

**Part 70 Permit
No. 47-065-4240**

This Permit Shall Remain in Full Force and Effect
From February 3, 2009, through February 2, 2014

Issued to:

**PORTER WARNER INDUSTRIES, LLC
P.O. BOX 2159
2 EAST 38TH STREET
CHATTANOOGA, TENNESSEE 37409-0159**

Designated Representative:
Gerald S. Hilton
Operations Manager
Telephone: (423) 266-4735

Responsible Official:

Agreed to by: _____
Gerald S. Hilton
Operations Manager

*An Application for Renewal Must Be Submitted to the Director of
the Chattanooga-Hamilton County Air Pollution Control Bureau
No Later Than August 2, 2013*

**CHATTANOOGA-HAMILTON COUNTY
AIR POLLUTION CONTROL BUREAU**
6125 Preservation Drive
Chattanooga, Tennessee 37416-3638
Telephone: (423) 643-5970

Robert H. Colby
Director

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EMISSION UNIT SUMMARY

The emission units regulated by this permit are the following:

Emission Unit No.	Description
001	Three 310-Ton Capacity Sand Storage Silos
002	Sand Delivery System
003	Resin-Coated Sand Production Lines #1, #2, and #3
004	150-Ton Capacity Sand Storage Silo

CONDITIONS OF GENERAL APPLICABILITY

This permittee, Porter Warner Industries, LLC, is subject to each of the conditions expressed below and is required to comply with them throughout the term of this Part 70 permit. By accepting this permit and operating under it, Porter Warner Industries agrees to comply with all terms, provisions, limitations, and requirements herein.

Where the term “Chattanooga Air Pollution Control Ordinance” is used in this permit, it means Part II, Chapter 4, of the Chattanooga City Code and any provisions of amendatory ordinances enacted subsequent to the date of the most recent codification of the Chattanooga City Code. **ALL SECTIONS OF THE CHATTANOOGA AIR POLLUTION CONTROL ORDINANCE CITED IN THIS PERMIT ARE INCORPORATED HEREIN BY REFERENCE.** Section numbers referred to in this permit which are not otherwise identified refer to sections in the Chattanooga Air Pollution Control Ordinance.

- 1.0 Definitions. Unless specifically defined within a provision of the Chattanooga Air Pollution Control Ordinance referenced elsewhere in this permit, the definitions in §4-2 and §4-53 shall apply. §4-2; §4-53

- 2.0 Severability. If any provision, part of a provision, sentence, clause, or phrase in this permit is for any reason declared to be unconstitutional or otherwise invalid by any court of competent jurisdiction, such decision shall not affect the validity of any other portion of this permit, and only such invalid portion shall be elided. §4-57(a)(5)

- 3.0 Compliance.
 - 3.1 The permittee must comply with all conditions of this Part 70 permit. Noncompliance with any permit provision constitutes a violation of either the Chattanooga Air Pollution Control Ordinance; the Tennessee Air Quality Act, T.C.A. 68-201-101 *et seq.*; and/or the federal Clean Air Act, as amended, Title 42 United States Code (U.S.C.) §7401 *et seq.* and is grounds for joint and several enforcement action; for permit termination, revocation, or modification; or for denial of a permit renewal application. Enforcement by the Chattanooga-Hamilton County Air Pollution Control Board (the Board) or the Director of the Chattanooga-Hamilton County Air Pollution Control Bureau (the Bureau) shall be conducted in accordance with the provisions of §4-4, §4-7, §4-14, §4-15, §4-17, §4-18, §4-20, §4-61, §4-62, §4-63, §4-64, and §4-65, as appropriate to the circumstances. §4-57(a)(6)(i)

 - 3.2 It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. §4-57(a)(6)(ii)

 - 3.3 This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification,

revocation and reissuance, or termination; or the filing of a notification of planned changes or anticipated noncompliance does not stay any condition in this permit. §4-57(a)(6)(iii)

- 3.4 Annual compliance certifications shall be submitted by **February 2** of each year throughout the term of this permit. Separate compliance certifications shall be submitted to:

Chattanooga-Hamilton County Air Pollution Control Bureau
6125 Preservation Drive
Chattanooga, TN 37416-3638

and to:

U.S. EPA Region 4
Air Enforcement Section
Sam Nunn Atlanta Federal Center
61 Forsyth Street SW
Atlanta, GA 30303-8960

Each such compliance certification shall include the following information (provided that the identification of applicable information may cross-reference the permit or previous reports as applicable):

- 3.4.1 Identification of each term or condition of the permit that is the basis of the certification;
- 3.4.2 Compliance status;
- 3.4.3 Whether compliance was continuous or intermittent;
- 3.4.4 The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with §4-57(a)(3);
- 3.4.5 Where any specific test method requires quality assurance audit samples and the audit result does not validate the source's sample within the specified parameters, the source must retest the stack test until such time as the audit result does validate the sample within the specified parameters; except that the Bureau Director may waive retesting if the source's stack test sample is in compliance with this permit even if not validated within the specified quality assurance parameters; §4-3(d)
- 3.4.6 Such other facts as the Board or the Bureau Director may require to determine the compliance status of the Part 70 source; and §4-57(c)(5)(iii)(E)

3.4.7 Such additional requirements as may be required for enhanced monitoring compliance certification under Title 42 U.S.C. §7414(a)(3) and §7661c(b) of the Clean Air Act. §4-3(d); §4-57(c)(5)

The annual compliance period that is covered by each compliance certification shall be the previous calendar year from **January 1 through December 31**.

- 3.5 The methods set forth in §4-3 shall be applicable for determining compliance with all terms, provisions, limitations, and requirements contained in this permit, except where otherwise specifically provided in this permit.
- 4.0 Property Rights. This permit does not convey any property rights of any sort or any exclusive privilege. This permit is not assignable except as provided in §4-58(d)(1)(iv). §4-57(a)(6)(iv)
- 5.0 Information to be Furnished. The permittee shall furnish to the Bureau Director, within a reasonable period of time, any information that the Board or the Bureau Director may request in writing to determine whether cause exists for modifying, revoking, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Board or the Bureau Director copies of records required to be kept by the permit. For information claimed to be confidential, the permittee may furnish such records directly to the Administrator of the U.S. Environmental Protection Agency (EPA) along with a claim of confidentiality. Eligibility for confidential treatment shall be determined by the Board pursuant to the provisions of §4-19 for information submitted directly to the Bureau Director. An independent determination regarding confidentiality would be made by the Administrator of the U.S. EPA for information submitted directly to the Administrator. §4-57(a)(6)(v)
- 6.0 Fees. The permittee shall pay fees to the Bureau Director consistent with the fee provisions set forth in §4-60. §4-57(a)(7)
- 7.0 Changes Provided for by Permit. No permit revision shall be required under any economic incentives, marketable permits, emissions trading, or similar program or process which is included in the Chattanooga City Code, Part II, Chapter 4, Article III for changes that are provided for in this permit pursuant to such program or process. §4-57(a)(8)
- 8.0 Reasonably Anticipated Operating Scenarios. Contemporaneously with making a change from one operating scenario to another, the permittee must record in a log at the Part 70 source premises a record of the scenarios under which it is operating. §4-57(a)(9)
- 9.0 Acid Precipitation Requirements. Where an applicable requirement of the Clean Air Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Clean Air Act and incorporated by reference at §4-52(d), both provisions are herein incorporated into this permit by reference and shall be legally enforceable. This

source does not lawfully hold any allowance under Title IV of the Clean Air Act. §4-57(a)(1)(ii)

10.0 Federal Enforceability. All terms and conditions in this Part 70 permit, including any provisions designed to limit the potential to emit of this Part 70 source, are enforceable by the Administrator of the U.S. EPA and by citizens under the Clean Air Act except for the following, which are locally enforceable only:

10.1 §4-41, Rule 12 (Regulation of Odors in the Ambient Air) and

10.2 §4-41, Rule 14 (Nuisances).

Any terms and conditions included in the permit that are not required under the Clean Air Act or under any of its applicable requirements are specifically designated in this permit as not being federally enforceable under the Clean Air Act. §4-57(b)

11.0 Inspection of Permitted Source(s). Upon presentation of identification and in the performance of their duties, the permittee shall allow the Bureau Director and other Bureau employees to perform the following:

11.1 Enter upon the permittee's premises or buildings where a Part 70 source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;

11.2 Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;

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

11.4 Sample or monitor substances or parameters, and collect and preserve evidence for the purpose of assuring compliance with the permit or applicable requirements thereunder at reasonable times and for taking such other actions as are appropriate under the law in accordance with Item 3.1 of these Conditions of General Applicability.

11.5 For the purposes of Items 11.2, 11.3, and 11.4 of these Conditions of General Applicability, "reasonable times" shall be considered to be customary business hours, unless reasonable cause exists to suspect noncompliance with the Chattanooga Air Pollution Control Ordinance or any "applicable requirement," as defined in §4-53, or with any permit issued thereunder, and the Bureau Director specifically authorizes a designee to inspect a facility at any other time.

11.6 In the alternative, the Bureau Director, other Bureau employees, or any other law enforcement officer may obtain a search warrant to obtain, collect, and preserve evidence.

§4-16; §4-57(c)(2)

12.0 Recordkeeping and Reporting.

12.1 Record Retention Requirements. All required monitoring data and related support information shall be retained by the permittee for five (5) years after the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, all original strip-chart recordings for continuous monitoring instrumentation, copies of all reports, and logs required by the permit. §4-57(a)(3)(ii)(B)

12.2 Reporting of Deviations. The permittee shall promptly report all emission limitation exceedances and all other deviations from permit requirements (including those attributable to malfunctions), the probable cause of such exceedance or deviation, and any corrective actions or preventive measures taken. "Promptly report" shall mean an initial telephone report to the Bureau Director within twenty-four (24) hours after the onset of the exceedance or other deviation, followed up by a written report submitted to the Bureau Director within seven (7) days after the onset of the exceedance or other deviation. Any excess emissions or other deviation that creates an imminent hazard requiring immediate action to protect health or safety must be reported by telephone immediately to the Bureau Director, to the Hamilton County Local Emergency Planning Committee, to the Tennessee Emergency Management Agency, and to the National Response Center. §4-12; §4-57(a)(3)(iii)(B)

13.0 Emergency Provision.

13.1 Definition. An emergency is any situation arising from sudden and reasonably unforeseeable events beyond the control of the permittee, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the permittee to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error. §4-57(g)

13.2 An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of Item 13 of these Conditions of General Applicability are met, unless an ambient air violation occurs as a result of the emergency. The affirmative defense

of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence which establishes that:

- 13.2.1 An emergency occurred and that the permittee can identify the cause(s) of the emergency;
- 13.2.2 The permitted facility was at the time being properly operated;
- 13.2.3 During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and
- 13.2.4 The permittee submitted a telephone notice of the emergency to the Bureau Director within one (1) working day of the time when emission limitations were exceeded due to the emergency, and the permittee submitted a follow up written report to the Bureau within seven (7) days after the onset of the exceedance. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

§4-57(g)

- 13.3 In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof. *§4-12; §4-57(g)*
- 13.4 The permittee must employ all reasonable measures to keep emissions to a minimum during start-ups, shutdowns, operation, and emergencies. These measures may include installation and use of alternate control systems, changes in operating methods or procedures, cessation of operation until the process equipment or air pollution control equipment is repaired, maintaining sufficient spare parts, use of overtime labor, use of outside consultants and contractors, and other appropriate means. Exceedances of limitations on emissions that are caused by poor maintenance, careless operation, or any other preventable upset condition or preventable equipment breakdown shall not be considered emergencies, and shall be considered in violation of the emission standard exceeded. *§4-12*
- 13.5 A log of any operation or failure to operate, start-up, or shutdown resulting in air pollutant emissions in excess of any applicable requirement must be kept at the Part 70 source. This log must record at least the following:
 - 13.5.1 Stack, air pollution control equipment, or emission point involved;
 - 13.5.2 Time excess emissions, start-up, or shutdown began or when excess emissions were first discovered by the source;

- 13.5.3 Type of exceedance qualifying as a malfunction, or reason for shutdown;
- 13.5.4 Time start-up or shutdown was complete or time the air pollutant source returned to normal operation after an emissions exceedance;
- 13.5.5 Documentation that the source was or was not, at the time of the onset of the exceedance, being properly operated;
- 13.5.6 Documentation of any preventative maintenance of the air pollution control equipment or process equipment or processes that had been completed prior to the emissions exceedance, start-up, or shutdown;
- 13.5.7 The steps taken by the source during the period of the emissions exceedance, start-up, or shutdown to minimize levels of emissions that exceeded the applicable requirements; and
- 13.5.8 The magnitude and identity of the excess emissions, expressed in pounds per hour and the units of the applicable emission limitation, and the operating data and calculations used in determining the magnitude of the excess emissions.

§4-12

- 13.6 The information required by Items 13.5.1 and 13.5.2 of these Conditions of General Applicability must be entered into the log by the end of the shift during which the exceedance or other deviation began. All required information shall be entered in the log no later than twenty-four (24) hours after the exceedance or other deviation has ceased or has been corrected. Any later discovered corrections may be added in the log as footnotes with the reason given for the change. There shall be no erasures, obliterations, modifications, or revisions of the log entry except by single line-through and identification of corrections.
§4-12

- 13.7 If the Bureau Director or the Administrator of the Chattanooga-Hamilton County Health Department finds that a condition of air pollution exists or is likely to exist, and that it creates any emergency requiring immediate action to protect human health or safety, the mayor with the concurrence of the Bureau Director or the Administrator of the Chattanooga-Hamilton County Health Department shall order persons causing or contributing to the air pollution to reduce or discontinue immediately the emission of air pollutants. Upon issuance of any such order, the Bureau Director shall fix a place and time, not later than twenty-four (24) hours thereafter, for a hearing to be held before the Board. Not more than twenty-four (24) hours after commencement of such hearing, and without adjournment thereafter, the Board shall affirm, modify, or recommend to the mayor that the order be affirmed, modified, or set aside. *§4-20*

- 14.0 Certification. Any application form, report, or compliance certification submitted pursuant to this permit shall contain a certification, as defined in §4-53, by a responsible official, as defined in §4-53, of truth, accuracy, and completeness. Any certification required by this permit shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. §4-56(d)
- 15.0 Modifications.
- 15.1 Administrative amendments to this permit shall be requested and may be granted in accordance with §4-58(d), and only for the reasons set forth therein. The permittee is required to submit an application for an administrative amendment within sixty (60) days after a change of the name of the permittee is registered with the Tennessee Secretary of State.
- 15.2 Minor permit modifications to this permit shall be requested and may be granted in accordance with §4-58(e)(1) and (2).
- 15.3 Significant permit modifications to this permit shall be requested and may be granted in accordance with §4-58(e)(3).
- 15.4 Operational flexibility allows changes within this permitted source without requiring a permit revision, if the changes are not modifications under Title I of the Clean Air Act and the changes do not exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions), provided that:
- 15.4.1 The permittee provides the U.S. EPA and the Bureau Director with written notification at least seven (7) days in advance of the proposed changes; and
- 15.4.2 For each such change, said written notification shall include a brief description of the change within the permitted source, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.
- The permit shield described in §4-57(f) shall not apply to any change made pursuant to operational flexibility. §4-58(i)
- 15.5 Installation permit application and issuance requirements in §4-8(a) will apply to this permittee and emission units located at this Part 70 source if modifications to or new construction of a Part 70 source are subject to the following:
- 15.5.1 §4-41, Rule 18 (Prevention of Significant Air Quality Deterioration);

- 15.5.2 §4-41, Rule 25.3 (General Provisions and Applicability for Volatile Organic Compounds – Standards for New Sources);
- 15.5.3 §4-41, Rule 23 (General Provisions and Applicability for Process Gaseous Emissions Standards);
- 15.5.4 Any standard or other requirement pursuant to regulations promulgated under Title 42 U.S.C. §7411 in Title 40 *Code of Federal Regulations* Part 60;
- 15.5.5 Case-by-case determinations made pursuant to Title 42 U.S.C. §7412(g) and (j) as set forth at §4-53 “Applicable requirements (4)”; or
- 15.5.6 Case-by-case determinations made pursuant to §4-41, Rule 27 (Particulate Matter Controls for New Sources and New Modifications After August 29, 1995).

§4-50

16.0 Off-Permit Changes.

- 16.1 An off-permit change is one that:
 - 16.1.1 Is not addressed or prohibited by the permit;
 - 16.1.2 Is not a modification under Title I of the Clean Air Act;
 - 16.1.3 Is not subject to any requirements under Title IV of the Clean Air Act;
 - 16.1.4 Meets all applicable requirements, as described in this permit; and
 - 16.1.5 Does not violate, or cause or contribute to a violation of, any existing permit term or condition.
- 16.2 A contemporaneous notification shall be submitted to the Bureau Director and to the U.S. EPA except for changes that qualify as insignificant under §4-56(c)(11) and (c)(12).
- 16.3 The permittee shall keep a record describing off-permit changes made at the Part 70 source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those off-permit changes.
- 16.4 The permit shield described in §4-57(f) shall not apply to any change made pursuant to off-permit changes.

§4-58(j)

17.0 Permit Reopening. This permit shall be reopened and revised under any of the following circumstances, as set forth at §4-58(f)(1):

17.1 Additional applicable requirements become applicable by amendment of the Chattanooga Air Pollution Control Ordinance to this source and the remaining permit term is three (3) or more years. Such reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire;

17.2 Additional requirements (including excess emissions requirements) become applicable to an affected source as defined in §4-53. Upon approval by the Administrator of the U.S. EPA and amendment of the Chattanooga Air Pollution Control Ordinance, excess emissions offset plans shall be incorporated into the permit;

17.3 The Board, the Bureau Director, or the Administrator of the U.S. EPA determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or

17.4 The Board, the Bureau Director, or the Administrator of the U.S. EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

Proceedings to reopen and issue a revised permit shall follow the same procedures as apply to initial permit issuance, described in §4-58, and shall affect only those parts of the permit for which cause to reopen exists. Such reopening shall be made as expeditiously as practicable, but only after notice of such intent is provided to this permittee by the Bureau Director at least thirty (30) days in advance of the date that permit is to be reopened. A shorter time period may be provided in the case of an emergency. §4-58(f)

This permit is also subject to reopening for cause by the U.S. EPA, as described in §4-58(g). §4-58(g)

18.0 Rules Applicable to All Permittee Activities. The following conditions apply to all activities of this permittee, including insignificant activities:

18.1 Nitrogen Oxides. The permittee shall comply with §4-41, Rules 2.4, 2.5, and 2.7, regarding emissions of nitrogen oxides.

- 18.2 Visible Emissions. The permittee shall comply with §4-41, Rule 3, which stipulates that the opacity of visible emissions shall not exceed twenty (20) percent for an aggregate of more than five (5) minutes in any one-hour period or more than twenty (20) minutes in any twenty-four-hour period. The permittee shall also comply with §4-41, Rule 9, regarding visible emissions from internal combustion engines. In addition, the permittee shall comply with §4-41, Rule 11, which stipulates that the opacity of visible emissions from the handling, processing, or storage of any material in the open air shall not exceed twenty (20) percent for more than three (3) minutes in any consecutive sixty-minute period or more than twenty (20) minutes in any twenty-four-hour period. §4-3(c)(9)
- 18.3 Certain Fuels. The permittee shall comply with §4-41, Rule 4, regarding importation, sale, transportation, use, or consumption of fuels containing in excess of four (4) percent sulfur by weight.
- 18.4 Prohibition of Hand-Fired Fuel-Burning Equipment. The permittee shall comply with §4-41, Rule 5, regarding the prohibition of the use of hand-fired fuel-burning equipment with solid fuels.
- 18.5 Open Burning. The permittee is prohibited from conducting open burning except in accordance with §4-41, Rule 6.
- 18.6 Fuel-Burning Equipment. The permittee shall comply with §4-41, Rule 8, regarding particulate matter emissions from fuel-burning equipment.
- 18.7 Process Emissions. The permittee shall comply with §4-41, Rule 10, regarding process particulate matter emissions.
- 18.8 Odors in Ambient Air. The permittee shall comply with §4-41, Rule 12, regarding emissions of objectionable odors. (local rule only)
- 18.9 Sulfur Oxides. The permittee shall comply with §4-41, Rule 13, regarding emissions of sulfur oxides.
- 18.10 Nuisances. The permittee shall comply with §4-41, Rule 14, regarding discharges from any source of air contaminants or other material which shall cause a nuisance. (local rule only)
- 18.11 Hazardous Air Pollutants. The permittee shall comply with §4-41, Rules 16.1 through 16.4, regarding emission standards for hazardous air pollutants other than asbestos.
- 18.12 Asbestos – Demolition or Renovation. The permittee shall comply with §4-41, Rules 17.5, 17.10, 17.12, and 17.13, when conducting any demolition or renovation activities at the permitted source.

- 18.13 Stack Heights. The permittee shall comply with §4-41, Rule 22, regarding good engineering practice stack heights.
- 18.14 Particulate Matter Controls for New Sources and New Modifications. The permittee shall comply with §4-41, Rule 27, regarding particulate matter controls for any new source or modification for which installation commences after August 29, 1995.
- 19.0 Stratospheric Ozone and Climate Protection. The permittee is subject to the standards for recycling and emissions reduction promulgated at Title 40 *Code of Federal Regulations* Part 82, Subpart F, including the use of certified technicians only.
- 20.0 Dismantled Equipment. The permittee shall report the permanent discontinuance or dismantlement of any equipment or activity covered by this permit to the Bureau Director within thirty (30) days. §4-11(a)
- 21.0 Monitoring. All monitoring and related reporting shall be conducted in compliance with §4-57(a)(3)(ii)(A) and (B).
- 22.0 Applicable Requirements. In addition to the Conditions of General Applicability, Conditions Applicable to the Entire Facility, and Emission Unit Special Conditions in this permit, “applicable requirements” as defined in §4-53 shall apply.
- 23.0 Basis of Permit. This permit is being issued based on the statements made and the information provided in the Part 70 permit application submitted under oath by this source.

CONDITIONS APPLICABLE TO THE ENTIRE FACILITY

- 1.0 Semiannual Compliance Monitoring Reports. In addition to reports that are required by the Conditions of General Applicability, a semiannual compliance monitoring report shall be submitted by **February 2** and **August 2** of each year throughout the term of this permit. The compliance monitoring report shall be submitted to:

Chattanooga-Hamilton County Air Pollution Control Bureau
6125 Preservation Drive
Chattanooga, TN 37416-3638

Each such compliance monitoring report shall include the following information:

- 1.1 The annual number of hours that each of the Resin-Coated Sand Production Lines #1, #2, and #3 (**Emission Unit 003**) was operated during each of the previous six (6) rolling twelve (12)-month periods (ending on the last day of each calendar month of the reporting period); §4-41, Rule 25.3
- 1.2 The annual quantity of resin-coated sand that was produced in Resin-Coated Sand Production Lines #1, #2, and #3 (**Emission Unit 003**) combined during the preceding twelve (12) months (ending on the last day of the reporting period); §4-57(c)(1)
- 1.3 The single highest calculated unpolymerized phenol concentration of any batch of sand, at the time that novolac resin was initially applied to it, that was used in any of Resin-Coated Sand Production Lines #1, #2, and #3 (**Emission Unit 003**) during the reporting period; §4-41, Rule 25.3
- 1.4 The annual quantity of resin-coated sand that was loaded into the 150-ton capacity sand storage silo (**Emission Unit 004**) during the preceding twelve (12) months (ending on the last day of the reporting period); and §4-57(c)(1)
- 1.5 A detailed summary of deviations from permit requirements during the reporting period indicating every instance in which an emission unit was operated outside of required parameters (e.g. visible emission limitations) or was operated while air pollution control equipment that was required to be used was not in operation, bypassed (by way of a pressure relief valve, blown rupture disk, blown gasket, etc.), or operated outside of required parameters. For each such incident, the nature and cause of the incident, affected equipment, calendar date, beginning time, elapsed time, value of any operating parameter that was not met, and estimated resulting emissions shall be included in the summary. §4-57(a)(3)(iii)(B)

The six (6)-month reporting period that is covered by each compliance monitoring report that is due on February 2 shall be from **July 1 through December 31** of the previous

year. The six (6)-month reporting period that is covered by each compliance monitoring report that is due on August 2 shall be from **January 1 through June 30** of the current year. §4-57(a)(3)(iii)

- 2.0. Air Pollution Control Equipment Replacement. The addition of air pollution control equipment to achieve additional emissions reductions and/or the replacement of air pollution control equipment with equipment of equal or greater control efficiency for each pollutant controlled by the original equipment are changes that qualify as operational flexibility with the exception that air pollution control technology required by any regulation promulgated pursuant to Section 112 of the Clean Air Act codified at Title 40 *Code of Federal Regulations* Part 63, including control measures employed to demonstrate early reductions of hazardous air pollutants, is not eligible for replacement under operational flexibility. Operational flexibility changes are subject to the notification requirements of Item 15.4 of the Conditions of General Applicability. §4-58(i)
- 3.0 Air Pollution Control Equipment Maintenance. Preventative maintenance on each piece of air pollution control equipment at the facility shall be performed at regular intervals in accordance with the manufacturers' recommendations. This air pollution control equipment consists of three fabric sock filters (Emission Unit 001) and four baghouses (Emission Units 003 and 004). §4-57(a)(1)

EMISSION UNIT SPECIAL CONDITIONS

Emission Unit 001 – Three 310-Ton Capacity Sand Storage Silos

- 1.0 Particulate matter emissions from each of the three 310-ton capacity sand storage silos and from the bucket elevator that precedes them shall be vented to and controlled by a fabric sock filter. The four filters shall be used in accordance with the manufacturer's recommendations. Only one of the three silos may be loaded at any one time from a railcar, and only one of them may be loaded at any one time from a tank truck. The pneumatic loading line of each silo for loading from tank trucks shall be closed off when it is not in use. For each of the three silos, the silo shall not be loaded if its filter and the filter for the bucket elevator are not functional and in place. §4-57(a)(1)
- 2.0 The maximum allowable emissions of particulate matter from any of the three 310-ton capacity sand storage silos and the preceding bucket elevator combined are 0.25 grain per standard cubic foot (gr/scf). This emission limitation is equivalent to 0.011 pound/hour for the calculated exhaust flow rate of 5.05 standard cubic feet per minute (scfm) when a silo is being loaded from a railcar by way of the bucket elevator. This emission limitation is equivalent to 0.64 pound/hour for the reported exhaust flow rate of 300 scfm when a silo is being loaded pneumatically from a tank truck. §4-41, Rule 10.7
- 3.0 Visible emissions from the three 310-ton capacity sand storage silos and preceding bucket elevator shall not exceed five (5) percent opacity for an aggregate of more than five (5) minutes in any period of one hour or more than twenty (20) minutes in any period of twenty-four hours. §4-57(a)(1)
- 4.0 For each of the three filters for the 310-ton capacity sand storage silos, the presence, or lack thereof, of any visible emissions from the filter exhaust shall be determined by visual observation at least once each day while the silo that is served by the filter is being loaded. In addition, the presence, or lack thereof, of any visible emissions from the exhaust of the filter for the preceding bucket elevator shall be determined by visual observation at least once each day while any of the three silos is being loaded. ***Corrective action shall be taken if any emissions are visible.*** A log shall be maintained, on the premises, in which the results of the daily observations are recorded. For each observation of visible emissions, the corrective action that was taken and the calendar date on which it was completed shall also be recorded in the log. In addition, each day shall be noted in the log for which no observation could be made because a silo was not loaded. §4-57(c)(1)
- 5.0 Testing of any of the three 310-ton capacity sand storage silos or the preceding bucket elevator, as controlled by a filter, to determine the emissions of particulate matter and to determine the opacity of the emissions may be required by the Bureau Director. If required, these tests shall, at a minimum, consist of and be performed in accordance with EPA Test Methods 1, 2, 3, 4, 5, and 9, Title 40 *Code of Federal Regulations* Part 60, Appendix A and in accordance with §4-3. §4-3; §4-8(c)(8); §4-57(c)(1)

Emission Unit 002 – Sand Delivery System

- 1.0 The sand delivery system consists of a belt conveyor for railcar unloading and a belt conveyor for unloading the three 310-capacity sand storage silos. The emission sources of this system are four transfer points where sand is deposited onto or discharged from either of the two belt conveyors. Only one of the three silos may be unloaded at any one time. §4-57(a)(1)
- 2.0 Visible emissions from the sand delivery system shall not exceed ten (10) percent opacity for an aggregate of more than fifteen (15) minutes in any period of one hour or more than sixty (60) minutes in any period of twenty-four hours. §4-41, Rule 26.11
- 3.0 Visible emissions from the sand delivery system shall not exceed twenty (20) percent opacity for an aggregate of more than three (3) minutes in any period of one hour or more than twenty (20) minutes in any period of twenty-four hours. §4-41, Rule 11

Emission Unit 003 – Resin-Coated Sand Production Lines #1, #2, and #3

- 1.0 The emission sources of each of Resin-Coated Sand Production Lines #1 and #2 are a surge hopper, a heater, a muller, an initial screen, a cooler, a final screen, and a bagging station. The emission sources of Resin-Coated Sand Production Line #3 are a surge hopper, a heater, a muller, a cooler, a final screen, and a storage bin. (The maximum sand processing rates are approximately 7,500 pounds/hour for Line #1, 7,500 pounds/hour for Line #2, and 12,000 pounds/hour for Line #3.)
 - 1.1 Odorous volatile organic compound (VOC) emissions of phenol from the muller of each of Production Lines #1, #2, and #3 shall be counteracted by the use of an Ecosorb[®] exhaust injection system. As an alternative to Ecosorb[®] solution, another solution that is demonstrated to have an equal or greater effectiveness in counteracting odorous emissions of phenol may be used in any of the injection systems. Information pertaining to the characteristics, effectiveness, and use of any such solution shall be submitted to the Bureau Director at least seven (7) days prior to the proposed change. The injection systems shall be operated and maintained in accordance with the manufacturer's recommendations. For each of the three mullers, the muller shall not be operated if its injection system is not in operation. §4-41, Rule 12 (local rule only) and Rule 25.3
 - 1.2 Particulate matter emissions from the surge hoppers of Production Lines #1 and #2 shall be vented to and controlled by a Griffen Environmental JV-16-6X baghouse. The baghouse shall be operated in accordance with the manufacturer's recommendations. Neither of the two surge hoppers shall be loaded if the baghouse is not in operation. §4-41, Rule 27.1
 - 1.3 Particulate matter emissions from the surge hopper of Production Line #3 shall be vented to and controlled by an Estee 12-84 baghouse. The baghouse shall be operated in accordance with the manufacturer's recommendations. The surge hopper shall not be loaded if the baghouse is not in operation. §4-41, Rule 27.1
 - 1.4 Particulate matter emissions from the heater, initial screen, cooler, final screen, and bagging station of each of Production Lines #1 and #2 and from the heater, cooler, final screen, and storage bin of Production Line #3 shall be vented to and controlled by an Carborundum 90 M10 CP.3 baghouse. The baghouse shall be operated in accordance with the manufacturer's recommendations. None of the three production lines shall be operated if the baghouse is not in operation. §4-41, Rule 27.1
- 2.0 The spray nozzles of the Ecosorb[®] exhaust injection system for the muller of each of Production Lines #1 and #2 shall be visually inspected at least once every two (2) weeks when the injection system is required to be used. For each of these two injection systems, all of the spray nozzles of the system shall be ***cleaned if any of them appear to be either partially or completely clogged.*** In addition, all of the spray nozzles of each of these

injection systems shall be **cleaned at least once every three (3) months**. A log shall be maintained, on the premises, in which the results of the biweekly inspections are recorded. The calendar date of each inspection and of each cleaning shall also be recorded in the log. §4-41, Rule 12 (local rule only) and Rule 25.3

- 3.0 The flow rate of Ecosorb[®] solution through the supply line of the Ecosorb[®] exhaust injection system for the muller of Production Line #3 shall be maintained at **no less than 0.19 gallon/minute**. The highest and lowest Ecosorb[®] solution flow rates for this injection system attained throughout an injection cycle shall be recorded at least once each week when the injection system is required to be used. All of the spray nozzles of this injection system shall be **cleaned if the required flow rate of Ecosorb[®] solution is not met**. In addition, all of the spray nozzles of this injection system shall be **cleaned at least once each month**. A log shall be maintained, on the premises, in which the weekly flow rate readings are recorded. The calendar date of each flow rate reading and of each cleaning shall also be recorded in the log. §4-41, Rule 12 (local rule only) and Rule 25.3
- 4.0 Appropriate methods and technology shall be utilized to reduce or control gaseous emissions from Production Lines #1, #2, and #3 so as to prevent objectionable odors, as defined by §4-41, Rule 12, from these emissions from being detected beyond the plant property boundaries. §4-41, Rule 12 (local rule only) and Rule 23
- 5.0 Each of Production Lines #1, #2, and #3 shall be operated for **no more than 6,000 hours during any period of 365 consecutive days**. A log shall be maintained, on the premises, in which the number of hours is recorded that each of the three production lines is operated during each calendar month. §4-41, Rule 25.3
- 6.0 The maximum allowable VOC emissions of phenol from each of Production Lines #1 and #2 are 3.5 pounds/hour. These emission limitations are best available control technology (BACT), as determined by the Bureau Director. §4-41, Rule 25.3
- 7.0 The maximum allowable VOC emissions of phenol from Production Line #3 are 5.7 pounds/hour. This emission limitation is BACT, as determined by the Bureau Director. §4-41, Rule 25.3
- 8.0 The maximum unpolymerized phenol concentration of the sand that is used in each of Production Lines #1, #2, and #3 shall **not exceed 0.176 percent by weight** at the time that novolac resin is initially applied to the sand. This concentration shall be calculated for each batch of sand by multiplying the novolac resin application rate (in units of percentage by weight of the sand throughput rate) by the unpolymerized phenol concentration of the resin (in units of percentage by weight) and then dividing the resulting product by 100 percent. A log shall be maintained, on the premises, in which this calculated unpolymerized phenol concentration of each batch of sand is recorded. For each batch of sand, the calendar date, novolac resin application rate, and

unpolymerized phenol concentration of the resin shall also be recorded in the log. §4-41, Rule 25.3

- 9.0 The maximum allowable emissions of particulate matter from the two surge hoppers of Production Lines #1 and #2 combined are 0.005 pound/hour. This emission limitation is BACT, as determined by the Bureau Director. §4-41, Rule 27.1
- 10.0 The maximum allowable emissions of particulate matter from the surge hopper of Production Line #3 are 0.005 pound/hour. This emission limitation is BACT, as determined by the Bureau Director. §4-41, Rule 27.1
- 11.0 The maximum allowable emissions of particulate matter from the two heaters, two initial screens, two coolers, two final screens, and two bagging stations of Production Lines #1 and #2 and from the heater, cooler, final screen, and storage bin of Production Line #3 combined are 0.04 pound/hour. This emission limitation is BACT, as determined by the Bureau Director. §4-41, Rule 27.1
- 12.0 The maximum allowable emissions of particulate matter from the muller of each of Production Lines #1, #2, and #3 are 0.10 pound/hour. These emission limitations are BACT, as determined by the Bureau Director. §4-41, Rule 27.1
- 13.0 Visible emissions from the surge hopper, heater, initial screen, cooler, final screen, and bagging station of each of Production Lines #1 and #2 and from the surge hopper, heater, cooler, final screen, and storage bin of Production Line #3 shall not exceed five (5) percent opacity for an aggregate of more than five (5) minutes in any period of one hour or more than twenty (20) minutes in any period of twenty-four hours. This limitation is BACT, as determined by the Bureau Director. §4-41, Rule 27.1
- 14.0 Visible emissions from the muller of each of Production Lines #1, #2, and #3 shall not exceed ten (10) percent opacity for an aggregate of more than five (5) minutes in any period of one hour or more than twenty (20) minutes in any period of twenty-four hours. This limitation is BACT, as determined by the Bureau Director. §4-41, Rule 27.1
- 15.0 The presence, or lack thereof, of any visible emissions from the exhaust stack of the baghouse for the two surge hoppers of Production Lines #1 and #2 shall be determined by visual observation at least once each day while either of these surge hoppers is being loaded. The presence, or lack thereof, of any visible emissions from the exhaust stack of the baghouse for the surge hopper of Production Line #3 shall also be determined by visual observation at least once each day while this surge hopper is being loaded. In addition, the presence, or lack thereof, of any visible emissions from the exhaust stack of the baghouse for the two heaters, two initial screens, two coolers, two final screens, and two bagging stations of Lines #1 and #2 and for the heater, cooler, final screen, and storage bin of Line #3 shall be determined by visual observation at least once each day while any of the production lines are in operation. **Corrective action shall be taken if any emissions are visible.** A log shall be maintained, on the premises, in which the

results of the daily observations are recorded. For each observation of visible emissions, the corrective action that was taken and the calendar date on which it was completed shall also be recorded in the log. In addition, each day shall be noted in the log for which no observation could be made because neither of the two surge hoppers of Lines #1 and #2 was loaded, because the surge hopper of Line #3 was not loaded, or because none of the three production lines were operated. §4-41, Rule 27.1

- 16.0 Testing of the miller of any of Production Lines #1, #2, and #3 to determine the VOC emissions of phenol, to determine the emissions of particulate matter, and to determine the opacity of the emissions may be required by the Bureau Director. If required, these tests shall, at a minimum, consist of and be performed in accordance with EPA Test Methods 1, 2, 3, 4, 5, 9, and 18 or 25, Title 40 *Code of Federal Regulations* Part 60, Appendix A and in accordance with §4-3. §4-3; §4-8(c)(8); §4-57(c)(1)
- 17.0 Testing of the surge hopper, heater, initial screen, cooler, final screen, or bagging station of either of Production Lines #1 or #2 or the surge hopper, heater, cooler, final screen, or storage bin of Production Line #3, as controlled by a baghouse, to determine the emissions of particulate matter and to determine the opacity of the emissions may be required by the Bureau Director. If required, these tests shall, at a minimum, consist of and be performed in accordance with EPA Test Methods 1, 2, 3, 4, 5, and 9, Title 40 *Code of Federal Regulations* Part 60, Appendix A and in accordance with §4-3. §4-3; §4-8(c)(8); §4-57(c)(1)

Emission Unit 004 – 150-Ton Capacity Sand Storage Silo

- 1.0 Particulate matter emissions from the 150-ton capacity sand storage silo shall be vented to and controlled by a Flex-Kleen 84-9 baghouse. The baghouse shall be operated in accordance with the manufacturer's recommendations. The silo shall not be loaded if the baghouse is not in operation. §4-8(e)(2)
- 2.0 The maximum allowable emissions of particulate matter from the 150-ton capacity sand storage silo are 0.002 pound/hour. This emission limitation is best available control technology (BACT), as determined by the Bureau Director. §4-8(e)(2)
- 3.0 Visible emissions from the 150-ton capacity sand storage silo shall not exceed five (5) percent opacity for an aggregate of more than five (5) minutes in any period of one hour or more than twenty (20) minutes in any period of twenty-four hours. This limitation is BACT, as determined by the Bureau Director. §4-8(e)(2)
- 4.0 The presence, or lack thereof, of any visible emissions from the baghouse exhaust stack shall be determined by visual observation at least once each day while the 150-ton capacity sand storage silo is being loaded. ***Corrective action shall be taken if any emissions are visible.*** A log shall be maintained, on the premises, in which the results of the daily observations are recorded. For each observation of visible emissions, the corrective action that was taken and the calendar date on which it was completed shall also be recorded in the log. In addition, each day shall be noted in the log for which no observation could be made because the silo was not loaded. §4-8(e)(2)
- 5.0 Testing of the 150-ton capacity sand storage silo, as controlled by the baghouse, to determine the emissions of particulate matter and to determine the opacity of the emissions may be required by the Bureau Director. If required, these tests shall, at a minimum, consist of and be performed in accordance with EPA Test Methods 1, 2, 3, 4, 5, and 9, Title 40 *Code of Federal Regulations* Part 60, Appendix A and in accordance with §4-3. §4-3; §4-8(c)(8); §4-57(c)(1)

PERMIT SHIELD

At the request of the responsible official who signed and certified to the Part 70 permit application, compliance with the conditions of this permit shall be deemed compliance with any “applicable requirements,” as defined in §4-53, as of the date of permit issuance that (1) are included and specifically identified in this permit, or (2) have been determined in writing in this permit not to be applicable to this permittee as specifically identified. This permit shield does not alter or affect the following:

- (a) The provisions of Title 42 U.S.C. §7603 (emergency orders), including the authority of the Administrator of the U.S. EPA, the Board, or the Bureau Director thereunder;
- (b) The liability of a permittee of a source for any violation of applicable requirements prior to or at the time of permit issuance;
- (c) The applicable requirements of the acid rain program promulgated under Title IV of the Clean Air Act consistent with Title 42 U.S.C. §7651g(a);
- (d) The ability of the U.S. EPA to obtain information from a source pursuant to Title 42 U.S.C. §7414, or of the Board or the Bureau Director to obtain information from a source pursuant to the Chattanooga Air Pollution Control Ordinance or any other provision of local, state, or federal law; and §4-57(f)
- (e) The right of any person to damages or other relief on account of injury to persons or property and to maintain any action or other appropriate proceeding therefor; nor does it abridge, limit, impair, create, enlarge, or otherwise affect substantively or procedurally this right. §4-5(1)