STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

Dragon Products Company, LLC **Knox County** **Thomaston, Maine** **A-326-70-J-A**	**Departmental** **Findings of Fact and Order** **Part 70 Air Emission License** **Amendment #4**

FINDINGS OF FACT

After review of the Part 70 License amendment application, staff investigation reports, and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 Maine Revised Statutes (M.R.S.) § 344 and § 590, the Maine Department of Environmental Protection (Department) finds the following facts:

I. REGISTRATION

A. Introduction

FACILITY	Dragon Products Company, LLC
LICENSE TYPE	Part 70 Significant License Modification
NAICS CODES	327731
NATURE OF BUSINESS	Cement Manufacturing
FACILITY LOCATION	U.S. Route 1, Thomaston, Maine

Dragon Products Company, LLC (Dragon) manufactures portland cement using a dry process consisting of quarrying and crushing; raw materials grinding and blending; clinker production; and finish grinding, packing, and storage.

New Source Review (NSR) License Amendment A-326-77-13-A (issued 10/22/2020) addressed changes to the production limit for the Slag Dryer. Dragon has requested that the provisions of this NSR license be incorporated into the Part 70 license.

B. Emission Equipment

The following emission units are addressed by this Part 70 License:

Fuel Burning Equipment

Equipment	Max. Input Capacity (MMBtu/hr)	Maximum Firing Rate	Fuel Type, % sulfur by weight	Dates of…		Stack #
				Manufacture	Installation	
F651: Slag Dryer Burner	75.6	75,600 ft^3/hr	Natural gas, negligible	2015	2016	#1

Process Equipment

Equipment	Production Rate	Pollution Control Equipment	Stack #
F650: Slag Dryer	100 tons/hour of slag	Dust collector	#1
F652: Discharge Conveyor			

C. Application Classification

All rules, regulations, or statutes referenced in this air emission license refer to the amended version in effect as of the issued date of this license.

Dragon has requested incorporation into the Part 70 Air License the relevant terms and conditions of NSR license amendment A-326-77-13-A issued 10/22/2020 pursuant to *Major and Minor Source Air Emission License Regulations*, 06-096 Code of Maine Rules (C.M.R.) ch. 115. Therefore, this license application was considered a Part 70 Significant License Modification and processed under *Part 70 Air Emission License Regulations*, 06-096 C.M.R. ch. 140.

II. BEST PRACTICAL TREATMENT (BPT) AND EMISSION STANDARDS

A. Introduction

In order to receive a license, the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 C.M.R. ch. 100. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emission from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Slag Dryer

In NSR #12 (A-326-77-13-A, issued 10/22/2020), the production limit for the Slag Dryer was increased from 75,000 ton/year of slag to 150,000 ton/year of slag (12-month rolling total).

Following is a summary of the Best Available Control Technology (BACT) determination established in NSR #12:

Dragon shall process a maximum of 150,000 tons per year (12-month rolling total) of slag in the Slag Dryer, based on the quantity of product exiting the Slag Dryer. Records shall be maintained documenting compliance with this limit on a monthly and 12-month rolling total basis.

Total fuel use for the Slag Dryer Burner shall not exceed 111.2 million scf/year (12-month rolling total) of natural gas. Dragon shall keep records of the amount of natural gas fired in the Slag Dryer on a monthly and 12-month rolling total basis.

Emissions from the Slag Dryer shall be controlled by a baghouse.

The BACT emission limits for the Slag Dryer firing natural gas are the following:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Slag Dryer	Negligible (based on the AP-42 emission factor for natural gas combustion and a baghouse control efficiency of ≥ 99.9%)			0.04	7.41	6.23	0.41

Note: Emission limits are based on heating value of 1,020 Btu/scf.

Visible emissions from the Slag Dryer baghouse shall not exceed 10% opacity on a six-minute block average basis. Dragon shall take corrective action if visible emissions from the baghouse exceed 5% opacity.

C. Facility Annual Emissions

The table below provides an estimate of facility-wide annual emissions for the purposes of calculating the facility's annual air license fee. Only licensed equipment is included, i.e., emissions from insignificant activities are excluded. Similarly, **fugitive particulate matter emissions are not included**. Maximum potential emissions were calculated based on the following assumptions:

- Operating the Kiln System for 8,760 hrs/year (maximum for PM, PM_{10});
- Annual limits for the Kiln System and Clinker Cooler (maximum for SO_2, NO_x, CO, and VOC);
- Processing 150,000 ton/year in the Slag Dryer;
- Firing 111.2 million scf/year in the Slag Dryer Burner;
- Operating each emergency generator for 100 hrs/year; and
- Operating the Auxiliary Kiln Drive Engine for 8,760 hr/year.

Please note, this information provides the basis for fee calculation only and should not be construed to represent a comprehensive list of license restrictions or permissions. That information is provided in the Order section of this license.

Total Licensed Annual Emissions for the Facility
Tons/year
(used to calculate the annual license fee)

	PM	**PM_{10}**	**SO_2**	**NO_x**	**CO**	**VOC**	**NH_3**
Kiln System	41.2	41.2	306.6	1,533.0	843.2	57.5	32.9
Clinker Cooler	40.1	40.1	–	–	–	–	–
Emergency Generator	–	–	–	0.8	0.2	0.1	–
Quarry #1 Pump	–	–	–	0.4	0.1	–	–
Auxiliary Kiln Drive Engine	0.5	0.5	–	19.3	4.2	1.5	–
Slag Dryer	–	–	–	5.6	4.7	0.3	–
Total TPY	**81.8**	**81.8**	**306.6**	**1,559.1**	**852.4**	**59.4**	**32.9**

III. AMBIENT AIR QUALITY ANALYSIS

Dragon previously submitted an ambient air quality analysis demonstrating that emissions from the facility, in conjunction with all other sources, do not violate ambient air quality standards (see license A-326-71-U-A/R, issued on November 19, 2002). An additional ambient air quality analysis is not required for this Part 70 License.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that emissions from this source:

- will receive Best Practical Treatment;
- will not violate applicable emissions standards; and
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants the Part 70 License Amendment A-326-70-J-A pursuant to 06-096 C.M.R. 140 and the preconstruction permitting requirements of *Major and Minor Source Air Emission License Regulations*, 06-096 C.M.R. ch. 115 and subject to the conditions found in Air Emission License A-326-70-E-R/A, in amendments A-326-70-F-A, A-326-70-G-A, and A-326-70-H-A and the following conditions.

Federally enforceable conditions in this Part 70 license must be changed pursuant to the applicable requirements in 06-096 C.M.R. ch. 115 for making such changes and pursuant to the applicable requirements in 06-096 C.M.R. ch. 140.

For each specific condition which is state enforceable only, state-only enforceability is designated with the following statement: **Enforceable by State-only**.

Severability. The invalidity or unenforceability of any provision of this License Amendment or part thereof shall not affect the remainder of the provision or any other provisions. This License Amendment shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

SPECIFIC CONDITIONS

The following shall Replace Specific Condition (33) of Air Emission License A-326-70-F-A:

(33) **Slag Dryer**

A. Dragon shall process a maximum of 150,000 tons per year (12-month rolling total) of slag in the Slag Dryer, based on the quantity of product exiting the Slag Dryer. Records shall be maintained documenting compliance with this limit on a monthly and 12-month rolling total basis.
[06-096 C.M.R. ch. 115, BACT (A-326-77-13-A, 10/22/2020)]

B. Total fuel use for the Slag Dryer Burner shall not exceed 111.2 million scf/year (12-month rolling total) of natural gas. Dragon shall keep records of the amount of natural gas fired in the Slag Dryer on a monthly and 12-month rolling total basis.
[06-096 C.M.R. ch. 115, BACT (A-326-77-13-A, 10/22/2020)]

C. Emission shall not exceed the following:
[06-096 C.M.R. ch. 115, BACT (A-326-77-13-A, 10/22/2020)]

Unit	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Slag Dryer	0.04	7.41	6.23	0.41

Note: Emission limits are based on heating value of 1,020 Btu/scf.

D. Visible emissions from the Slag Dryer baghouse shall not exceed 10% opacity on a six-minute block average basis. Dragon shall take corrective action if visible emissions from the baghouse exceed 5% opacity. [06-096 C.M.R. ch. 101, § 3(B)(3)]

E. Dragon shall maintain and operate a baghouse to control emissions during operation of the Slag Dryer. Dragon shall maintain records of all routine and non-routine maintenance conducted on the baghouse. Such records shall contain the location, date, nature of maintenance or failure, and maintenance action taken or action taken to correct the failure. [06-096 C.M.R. ch. 115, BACT (A-326-77-13-A, 10/22/2020)]

DONE AND DATED IN AUGUSTA, MAINE THIS 3rd DAY OF DECEMBER, 2020.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____ for _____
MELANIE LOYZIM, ACTING COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-326-70-E-R/A.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 9/29/2020
Date of application acceptance: 10/1/2020

Date filed with the Board of Environmental Protection:

This Order prepared by Lynn Muzzey, Bureau of Air Quality.

FILED

DEC 03, 2020

State of Maine
Board of Environmental Protection