

**BUREAU OF AIR MANAGEMENT
NEW SOURCE REVIEW PERMIT
TO CONSTRUCT AND OPERATE A STATIONARY SOURCE**

Issued pursuant to Title 22a of the Connecticut General Statutes (CGS) and Section 22a-174-3a of the Regulations of Connecticut State Agencies (RCSA).

Owner/Operator	Oldcastle APG Northeast, Inc. – Canaan Facility
Address	43 Clayton Road, North Canaan, Connecticut 06018
Equipment Location	43 Clayton Road, North Canaan, Connecticut 06018
Equipment Description	A Tarmac International Rotary Dryer System with a 31 MMBtu/hr Honeywell - Hauck Megastar Low NOx Burner
Town-Permit Numbers	134-0023
Premises Number	4
Stack Number	4
Permit Issue Date	
Expiration Date	None

Emma Cimino
Deputy Commissioner

Date

This permit specifies necessary terms and conditions for the operation of this equipment to comply with state and federal air quality standards. The Permittee shall at all times comply with the terms and conditions stated herein.

PART I. DESIGN SPECIFICATIONS

A. General Description

Oldcastle APG Northeast, Inc. (Oldcastle) operates a concrete batching and mixing facility located in North Canaan, CT. The facility consists of three concrete batching lines and associated silos, storage bins, and baghouse control devices, a 12,000-gallon No. 2 fuel oil tank, and a Tarmac International, Inc. rotary kiln dryer system with a 31 MMBtu/hr Honeywell - Hauck Megastar Low NOx Burner.

B. Equipment Design Specifications

1. Rotary Kiln Dryer and Burner

- a. Rotary Dryer Equipment: Tarmac International Rotary Dryer**
 - i. Type: Batch Mix**
 - ii. Design Maximum Rated Capacity (tons/hour): 124**
- b. Burner Equipment: Honeywell - Hauck Megastar**
 - i. Fuel Type: No. 2 Fuel Oil (ULSD)**
 - ii. Maximum Fuel Firing Rate (gal/hr): 220**
 - iii. Maximum Heat Input (MMBtu/hr): 31**

C. Control Equipment Design Specifications

1. Burner

- a. Low NOx Burner**
- b. Make and Model: Honeywell - Hauck Megastar**

2. Baghouse

- a. Make and Model: Astec Industries, Inc. Model No. SBH-17-04**
- b. Filter Media: Polyester Felt**
- c. Number of Bags: 256**
- d. Net Cloth Area (ft²): 3100**
- e. Air/Cloth Ration at Max Flowrate (ft²): 5.5**
- f. Cleaning Method: Pulse Jet**
- g. Pressure Drop Across Unit (in H₂O): 2 to 6**
- h. Overall Control Efficiency (%): 99.9**

D. Stack Parameters

- 1. Stack Height (ft): 33.67**
- 2. Minimum Exhaust Gas Flow Rate (acfm): 17,036**
- 3. Minimum Stack Exit Temperature (°F): 180**
- 4. Minimum Distance from Stack to Nearest Property Line (ft): 168**

PART II. OPERATIONAL CONDITIONS

A. Equipment (Rotary Kiln Dryer and Burner)

1. Dryer
 - a. Maximum Aggregate Throughput Rate (tons/hr): 100
2. Burner
 - a. Maximum Fuel Firing Rate (gals/hr): 177.5
 - b. Maximum Fuel Consumption over any Consecutive 12 Month Period (gal): 1,554,900
 - c. Maximum Fuel Sulfur Content (% by weight, dry basis): 0.0015

B. Control Equipment (Astec Industries Baghouse)

1. The Pollutants Controlled: PM, PM-10, PM 2.5
2. Pressure Drop Across Unit (in H₂O): 2 to 6

PART III. ALLOWABLE EMISSION LIMITS

The Permittee shall not cause or allow this equipment to exceed the emission limits stated herein at any time.

A. Criteria Pollutants

Pollutant	Ib/hr	tpy
PM	2.85	12.50
PM ₁₀	1.16	5.07
PM _{2.5}	0.87	3.83
SO ₂	0.024	0.11
NOx	4.40	19.27
VOC	3.20	14.02
CO	9.80	42.92

B. Hazardous Air Pollutants

This equipment shall not cause an exceedance of the Maximum Allowable Stack Concentration (MASC) for any hazardous air pollutant (HAP) emitted and listed in RCRA Section 22a-174-29. [STATE ONLY REQUIREMENT]

C. Opacity

This equipment shall not exceed 10% opacity during any six minute block average as measured by 40 CFR 60, Appendix A, Reference Method 9.

D. Demonstration of compliance with the above emission limits may be met by calculating the emission rates using emission factors from the following sources:

- PM, PM-10, PM 2.5, NOx, CO, VOC: Stack Test Results

The commissioner may require other means (e.g. stack testing) to demonstrate compliance with the above emission limits, as allowed by state or federal statute, law or regulation.

PART IV. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS

A. Monitoring

1. The Permittee shall continuously monitor fuel consumption by the burner using a non-resettable totalizing fuel meter.
2. The Permittee shall monitor the aggregate throughput in tons/hr processed through the rotary kiln dryer. The maximum operating throughput rate shall not exceed 100 tons/hr at any time.
3. The Permittee shall monitor the stack for any visible dust not captured by the fabric filter.
4. The Permittee shall continuously monitor the pressure drop across the fabric filters. The Permittee shall maintain these parameters within the 2 to 6 inch H₂O range recommended by the manufacturer and as stated in Part 1.C.2.g and Part 2.B.2 of this permit.
5. A bag leak detector system shall be properly installed, calibrated, operated and maintained in accordance with manufacturer's recommendations. An audible alarm shall be set to sound when the pressure drop is out of range.
6. The Permittee shall perform inspections of the control devices as recommended by the manufacturer.

B. Record Keeping

1. The Permittee shall keep records of monthly and consecutive 12 month fuel consumption. The consecutive 12 month fuel consumption shall be determined by adding (for each fuel) the current month's fuel consumption to that of the previous 11 months. The Permittee shall make these calculations within 30 days of the end of the previous month.
2. The Permittee shall maintain records of the sulfur content of fuel oil combusted. A written certification or a written contract with a fuel supplier is sufficient to satisfy this requirement if the certification or contract identifies:
 - a. The name of the fuel seller;
 - b. The type of fuel purchased;
 - c. The sulfur content of the fuel purchased; and
 - d. The method used to determine the sulfur content of the fuel purchased.
3. The Permittee shall calculate and record the monthly and consecutive 12 month PM, PM₁₀, PM_{2.5}, SO₂, NOx, VOC and CO emissions in units of tons. The consecutive 12 month emissions shall be determined by adding (for each pollutant) the current month's emissions to that of the previous 11 months. Such records shall include a sample calculation for each pollutant. The Permittee shall make these calculations within 30 days of the end of the previous month.
4. The Permittee shall keep all records required by this permit for a period of no less than five years and shall submit such records to the commissioner upon request.

PART V. STACK EMISSION TEST REQUIREMENTS

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Stack emission testing shall be performed in accordance with the Emission Test Guidelines available on the DEEP website at www.ct.gov/deep/stacktesting.

Initial stack testing shall be required for the following pollutant(s):

PM PM₁₀ PM_{2.5} SO₂ NOx CO
 VOC Opacity Other: Overall Baghouse Control Efficiency

The Permittee shall conduct initial stack testing within 180 days of the issuance of this permit.

Recurrent stack testing for PM, PM-10 and PM 2.5, NOx, and Overall Baghouse Control Efficiency shall be conducted within 5 years from the date of the previous stack test.

Stack test results shall be reported as follows: all pollutants in units of lb/hr, overall baghouse control efficiency in %.

PART VI. OPERATION AND MAINTENANCE REQUIREMENTS

- A. The Permittee shall operate and maintain this equipment in accordance with the manufacturer's specifications and written recommendations.
- B. The Permittee shall properly operate the control equipment at all times that this equipment is in operation and emitting air pollutants.

PART VII. SPECIAL REQUIREMENTS

A. Premises Emissions Summary

1. On January 1st of each calendar year, if the potential emissions of NOx or VOC from the premises are equal to or greater than 25 tons per year per pollutant, then for such pollutant(s), the Permittee shall:
 - a. Monitor NOx and/or VOC emissions, as applicable, from the premises for such calendar year.
 - b. Calculate and record annual NOx and/or VOC emissions, as applicable, from the premises for such calendar year, in units of tons. The Permittee shall make these calculations on or before February 1st of the following year with respect to the previous calendar year. Such records shall include a sample calculation(s).
 - c. If actual NOx and/or VOC emissions, as applicable, from the premises are equal to or greater than 25 tons for such calendar year, the Permittee shall submit to the commissioner, on or before March 1st of the following year, an annual emissions summary with respect to the premises for the previous calendar year. Such summary shall be submitted on forms prescribed or provided by the commissioner.
2. A Permittee is exempt from Part VII.C.1 requirements of this permit if, on January 1st of the subject year, the premises was operating in accordance with any of the following:
 - a. A valid Title V permit issued pursuant to RCSA section 22a-174-33;
 - b. RCSA section 22a-174-33a; or
 - c. RCSA section 22a-174-33b

- B.** The Permittee shall not cause or permit the emission of any substance or combination of substances which creates or contributes to an odor beyond the property boundary of the premises that constitutes a nuisance as set forth in RCSA Section 22a-174-23. [STATE ONLY REQUIREMENT]
- C.** The Permittee shall operate this facility at all times in a manner so as not to violate or contribute significantly to the violation of any applicable state noise control regulations, as set forth in RCSA Sections 22a-69-1 through 22a-69-7.4. [STATE ONLY REQUIREMENT]
- D.** The Permittee shall resubmit for review and approval a Best Available Control Technology (BACT) analysis if such construction or phased construction has not commenced within the 18 months following the commissioner's approval of the current BACT determination (i.e., the date of this permit) for such construction or phase of construction. [RCSA §22a-174-3a(j)(4)]

PART VIII. ADDITIONAL TERMS AND CONDITIONS

- A.** This permit does not relieve the Permittee of the responsibility to conduct, maintain and operate the regulated activity in compliance with all applicable requirements of any federal, municipal or other state agency. Nothing in this permit shall relieve the Permittee of other obligations under applicable federal, state and local law.
- B.** Any representative of DEEP may enter the Permittee's site in accordance with constitutional limitations at all reasonable times without prior notice, for the purposes of inspecting, monitoring and enforcing the terms and conditions of this permit and applicable state law.
- C.** This permit may be revoked, suspended, modified or transferred in accordance with applicable law.
- D.** This permit is subject to and in no way derogates from any present or future property rights or other rights or powers of the State of Connecticut and conveys no property rights in real estate or material, nor any exclusive privileges, and is further subject to any and all public and private rights and to any federal, state or local laws or regulations pertinent to the facility or regulated activity affected thereby. This permit shall neither create nor affect any rights of persons or municipalities who are not parties to this permit.
- E.** Any document, including any notice, which is required to be submitted to the commissioner under this permit shall be signed by a duly authorized representative of the Permittee and by the person who is responsible for actually preparing such document, each of whom shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information may be punishable as a criminal offense under section 22a-175 of the Connecticut General Statutes, under section 53a-157b of the Connecticut General Statutes, and in accordance with any applicable statute."
- F.** Nothing in this permit shall affect the commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent, or abate pollution, recover costs and natural resource damages, and to impose penalties for violations of law, including but not limited to violations of this or any other permit issued to the Permittee by the commissioner.

- G.** Within 15 days of the date the Permittee becomes aware of a change in any information submitted to the commissioner under this permit, or that any such information was inaccurate or misleading or that any relevant information was omitted, the Permittee shall submit the correct or omitted information to the commissioner.
- H.** The date of submission to the commissioner of any document required by this permit shall be the date such document is received by the commissioner. The date of any notice by the commissioner under this permit, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is personally delivered or the date three days after it is mailed by the commissioner, whichever is earlier. Except as otherwise specified in this permit, the word "day" means calendar day. Any document or action which is required by this permit to be submitted or performed by a date which falls on a Saturday, Sunday or legal holiday shall be submitted or performed by the next business day thereafter.
- I.** Any document required to be submitted to the commissioner under this permit shall, unless otherwise specified in writing by the commissioner, be directed to: Office of Director; Enforcement Division; Bureau of Air Management; Department of Energy and Environmental Protection; 79 Elm Street, 5th Floor; Hartford, Connecticut 06106-5127.