



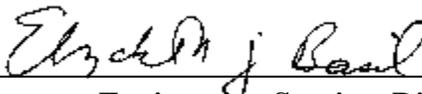
Office of Environmental Quality Control Bureau of Air Quality General Construction Permit

Concrete Plants

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. 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.

The 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.

Issue Date: September 3, 2013



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

General Construction Permit for Concrete Plants
Page 2 of 10

RECORD OF REVISIONS	
Revision Date	Description of Change
08/21/2014	Incorporate changes to S.C. Regulation 61-62.5, Standard No. 1, Section III in condition E.4; revise conditions E.5 and E.7; and corrected typos.
07/23/2015	Revised conditions D.1 and D.2, updated condition E.3 to incorporate changes to S.C. Regulation 61-62.5, Standard No. 1, Section I, removed condition E.5, and input condition H.1.

General Construction Permit for Concrete Plants
Page 3 of 10

A. APPLICABILITY

Condition Number	Condition
A.1	<p>This permit applies to concrete batch plants, concrete block production facilities and pug mills comprised of one or any combination of the following: sand and aggregate storage; sand and aggregate transfer to elevated bin; cement and/or cement supplement loading; weigh hopper loading; truck loading, central mixer loading and/or pug mixer loading; loading, transfer, or storage associated with emission control systems; boiler(s) and/or other fuel combustion device(s) rated less than 30 million BTU/hr; and other sources as approved by the Department. A facility may operate under the conditions contained herein if it meets the following criteria, as applicable:</p> <ol style="list-style-type: none"> 1. Each fuel combustion source with a maximum rated input capacity of less than 10 million BTU/hr shall be fired on natural gas, propane, virgin fuel oil (sulfur content equal to or less than 2.1% by weight) or used specification oil as defined in S.C. Regulation 61-62.1, Section I. 2. Each fuel combustion source with a maximum rated input capacity of greater than or equal to 10 million BTU/hr but less than 30 million BTU/hr shall be fired on natural gas, propane, or virgin fuel oil (sulfur content equal to or less than 0.5% by weight).
A.2	No facility covered under this permit shall be potentially major for Prevention of Significant Deterioration (PSD), Nonattainment New Source Review (NA NSR), or Title V (TV) emissions.

B. GENERIC CONDITIONS

Condition Number	Condition
B.1	(S.C. Regulation 61-62.1, Section II.J.1.g) A copy of the Department issued construction and/or operating permit must be kept readily available at the facility at all times. The owner or operator 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 5 years from the date the record was generated and shall be made available to a Department representative upon request.
B.2	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.
B.3	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. Operational ranges shall be determined and available for triggering corrective actions and assuring proper operation. 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.

C. FUGITIVE EMISSIONS CONDITIONS

Condition Number	Conditions
C.1	<p>(S.C. Regulation 61-62.5, Standard No. 4, Section X)</p> <ol style="list-style-type: none"> 1. All non-enclosed operations shall be conducted in such a manner that a minimum of particulate matter becomes airborne. In no case shall established ambient air quality standards be exceeded at or beyond the property line. 2. The owner or operator of all such operations shall maintain dust control of the premises and any roadway owned or controlled by the owner or operator by paving, or other suitable measures. Oil treatment is

General Construction Permit for Concrete Plants
Page 4 of 10

C. FUGITIVE EMISSIONS CONDITIONS

Condition Number	Conditions
	prohibited.
C.2	<p>(S.C. Regulation 61-62.6) Emissions of fugitive particulate matter shall be controlled in such a manner and to the degree that it does not create an undesirable level of air pollution.</p> <p>Fugitive emissions must be controlled by wet suppression, sweeping, or in any other manner which has received prior approval from this Department. The control of fugitive emissions shall include, but is not limited to, the property around the facility itself and all entrances through which motor vehicles travel. Volatile organic compounds shall not be used for dust control purposes, and oil treatment is also prohibited.</p> <p>Fines collected by the air pollution control equipment shall be handled in a manner that minimizes fugitive emissions to the maximum extent possible.</p> <p>Sand and aggregate piles must be kept as wet as necessary to prevent visible dust emissions.</p>

D. PLANT CONDITIONS

Condition Number	Conditions
D.1	The owner/operator shall record concrete production, in cubic yards, daily. Records of daily concrete production shall be maintained on site in written or electronic logs. The owner/operator shall indicate, in its records, any dates when the plant is not in operation.
D.2	<p>During source operation, truck and/or mixer load-outs shall be visually inspected weekly for leaks or visible emissions in the exhaust during the load-out. If the load-out's emissions control systems are not operating properly, truck and/or mixer load-out shall immediately cease until corrective action has been taken.</p> <p>The owner/operator shall record the results of each inspection along with any corrective action taken. The owner/operator shall indicate, in its records, any weeks when the plant is not in operation. These records shall be maintained on site in written or electronic logs.</p>
D.3	<p>All control devices shall be on-line and operating properly when the plant is in operation. Ruptured or inoperative bags/cartridges shall be replaced immediately.</p> <p>The owner/operator shall record filter maintenance including, but not limited to, the time and date bags/cartridges are replaced. These records shall be maintained on site in written or electronic logs.</p>
D.4	<p>All system pressure drop gauges shall be operated and maintained on each control device (excluding binvents).</p> <p>The owner/operator shall, on a daily basis, record system pressure drop on each control device (excluding binvents). The owner/operator shall indicate, in its records, any dates when the plant is not in operation. These records shall be maintained on site in written or electronic logs.</p>
D.5	<p>During source operation, each silo control device shall be visually inspected for leaks or visible emissions in the exhaust whenever the silo is being loaded or during a daily facility inspection, whichever is lesser. If leaks or visible emissions in the exhaust are present, loading of the silo shall immediately cease until corrective action has been taken.</p> <p>The owner/operator shall record the results of each inspection along with any corrective action taken. The owner/operator shall indicate, in its records, any dates when no silo loading has occurred. These records shall be maintained on site in written or electronic logs.</p>
D.6	(S.C. Regulation 61-62.5, Standard No. 4, Section VIII) Particulate matter emissions shall be limited to the rate specified by use of the following equations: for process weight rates less than or equal to 30 tons per hour ($E = 4.10P^{0.67}$) and for process weight rates greater than 30 tons per hour ($E = 55.0P^{0.11} - 40$), where E = the allowable emission rate in pounds per hour and P = process weight rate in tons per hour.

General Construction Permit for Concrete Plants
Page 5 of 10

D. PLANT CONDITIONS

Condition Number	Conditions
	<p>(S.C. Regulation 61-62.5, Standard No. 4, Section IX) Visible emissions (including fugitive emissions) from all sources not specified elsewhere as applicable are subject to the following emission limitations:</p> <ol style="list-style-type: none"> 1. Where construction or modification began after December 31, 1985, the source shall not exhibit an opacity greater than 20%. 2. Where construction or modification began on or before December 31, 1985, the source shall not exhibit an opacity greater than 40%.

E. FUEL USAGE AND FUEL BURNING CONDITIONS

Condition Number	Conditions
E.1	<p>Used specification oil or any addition of used specification oil to the fuel shall not be utilized without prior written approval from the Department. Constituents for used specification oil shall not exceed those defined below:</p> <ol style="list-style-type: none"> i. Arsenic – 5 ppm maximum ii. Cadmium – 2 ppm maximum iii. Chromium – 10 ppm maximum iv. Lead – 100 ppm maximum v. Nickel – 120 ppm maximum vi. Total halogens – 1,000 ppm maximum (non-hazardous waste) vii. Flash Point – 100 °F (37.8 °C) minimum <p>The owner/operator shall maintain the following records on site in written or electronic logs:</p> <ol style="list-style-type: none"> 1. For each shipment, the date and total amount of used specification oil received. 2. For on-site generated used specification oil, the firing rate and dates fired. 3. The waste analysis showing total arsenic, total cadmium, total chromium, total lead, total nickel, total halogens, percent sulfur, flash point, and BTU content. The waste analysis shall be performed only on the initial shipment of oil (or initial use of on-site generated specification oil) unless the oil becomes inconsistent in composition or is received from another supplier.
E.2	<p>The owner/operator shall gain Department approval prior to the use of any non-specification oil, hazardous waste, or any other waste chemical as a fuel or any addition of these items to the fuel.</p>
E.3	<p>The owner/operator of any fuel burning source (excluding natural gas and propane fired units) shall record the time, magnitude, and duration of periods of startup and shutdown. These records shall be maintained on site in written or electronic logs.</p>
E.4	<p>(S.C. Regulation 61-62.5, Standard No. 1, Section I) Each fuel burning source is subject to the following emission limitations:</p> <ol style="list-style-type: none"> 1. If constructed on or after February 11, 1971, the source shall not discharge into the ambient air smoke which exceeds an opacity of 20%. 2. If constructed before February 11, 1971, the source shall not discharge into the ambient air smoke which exceeds an opacity of 40%. <p>The twenty (20) percent opacity limit and the forty (40) percent opacity limit may be exceeded for sootblowing, but may not be exceeded for more than six (6) minutes in a one hour period nor be exceeded for more than a total of twenty-four (24) minutes in a twenty-four (24) hour period. Emissions caused by sootblowing shall not exceed sixty (60) percent opacity.</p> <p>The opacity standards set forth above do not apply during startup or shutdown. Owners and operators shall, to the extent practicable, maintain and operate any source including associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions.</p> <p>(S.C. Regulation 61-62.5, Standard No. 1, Section II) Each fuel burning source is subject to the following emission limitations:</p> <ol style="list-style-type: none"> 1. If constructed on or after February 11, 1971, the allowable discharge of particulate matter resulting from the

General Construction Permit for Concrete Plants
Page 6 of 10

E. FUEL USAGE AND FUEL BURNING CONDITIONS

Condition Number	Conditions
	<p>source is 0.6 pounds per million BTU input.</p> <p>2. If constructed prior to February 11, 1971, the allowable discharge of particulate matter resulting from the source is 0.8 pounds per million BTU input.</p> <p>(S.C. Regulation 61-62.5, Standard No. 1, Section III) The maximum allowable discharge of sulfur dioxide (SO₂) resulting from each fuel burning operation is 2.3 pounds per million BTU input.</p>
E.5	<p>Each stationary source that emits NO_x generated from fuel combustion rated greater than or equal to 10 million BTU/hr and where a burner assembly is replaced after June 25, 2004 shall comply with all applicable regulations of S.C. Regulation 61-62.5, Standard No. 5.2:</p> <p>(S.C. Regulation 61-62.5, Standard No. 5.2, Section IV) For sources where an existing burner assembly is replaced, the burner assembly shall be replaced with a low NO_x burner assembly or equivalent technology capable of achieving a 30 percent reduction from uncontrolled NO_x emission levels based upon manufacturer's specifications. An exemption from this requirement shall be granted when a single burner assembly is being replaced in a source with multiple burners due to non-routine maintenance.</p> <p>(S.C. Regulation 61-62.5, Standard No. 5.2, Sections IV and V) The owner/operator shall notify and register the burner assembly replacement with the Department, in writing, within 7 days of replacing the existing burner assembly. Notification will be provided on the Department's <i>Notification For Low NO_x Burner Replacement for South Carolina Oxides of Nitrogen (NO_x) Control Guidelines</i> Form D-2935. Those sources that wish to receive an emission reduction credit for the control device will be required to submit a construction permit application. Those sources requesting an alternative control methodology must receive written approval prior to burner replacement.</p> <p>(S.C. Regulation 61-62.5, Standard No. 5.2, Section VI) The owner/operator of a subject combustion source shall develop a tune-up plan and perform tune-ups every two years in accordance with manufacturer's specifications or with good engineering practices from replacement of burner. All tune-up records are required to be maintained on site.</p>
E.6	<p>(Boilers greater than or equal to 10 million BTU/hr and constructed after June 9, 1989) Each source subject to New Source Performance Standard (NSPS), 40 CFR 60, Subpart A, General Conditions and Subpart Dc, Small Industrial-Commercial-Institutional Steam Generating Units and S.C. Regulation 61-62.60, Subparts A and Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units shall comply with all applicable requirements of Subparts A and Dc:</p> <p>For sources burning natural gas and/or propane for fuel: Compliance with the regulation shall be demonstrated by burning only natural gas or propane for fuel. The use of other fuels will subject this source to additional emission limitations and is prohibited without prior written approval from the Department.</p> <p>For sources burning fuel oil: No owner/operator that combusts oil shall combust oil that contains greater than 0.5 weight percent sulfur. The SO₂ fuel oil sulfur limits apply at all times, including periods of startup, shutdown, and malfunction.</p> <p>Compliance with the fuel sulfur limit shall be determined based on certification from the fuel supplier. Fuel supplier certification shall include the following information:</p> <ol style="list-style-type: none"> 1. The name of the oil supplier; 2. A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in 40 CFR 60.41c; and 3. The sulfur content or maximum sulfur content of the oil. <p>Records of these certifications shall be kept on site. Reports shall be submitted every six-month period. Reports shall be submitted in a timely manner. Semiannual reports are due January 30th and July 30th each year. The reports shall</p>

General Construction Permit for Concrete Plants
Page 7 of 10

E. FUEL USAGE AND FUEL BURNING CONDITIONS

Condition Number	Conditions
	<p>consist of the fuel certification records and a signed statement from the owner/operator that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.</p> <p>All subject sources: The owner or operator of each boiler shall record and maintain records of the amounts and types of each fuel combusted during each calendar month or the owner or operator may elect to record and maintain records of the total amount of each fuel delivered to the property during each calendar month. The report shall indicate whether to amounts are based on fuel combusted or fuel delivered.</p>
E.7	<p>Emergency generators as well as the non-emergency generators shall comply with the requirements of all applicable regulations including but not limited to:</p> <p>New Source Performance Standards (NSPS) 40 CFR 60 Subparts A, General Provisions; IIII, Stationary Compression Ignition Internal Combustion Engines; and JJJJ Stationary Spark Ignition Internal Combustion Engines and S.C. Regulation 61-62.60, Subparts A; IIII, Stationary Compression Ignition Internal Combustion Engines; and JJJJ, Stationary Spark Ignition Internal Combustion Engines.</p> <p>National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR 63 Subparts A, General Provisions and ZZZZ, Reciprocating Internal Combustion Engines and S.C. Regulation 61-62.63, Subparts A and ZZZZ, Reciprocating Internal Combustion Engines.</p>
E.8	<p>Each fuel combustion source shall comply with the requirements of all applicable regulations including but not limited to:</p> <p>National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR Part 63, Subparts A, General Provisions and JJJJJ, NESHAP for Industrial, Commercial, and Institutional Boilers Area Sources and S.C. Regulation 61-62.63, Subparts A and JJJJJ, NESHAP for Industrial, Commercial, and Institutional Boilers Area Sources.</p>

F. MODELING REQUIREMENTS

Condition Number	Condition
F.1	<p>Air dispersion modeling may be required for concrete plants on a case-by-case basis as specified in the Bureau of Air Quality's <i>Air Quality Modeling Guidelines</i>. If this facility was required to submit air dispersion modeling to demonstrate that this facility's operation will not interfere with the attainment and maintenance of any state or federal ambient air standard, the owner/operator shall comply with the following:</p> <p>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 B. Higher emission rates may be administratively incorporated into Attachment B 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.</p> <p>The owner/operator shall maintain this facility at or below the emission rates as listed in Attachment B, not to exceed the pollutant limitations of this general state operating permit. Should the facility wish to increase the emission rates listed in Attachment B, not to exceed the pollutant limitations in the body of this permit, it may do so by the</p>

General Construction Permit for Concrete Plants
Page 8 of 10

F. MODELING REQUIREMENTS

Condition Number	Condition
	administrative process specified above.

G. PERMIT EXPIRATION AND EXTENSION

Condition Number	Condition
G.1	(S.C. Regulation 61-62.1, Section II.A.4) Approval to construct shall become invalid if construction: <ul style="list-style-type: none"> a. is not commenced within 18 months after receipt of such approval; b. is discontinued for a period of 18 months or more; or c. is not completed within a reasonable time as deemed by the Department. 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.
G.2	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.

H. PERMIT TO OPERATE

Condition Number	Condition
H.1	(S.C. Regulation 61-62.1 Section II.A.3) The owner/operator shall submit written notification to the Director of Engineering Services of the date construction is commenced, postmarked no later than 30 days after such date.
H.2	(S.C. Regulation 61-62.1 Section II.F.2) 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.
H.3	If construction is certified as provided in S.C. Regulation 61-62.1 Section II.F.2, the owner, operator, or representative may operate the source in compliance with the terms and conditions of the construction permit until the operating permit is issued by the Department.
H.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. Construction variances that would trigger additional requirements that have not been addressed prior to start of operation shall be considered construction without a permit.
H.5	(S.C. Regulation 61-62.1, Section II.F.3) The owner/operator shall submit a written request to the Director of the Engineering Services for a new or revised operating permit to cover any new or altered source postmarked no later than 15 days after the actual date of initial startup of each new or altered source. The written request for a new or revised operating permit must include, as a minimum, the following information: <ul style="list-style-type: none"> i. A list of sources that were placed into operation. ii. The actual date of initial startup of each new or altered source.

I. GENERAL REQUIREMENTS

Condition Number	Condition
I.1	The permittee shall pay permit fees to the Department in accordance with the requirements of S.C. Regulation 61-30, Environmental Protection Fees.
I.2	This permit may be reopened by the Department for cause or to include any new standard or regulation which becomes applicable to a source during the life of the permit.
I.3	(S.C. Regulation 61-62.1, Section II.J) For sources not required to have continuous emissions monitors, any

General Construction Permit for Concrete Plants
Page 9 of 10

I. GENERAL REQUIREMENTS

Condition Number	Condition
	<p>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 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.</p> <p>The owner or operator shall also submit a written report within 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 at 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.
I.4	<p>In the event of an emergency, as defined in S.C. Regulation 61-62.1, Section II.L, the owner or operator shall demonstrate the affirmative defense of an emergency through properly signed, contemporaneous operating logs, and other relevant evidence that verify:</p> <ol style="list-style-type: none"> 1. An emergency occurred, and the owner or operator can identify the cause(s) of the emergency; 2. The permitted source was at the time the emergency occurred being properly operated; 3. During the period of the emergency, the owner or operator took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and 4. The owner or operator gave a verbal notification of the emergency to the Department within 24 hours of the time when emission limitations were exceeded, followed by a written report within 30 days. The written report shall include, at a minimum, the information required by S.C. Regulation 61-62.1, Section II.J.1.c.i through viii. The written report shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. <p>In any enforcement action, the owner or operator seeking to establish the occurrence of an emergency has the burden of proof. This provision is in addition to any emergency, or upset provision contained in any applicable requirement.</p>
I.5	<p>(S.C. Regulation 61-62.1, Section II.O) Upon presentation of credentials and other documents as may be required by law, the owner or operator shall allow the Department or an authorized representative to perform the following:</p> <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.