitizing furnaces is metallurgical coke only.			
7.D.9	All	The owner/operator must always operate and maintain the mill, mix and extrusion process, each carbottom furnaces, autoclave/spray cooler/cooling bath, and each graphitizing furnace including air pollution control and monitoring equipment, according to the provisions in 40 CFR 63.6(e)(1)(i).			

PART 7.D - NESHAP PART 63 SUBPART B - CONDITIONS
SUBPART B – Requirements For Control Technology Determinations For Major Sources In Accordance With Clean Air Act Sections, Sections 112(g)

Condition Number	Equipment /Control Device ID	Condition						
7.D.10	All	The owner/operator must develop a written startup, shutdown, and malfunction plan, as outlined in 40 CFR 63.6(e)(3), that describes, in detail, procedures for operating and maintaining the mill, mix and extrusion process, each carbottom furnace, autoclave/spray cooler/cooling bath, and each graphitizing furnace during periods of startup, shutdown, and malfunction; and a program of corrective action for malfunctioning process, air pollution control, and monitoring equipment used to comply with the emission limitations in 7.D.7. The startup, shutdown, and malfunction plan does not need to address any scenario that would not cause either equipment to exceed an emission limitation. This plan must be developed by the owner/operator by startup. During periods of startup, shutdown, and malfunction, the owner/operator must operate each carbottom furnaces and autoclave/spray cooler/cooling bath in accordance with the startup, shutdown, and malfunction plan.						
7.D.11	All	The carbottom furnaces are permitted to burn only natural gas or propane (back-up) as fuel. The TO for the carbottom furnaces are allowed to burn only natural gas, propane (back-up) and the gaseous waste stream from the carbottom furnaces. The TO for the autoclave/spray cooler/cooling bath are allowed to burn only natural gas, propane (back-up) and the gaseous waste stream from the autoclave/spray cooler/cooling bath. The use of any other substances as fuel is prohibited without prior written approval from the Department.						
Initial Compliance Requirements								
7.D.12	CD-110-4345-28	<p>In order to demonstrate initial compliance with the MACT emissions limitations in condition 7.D.7, the owner/operator must conduct an initial performance tests for the dry fume scrubber/baghouse and conduct monitoring equipment performance evaluations within 60 days after achieving the maximum production rate at which the facility will be operated, but not later than 180 days after initial startup.</p> <p>The owner/operator must conduct each performance test at representative performance (i.e., performance based on normal operating conditions) and must demonstrate initial compliance based on this test.</p> <p>Notification of intent to source test, submittal of site-specific test plans, performance of source tests, and the reporting of source test results shall comply with 40 CFR 63 Sections 63.7 and 63.10 and with SC Regulation 61-62.1, Section IV Source Tests. The owner/operator shall submit a site specific test plan at least 60 calendar days before the performance test is scheduled to take place. The Department must be notified at least two weeks prior to a source test so that a representative may be present.</p> <table border="1" data-bbox="488 1493 1455 1556"> <thead> <tr> <th>Pollutant</th> <th>Emission Limit</th> <th>Method</th> </tr> </thead> <tbody> <tr> <td>POM</td> <td>0.071 lb/hr (total)</td> <td>As Approved by the Bureau</td> </tr> </tbody> </table>	Pollutant	Emission Limit	Method	POM	0.071 lb/hr (total)	As Approved by the Bureau
Pollutant	Emission Limit	Method						
POM	0.071 lb/hr (total)	As Approved by the Bureau						
7.D.13	CD-110-14	<p>The owner/operator is limited to the use of work practice standards for the vent condenser controlling HAP emissions from the Binder Pitch Tank.</p> <table border="1" data-bbox="488 1713 1455 1839"> <thead> <tr> <th>Pollutant</th> <th>Emission Limit</th> <th>Method</th> </tr> </thead> <tbody> <tr> <td>HAPs</td> <td>Work practice standards consisting of the inspection and cleaning of the condenser coils on a semiannual basis.</td> <td>Recordkeeping</td> </tr> </tbody> </table>	Pollutant	Emission Limit	Method	HAPs	Work practice standards consisting of the inspection and cleaning of the condenser coils on a semiannual basis.	Recordkeeping
Pollutant	Emission Limit	Method						
HAPs	Work practice standards consisting of the inspection and cleaning of the condenser coils on a semiannual basis.	Recordkeeping						

PART 7.D - NESHAP PART 63 SUBPART B - CONDITIONS
SUBPART B – Requirements For Control Technology Determinations For Major Sources In Accordance With Clean Air Act Sections, Sections 112(g)

Condition Number	Equipment /Control Device ID	Condition									
7.D.14	CD-210-2-4333-01; and CD-310-2-4333-01	<p>In order to demonstrate initial compliance with the MACT emissions limitations in condition 7.D.7, the owner/operator must conduct an initial performance test for the Thermal Oxidizer for the carbottom furnaces and the fume incinerator for the pitch impregnation process, establish a 3-hour block average minimum operating temperature, and conduct monitoring equipment performance evaluations within 60 days after achieving the maximum production rate at which the facility will be operated, but not later than 180 days after initial startup.</p> <p>The owner/operator must conduct each performance test at representative performance (i.e., performance based on normal operating conditions) and must demonstrate initial compliance based on this test.</p> <p>During the initial performance test, the facility shall continuously monitor the firebox temperature during each of the required 1-hour test runs. The minimum firebox temperature must then be established as the average of the three minimum 15-minute firebox temperatures monitored during each of the three 1-hour test runs.</p> <p>When conducting the performance test for POM emissions, the owner/operator needs to use method 315.</p> <p>Notification of intent to source test, submittal of site-specific test plans, performance of source tests, and the reporting of source test results shall comply with 40 CFR 63 Sections 63.7 and 63.10 and with SC Regulation 61-62.1, Section IV Source Tests. The owner/operator shall submit a site specific test plan at least 60 calendar days before the performance test is scheduled to take place. The Department must be notified at least two weeks prior to a source test so that a representative may be present.</p> <table border="1" data-bbox="488 1167 1455 1268"> <thead> <tr> <th>Pollutant</th> <th>Emission Limit</th> <th>Method</th> </tr> </thead> <tbody> <tr> <td>POM</td> <td>14.7 lb/hr (carbottom furnaces)</td> <td>As Approved by the Bureau</td> </tr> <tr> <td>POM</td> <td>3.00 lb/hr (autoclave/cooling section)</td> <td>As Approved by the Bureau</td> </tr> </tbody> </table>	Pollutant	Emission Limit	Method	POM	14.7 lb/hr (carbottom furnaces)	As Approved by the Bureau	POM	3.00 lb/hr (autoclave/cooling section)	As Approved by the Bureau
Pollutant	Emission Limit	Method									
POM	14.7 lb/hr (carbottom furnaces)	As Approved by the Bureau									
POM	3.00 lb/hr (autoclave/cooling section)	As Approved by the Bureau									
7.D.15	E-460-4247-01/10	<p>The owner/operator shall use the following work practice standards for the new graphitizing furnaces.</p> <table border="1" data-bbox="488 1392 1455 1551"> <thead> <tr> <th>Pollutant</th> <th>Work Practice Standards</th> <th>Method</th> </tr> </thead> <tbody> <tr> <td>HAPs</td> <td>Utilizing metallurgical coke as the only insulating media or utilizing an alternate insulating media as approved by the Department</td> <td>Recordkeeping</td> </tr> </tbody> </table>	Pollutant	Work Practice Standards	Method	HAPs	Utilizing metallurgical coke as the only insulating media or utilizing an alternate insulating media as approved by the Department	Recordkeeping			
Pollutant	Work Practice Standards	Method									
HAPs	Utilizing metallurgical coke as the only insulating media or utilizing an alternate insulating media as approved by the Department	Recordkeeping									
Continuous Compliance Requirements											

PART 7.D - NESHAP PART 63 SUBPART B - CONDITIONS
SUBPART B – Requirements For Control Technology Determinations For Major Sources In Accordance With Clean Air Act Sections, Sections 112(g)

Condition Number	Equipment /Control Device ID	Condition										
7.D.16	CD-110-4345-28	<p>Pursuant to 40 CFR 63.43 (g)(2)(ii) and SC Regulation 61-63.43(g)(2), the owner/operator shall conduct the following monitoring to assure continuous compliance with the applicable emission limitations in condition 7.D.7.</p> <table border="1" data-bbox="440 575 1395 703"> <thead> <tr> <th data-bbox="440 575 967 611">Pollutant/Parameter</th> <th data-bbox="967 575 1395 611">Monitoring</th> </tr> </thead> <tbody> <tr> <td data-bbox="440 611 967 703">Work practice standards consisting of the inspection and cleaning of the condenser coils on a semiannual basis</td> <td data-bbox="967 611 1395 703">Recordkeeping</td> </tr> </tbody> </table> <p>The owner/operator is limited to the use of work practice standards, as specified above, only for the vent condenser, controlling the emissions from the Binder Pitch Tank. Records shall be kept on-site, verifying that the work practice standards are met.</p>	Pollutant/Parameter	Monitoring	Work practice standards consisting of the inspection and cleaning of the condenser coils on a semiannual basis	Recordkeeping						
Pollutant/Parameter	Monitoring											
Work practice standards consisting of the inspection and cleaning of the condenser coils on a semiannual basis	Recordkeeping											
7.D.17	CD-110-4345-28; CD-210-2-4333-01; and CD-310-2-4333-01	<p>Pursuant to 40 CFR 63.43 (g)(2)(ii) and SC Regulation 61-63.43(g)(2), the owner/operator shall conduct the following monitoring to assure continuous compliance with the applicable emission limitations in condition 7.D.7.</p> <table border="1" data-bbox="440 987 1395 1272"> <thead> <tr> <th data-bbox="440 987 967 1022">Pollutant/Parameter</th> <th data-bbox="967 987 1395 1022">Monitoring</th> </tr> </thead> <tbody> <tr> <td data-bbox="440 1022 967 1083">POM (thermal oxidizer, fume incinerator and dry fume scrubber/baghouse)</td> <td data-bbox="967 1022 1395 1083">Source Tests as specified below</td> </tr> <tr> <td data-bbox="440 1083 967 1144">Dry Fume Scrubber/Baghouse(Mix, Mill and Extrusion)</td> <td data-bbox="967 1083 1395 1144">Rotary vane rpm (coke flow) and fan amperage (air flow)</td> </tr> <tr> <td data-bbox="440 1144 967 1205">Thermal Oxidizer Temperature (Carbottom Furnaces)</td> <td data-bbox="967 1144 1395 1205">Continuous temperature monitoring</td> </tr> <tr> <td data-bbox="440 1205 967 1272">Fume Incinerator Temperature (autoclave/cooling section)</td> <td data-bbox="967 1205 1395 1272">Continuous temperature monitoring</td> </tr> </tbody> </table> <p>To demonstrate continuous compliance with the POM emission limitations for the Thermal Oxidizer and the Fume Incinerator in condition 7.D.7, the owner/operator will record the 3-hour block average of all recorded firebox temperature readings, and maintain the 3-hour block average temperature above the minimum temperature established during the performance test. The firebox temperature indicator monitoring system must measure and record a temperature reading at least every fifteen minutes.</p> <p>When conducting the performance test for POM emissions, the owner/operator needs to use method 315.</p> <p>A source test of the Fume Incinerator, the Thermal Oxidizer and the Dry Fume Scrubber/Baghouse shall be performed every three (3) years after the initial performance test. Less frequent source testing for POM from these sources may be conducted if at least two (2) consecutive performance tests show that the emissions are at or below 75% of the emission limitation, and if there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. In this case, no performance testing will be required for the next four (4) years. A performance test shall be conducted during the fifth year and no more than 60 months after the previous performance test.</p> <p>All source tests shall be conducted in accordance with 40 CFR 63.7 and SC Regulation 61-62.1, Section IV, Source Tests and as required in the “Initial Compliance Requirements” section of this NOMA.</p>	Pollutant/Parameter	Monitoring	POM (thermal oxidizer, fume incinerator and dry fume scrubber/baghouse)	Source Tests as specified below	Dry Fume Scrubber/Baghouse(Mix, Mill and Extrusion)	Rotary vane rpm (coke flow) and fan amperage (air flow)	Thermal Oxidizer Temperature (Carbottom Furnaces)	Continuous temperature monitoring	Fume Incinerator Temperature (autoclave/cooling section)	Continuous temperature monitoring
Pollutant/Parameter	Monitoring											
POM (thermal oxidizer, fume incinerator and dry fume scrubber/baghouse)	Source Tests as specified below											
Dry Fume Scrubber/Baghouse(Mix, Mill and Extrusion)	Rotary vane rpm (coke flow) and fan amperage (air flow)											
Thermal Oxidizer Temperature (Carbottom Furnaces)	Continuous temperature monitoring											
Fume Incinerator Temperature (autoclave/cooling section)	Continuous temperature monitoring											

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PART 7.D - NESHAP PART 63 SUBPART B - CONDITIONS
SUBPART B – Requirements For Control Technology Determinations For Major Sources In Accordance With Clean Air Act Sections, Sections 112(g)

Condition Number	Equipment /Control Device ID	Condition				
7.D.18	E-460-4247-01/10	<p>Pursuant to 40 CFR 63.43 (g)(2)(ii) and SC Regulation 61-63.43(g)(2), the owner/operator shall conduct the following monitoring to assure continuous compliance with the applicable emission limitations in condition 7.D.7.</p> <table border="1" data-bbox="440 575 1395 674"> <thead> <tr> <th data-bbox="440 575 967 611">Pollutant/Parameter</th> <th data-bbox="967 575 1395 611">Monitoring</th> </tr> </thead> <tbody> <tr> <td data-bbox="440 611 967 674">Utilizing metallurgical coke only as a insulating media (graphitizing furnaces)</td> <td data-bbox="967 611 1395 674">Recordkeeping</td> </tr> </tbody> </table> <p>The owner/operator is limited to the use of metallurgical coke only as the insulation medium for the new graphitizing furnaces. Records shall be kept on-site, verifying that only metallurgical coke is utilized as the insulating medium. Alternate materials may be utilized as insulating media, if the HAP content of all regulated HAP pollutants in the alternate insulating media, is less than or equal to the HAP content in the metallurgical coke. The owner/operator shall submit a request to the Department, and receive approval in writing, prior to utilizing any such alternate insulating media.</p>	Pollutant/Parameter	Monitoring	Utilizing metallurgical coke only as a insulating media (graphitizing furnaces)	Recordkeeping
Pollutant/Parameter	Monitoring					
Utilizing metallurgical coke only as a insulating media (graphitizing furnaces)	Recordkeeping					
Monitoring Installation, Operation, And Maintenance Requirements						
7.D.19	CD-210-2-4333-01; and CD-310-2-4333-01	<p>Each continuous parameter monitoring system (CPMS) for the Thermal Oxidizer and Fume Incinerator must be capable of completing a minimum of one cycle of operation (sampling, analyzing, and recording) for each successive 15-minute period.</p> <p>At all times, the owner/operator must maintain the monitoring equipment including, but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.</p> <p>Record the results of each inspection, calibration, and validation check.</p> <p>For each temperature monitoring device, the facility must meet the following requirements:</p> <ol style="list-style-type: none"> (1) Locate the temperature sensor in a position that provides a representative temperature. (2) Use a temperature sensor with a minimum accuracy of 4°F or 0.75 percent of the temperature value, whichever is larger. (3) Perform an electronic calibration at least semiannually according to the procedures in the manufacturer's owners manual. Following the electronic calibration, conduct a temperature sensor validation check in which a second or redundant temperature sensor placed nearby the process temperature sensor must yield a reading within 30°F of the process temperature sensor's reading. (4) Conduct calibration and validation checks any time the sensor exceeds the manufacturer's specified maximum operating temperature range or install a new temperature sensor. (5) At least quarterly, inspect all components for integrity and all electrical connections for continuity, oxidation, and galvanic corrosion. 				
Notification Requirements						
7.D.20	All	a. The owner/operator must submit all of the notifications in 40 CFR 63.6(h)(4) and 63.6(h)(5), 63.7(b) and 63.7(c), 63.8(e), 63.8(f)(4) and 63.8(f)(6), and 63.9(b) through (h) that apply to the owner/operator by				

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**PART 7.D - NESHAP PART 63 SUBPART B - CONDITIONS
SUBPART B – Requirements For Control Technology Determinations For Major Sources In Accordance With Clean Air Act Sections, Sections 112(g)**

Condition Number	Equipment /Control Device ID	Condition
		<p>the dates specified.</p> <p>b. The owner/operator must submit a Notification of Compliance Status report according to 40 CFR 63.9(h)(2)(ii) and the requirements specified in paragraphs c and d of this section.</p> <p>c. For each initial compliance demonstration, the owner/operator must submit the Notification of Compliance Status report, including all performance test results, before the close of business on the 60th day following the completion of the performance test and/or other initial compliance demonstrations according to 40 CFR 63.10(d)(2).</p> <p>d. In addition to the requirements in 63.9(h), the Notification of Compliance Status report must contain all the information specified in paragraphs (1) through (4) below, as applicable.</p> <p>(1) A description of the affected source(s) including identification of which subcategory the source is in, the capacity of the source, a description of the add-on controls used on the source description of the fuel(s) burned, and justification for the worst-case fuel burned during the performance test.</p> <p>(2) Summary of the results of all performance tests, fuel analyses, and calculations conducted to demonstrate initial compliance including all established operating limits.</p> <p>(3) A signed certification that the owner/operator has met all emissions limitations.</p> <p>(4) If had a deviation from any emission limitation, the owner/operator must also submit a description of the deviation, the duration of the deviation, and the corrective action taken in the Notification of Compliance Status report.</p>
Recordkeeping Requirements		
7.D.21	All	<p>a. The owner/operator shall keep records as required by 40 CFR 63 Subpart A.</p> <p>b. The owner/operator shall calculate and record POM emissions. To demonstrate continuous compliance with the POM emission limitations in condition 7.D.7, the owner/operator will calculate and record POM emissions on a monthly basis and a twelve-month rolling sum. Reports of the calculated values shall be submitted to the Department semiannually.</p> <p>c. The owner/operator must keep a copy of each notification and report that the owner/operator submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that the owner/operator submitted in accordance with the requirements in 40 CFR §63.10(b)(2)(xiv).</p> <p>d. In accordance with 40 CFR §63.10(b)(1), the owner or operator of an affected source subject to the provisions of this part shall maintain files of all information (including all reports and notifications) required by this part recorded in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.</p>

**PART 7.D - NESHAP PART 63 SUBPART B - CONDITIONS
SUBPART B – Requirements For Control Technology Determinations For Major Sources In Accordance With Clean Air Act Sections, Sections 112(g)**

Condition Number	Equipment /Control Device ID	Condition
Reporting Requirements		
7.D.22	All	<p>a. The owner/operator shall submit reports as required by 40 CFR 63 Subpart A.</p> <p>b. The facility will calculate POM emissions on a monthly basis and a twelve- month rolling sum shall be calculated for total POM emissions. Reports of the calculated values and the twelve-month rolling sum shall be submitted to the Department semiannually. These reports shall confirm that POM emissions do not exceed the permit application.</p> <p>c. An algorithm, including example calculations and emission factors, explaining the method used to determine emission rates shall be included in the initial report. Subsequent submittals of the algorithm and example calculations are unnecessary, unless the method of calculation is found to be unacceptable by the Department or if the facility changes the method of calculating emissions and/or changes emission factors.</p> <p>d. In accordance with 40 CFR §63.10(d)(1), notwithstanding the requirements in this paragraph or paragraph (e) of this section, and except as provided in §63.16, the owner or operator of an affected source subject to reporting requirements under this part shall submit reports to the Administrator in accordance with the reporting requirements in the relevant standard(s).</p> <p>e. The owner/operator must submit a semiannual compliance report to the Department according to the requirements below:</p> <ol style="list-style-type: none"> (1) The first compliance report must cover the period beginning at startup and ending on June 30 or December 31, and lasting at least 6 months, but less than 12 months. (2) The first compliance report must be postmarked or delivered no later than July 30 or January 30, whichever date comes first after the first compliance report is due. (3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. (4) Each subsequent compliance report must be postmarked or delivered no later than July 30 or January 30, whichever date comes first after the end of the semiannual reporting period. <p>f. The compliance report must contain the information required below:</p> <ol style="list-style-type: none"> (1) Company name and address (2) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report (3) Date of report and beginning and ending dates of the reporting period

PART 8 - REPORTING REQUIREMENTS

PART 8.A - PERIODIC REPORTING SCHEDULE

Compliance Monitoring Report Submittal Frequency	Reporting Period (Begins on the startup date of the source.)	Report Due Date
Quarterly	January-March April-June July-September October-December	April 30 July 30 October 30 January 30
Semiannual	January-June April-September July-December October-March	July 30 October 30 January 30 April 30
Annual	January-December April-March July-June October-September	January 30 April 30 July 30 October 30

Note: This reporting schedule does not supersede any federal reporting requirements including but not limited to 40 CFR Part 60, 40 CFR Part 61, and 40 CFR Part 63. All federal reports must meet the reporting time frames specified in the federal standard unless the Department or EPA approves a change.

PART 8.B - REPORTING CONDITIONS

Condition Number	Condition
8.B.1	Reporting required in this permit, shall be submitted in a timely manner as directed in Part 8.A of this permit.
8.B.2	Unless elsewhere specified within this permit, all reports required under this permit shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality, at the address listed below. SCDHEC - BAQ Technical Management Section 2600 Bull Street Columbia, SC 29201

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The emission rates listed herein are not considered enforceable limitations but are used to evaluate ambient air quality impact. Until the Department makes a determination that a facility is causing or contributing to an exceedance of a state or federal ambient air quality standard, increases to these emission rates are not in themselves considered violations of these ambient air quality standards (see conditions 3.2 and 3.3).

STANDARD NO. 2 - MODELED AAQS EMISSION RATES (LBS/HR)							
STACK ID	PM₁₀	PM_{2.5}	SO₂	NO_x⁽¹⁾	CO	Lead	HF
LO2	0.793	0.765	16.500	0.130	85.000	--	--
ML1a	6.127	6.096	188.098	--	--	--	--
MP01	1.180	1.180	--	--	--	--	--
MP02	1.030	1.030	--	--	--	--	--
MP04	1.710	1.710	--	--	--	--	--
MP33	9.191	9.191	41.699	79.922	19.699	1.17E-04	--
MP52	0.770	0.770	--	--	--	--	--
MP54	0.640	0.640	--	--	--	--	--
MP55	0.018	0.018	0.001	0.411	0.186	--	--
MP56	0.018	0.018	0.001	0.414	0.188	--	--
MP57	0.018	0.018	0.001	0.414	0.188	--	--
MP58	0.018	0.018	0.001	0.414	0.188	--	--
MP59	1.170	1.170	0.004	9.183	4.840	2.99E-06	--
MP59	--	--	--	0.270	0.075	--	--
MP61	0.007	0.007	--	--	--	--	--
MP68	4.190	4.190	27.072	2.900	1900.826	--	--
MP74	0.900	0.900	--	--	--	--	--
MP75	0.430	0.430	--	--	--	--	--
NP08	0.144	0.144	--	--	--	--	--
NP09	1.410	1.410	--	--	--	--	--
NP10	0.086	0.086	--	--	--	--	--
NP11	0.086	0.086	--	--	--	--	--
NP12	2.790	2.790	--	--	--	--	--
NP13	0.690	0.690	--	--	--	--	--
NP14	0.039	0.039	0.003	0.720	0.410	2.45E-06	--
NP49	10.349	10.349	46.802	76.882	23.699	1.40E-04	--

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STANDARD NO. 2 - MODELED AAQS EMISSION RATES (LBS/HR)							
NP64	0.100	0.100	0.007	1.710	0.990	5.88E-06	--
NP65	1.170	1.170	0.004	9.183	4.840	3.68E-06	--
NP66	0.039	0.039	0.003	0.718	0.414	2.45E-06	--
NP70	6.010	6.010	21.937	2.400	1606.376	--	--
NP71	0.040	0.040	--	--	--	--	--
NP72	0.190	0.190	--	--	--	--	--
XP03	0.204	0.204	--	--	--	--	--
XP05	0.021	0.021	--	--	--	--	--
XP06	0.039	0.039	0.003	0.720	0.410	2.45E-06	--
XP50	0.860	0.860	--	--	--	--	--
XP51	0.043	0.043	--	--	--	--	--
XP53	0.430	0.430	--	--	--	--	--
XP55	0.015	0.015	0.001	0.192	0.161	2.06E-06	--
XP56	0.014	0.014	0.001	0.189	0.159	2.06E-06	--
XP57	0.014	0.014	0.001	0.189	0.159	2.06E-06	--
XP58	0.014	0.014	0.001	0.189	0.159	2.06E-06	--
XP61	0.023	0.023	0.002	0.305	0.256	1.96E-06	--
XP62	0.035	0.035	0.003	0.650	0.370	2.21E-06	--
XP62	0.035	0.035	0.003	0.650	0.370	2.21E-06	--
XP67	0.750	0.750	--	--	--	--	--
XP69	0.190	0.190	--	--	--	--	--
XP73	0.380	0.380	--	--	--	--	--
XP76	0.030	0.030	--	--	--	--	--
FACILITY TOTAL	54.417	54.358	342.147	188.106	3649.594	0.00029	--
1) Rates shown are the full NOx rates, but the modeling ARM (0.8) was applied to the modeling concentration results.							

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STANDARD NO. 7 - MODELED PSD CLASS II INCREMENT EMISSION RATES (LBS/HR)				
STACK ID	Minor Source Baseline Date(s)			
	6/5/1981	⁽²⁾	11/30/1977	1/25/2006
	PM₁₀	PM_{2.5}	SO₂	NO_x⁽¹⁾
BP33	--	--	--	-75.192
LO2	0.793	0.793	16.500	0.130
ML1a	--	--	188.098	--
ML1b	6.096	6.096	--	--
MP01	1.180	1.180	--	--
MP02	1.030	1.030	--	--
MP04	1.710	1.710	--	--
MP33	9.191	9.191	41.699	79.922
MP52	0.770	0.770	--	--
MP54	0.640	0.640	--	--
MP55	0.018	0.018	0.001	0.411
MP56	0.018	0.018	0.001	0.414
MP57	0.018	0.018	0.001	0.414
MP58	0.018	0.018	0.001	0.414
MP59	1.170	1.170	0.004	9.183
MP61	0.007	0.007	--	0.270
MP68	--	--	27.072	2.900
MP68	4.190	4.190	--	--
MP74	0.900	0.900	--	--
MP75	0.430	0.430	--	--
NP08	0.144	0.144	--	--
NP09	1.410	1.410	--	--
NP10	0.086	0.086	--	--
NP11	0.086	0.086	--	--
NP12	2.790	2.790	--	--
NP13	0.690	0.690	--	--
NP14	0.039	0.039	0.003	0.720

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STANDARD NO. 7 - MODELED PSD CLASS II INCREMENT EMISSION RATES (LBS/HR)				
STACK ID	Minor Source Baseline Date(s)			
	6/5/1981	(2)	11/30/1977	1/25/2006
	PM₁₀	PM_{2.5}	SO₂	NO_x⁽¹⁾
NP49	10.349	10.349	46.802	76.882
NP64	0.100	0.100	0.007	1.710
NP65	1.170	1.170	0.004	9.183
NP66	0.039	0.039	0.003	0.718
NP70	6.010	6.010	21.937	2.400
NP71	0.040	0.040	--	--
NP72	0.190	0.190	--	--
XP01	--	-1.180	--	--
XP02	--	-1.030	--	--
XP03	0.204	--	--	--
XP04	--	-1.710	--	--
XP05	0.021	--	--	--
XP06	0.039	--	0.003	--
XP33	--	-5.838	--	--
XP50	0.860	--	--	--
XP51	0.043	--	--	--
XP52	--	-0.770	--	--
XP53	0.430	--	--	--
XP54	--	-0.640	--	--
XP55	0.015	--	0.001	--
XP56	0.014	--	0.001	--
XP57	0.014	--	0.001	--
XP58	0.014	--	0.001	--
XP59	--	-1.170	--	-9.183
XP61	0.023	--	0.002	--
XP62	0.035	--	0.003	--
XP67	0.750	--	--	--
XP68	--	-8.389	--	-1.684

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STANDARD NO. 7 - MODELED PSD CLASS II INCREMENT EMISSION RATES (LBS/HR)				
STACK ID	Minor Source Baseline Date(s)			
	6/5/1981	⁽²⁾	11/30/1977	1/25/2006
	PM₁₀	PM_{2.5}	SO₂	NO_x⁽¹⁾
XP69	0.190	--	--	--
XP73	0.380	--	--	--
XP74	--	-0.900	--	--
XP75	--	-0.430	--	--
XP76	0.030	--	--	--
FACILITY TOTALS	54.384	29.265	342.147	99.612
1) Rates shown are the full NO _x rates, but the modeling ARM (0.8) was applied to the modeling concentration results.				
2) There is no minor source baseline date for PM _{2.5} in Dorchester County at this time. The PFC-75 project is after the Major Source Baseline date of 10/20/10, so project emission increases are increment consuming.				

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Reserved

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