



DEPARTMENT ORDER

McCain Foods USA, Inc.
Aroostook County
Easton, Maine
A-436-77-7-A

Departmental
Findings of Fact and Order
New Source Review
NSR #7

FINDINGS OF FACT

After review of the air emission license 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 (the Department) finds the following facts:

I. REGISTRATION

A. Introduction

FACILITY	McCain Foods USA, Inc.
LICENSE TYPE	06-096 C.M.R. ch. 115, Minor Modification
NAICS CODES	311411
NATURE OF BUSINESS	Frozen Potato Products
FACILITY LOCATION	Richardson Rd, Easton, Maine

B. NSR License Description

McCain Foods USA, Inc. (McCain) has requested a New Source Review (NSR) license in order to replace the existing Specialty Fryer with a new unit.

C. Emission Equipment

The following equipment is addressed in this NSR license:

Process Equipment

<u>Equipment</u>	<u>Production Rate</u>	<u>Pollution Control Equipment</u>
Specialty Fryer	15,000 lbs of finished product per hour	rotoclone

D. 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.

The application for McCain does not violate any applicable federal or state requirements and does not reduce monitoring, reporting, testing, or recordkeeping requirements.

The modification of a major source is considered a major or minor modification based on whether or not expected emissions increases exceed the "Significant Emission Increase" levels as given in *Definitions Regulation*, 06-096 Code of Maine Rules (C.M.R.) ch. 100.

The emission increases are determined by subtracting the baseline actual emissions of the 24 months preceding the modification (or representative 24 months) from the projected actual emissions. The results of this comparison are as follows:

Pollutant	Baseline Actual Emissions 2015 - 2016 (ton/year)	Projected Actual Emissions (ton/year)	Net Emissions Increase (ton/year)	Significant Emissions Increase Levels (ton/year)
PM	9.2	12.0	+2.8	25
PM ₁₀	9.2	12.0	+2.8	15
PM _{2.5}	9.2	12.0	+2.8	10

Notes: The above values are for the Specialty Fryer only. None of the other equipment at the facility is affected by this NSR license.

As a conservative estimate, all PM emissions are assumed to be less than 2.5 microns.

The projected future actual emissions for the new Specialty Fryer takes into account an expected increase in the average hourly throughput due to a decrease in downtime needed for scraping carbon and other related maintenance. It also conservatively assumes the new Specialty Fryer will operate 8760 hours/year.

Therefore, this NSR license is determined to be a minor modification under *Minor and Major Source Air Emission License Regulations*, 06-096 C.M.R. ch. 115 since the changes being made are not addressed or prohibited in the Part 70 air emission license. An application to incorporate the requirements of this NSR license into the Part 70 air emission license shall be submitted no later than 12 months from startup of the new Specialty Fryer.

II. BEST PRACTICAL TREATMENT (BPT)

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 new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in 06-096 C.M.R. ch. 100. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Replacement of Specialty Fryer

McCain has proposed the replacement of their existing Specialty Fryer with a new one of the same capacity but a smaller kettle. The heat exchanger for the fryer oil, stack, Energy Recovery System, and other associated support equipment all remain the same. The replacement fryer will improve crumb removal, thus reducing the risk of fryer fires, reduce operational downtime, improve oil circulation, reduce the volume of oil needed, and improve product quality.

1. BACT Findings

a. VOC

It was determined in air emission license A-436-71-I-A that the organic emissions released from the vegetable oil fryers are not VOCs but rather condensable organic particulate emissions. This determination was based on USEPA policy memorandums and tests conducted by both the USEPA and Frito-Lay. As a result of this information, VOC emissions from the fryers, including the Specialty Fryer, are assumed to be negligible.

b. PM

Emissions from the existing Specialty Fryer were determined to be condensable organic and filterable particulate matter and are controlled by a wet centrifugal collector rotoclone. Appropriate standard test methods for accurate measurement of condensable PM from this operation are not available. However, the rotoclone is assumed to be 62% efficient in

controlling these emissions based on a written guarantee from the equipment manufacturer.

McCain performed a BACT analysis for control of PM from the new Specialty Fryer. This analysis determined there were two types of control technologies that were technically feasible, wet electrostatic precipitators (Wet ESPs) and wet scrubbers.

The existing rotoclone is one type of wet scrubber, and as mentioned above, can achieve 62% control of PM emissions. There are other types of wet scrubbers that can achieve up to 75% control. Based on vendor-supplied information a PM control efficiency of 90% could be achieved with a Wet ESP. However, the extensive cost of purchasing and installing new control equipment in order to control an additional 4 – 9 tpy of PM is not justifiable, compared to using the existing rotoclone. Therefore, the continued use of a rotoclone and an emission limit of 5.7 lb/hr are determined to be BACT for control of PM from the Specialty Fryer.

c. Visible Emissions

BACT for control of visible emissions is determined to be a limit of 20% opacity on a six (6) minute block average basis except for no more than one (1) six-minute block average in a 1-hour period, during which time visible emissions shall not exceed 40% opacity.

C. Incorporation Into the Part 70 Air Emission License

The requirements in this 06-096 C.M.R. ch. 115 New Source Review license shall apply to the facility upon startup of the new Specialty Fryer. Per *Part 70 Air Emission License Regulations*, 06-096 C.M.R. ch. 140 § 1(C)(8), for a modification at the facility that has undergone NSR requirements or been processed through 06-096 C.M.R. ch. 115, the source must apply for an amendment to their Part 70 license within one year of commencing the proposed operations, as provided in 40 C.F.R. Part 70.5.

D. Annual Emissions

This amendment will not result in any change to licensed annual emissions.

III. AMBIENT AIR QUALITY ANALYSIS

McCain 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-436-70-B-A issued on 4/13/06). An additional ambient air quality analysis is not required for this NSR license.

ORDER

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

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

The Department hereby grants New Source Review License A-436-77-7-A pursuant to the preconstruction licensing requirements of 06-096 C.M.R. ch. 115 and subject to the standard and special conditions below.

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

SPECIFIC CONDITIONS

Upon completion of installation of the new Specialty Fryer, any previously issued NSR provisions for that equipment shall be replaced with the following:

(1) Specialty Fryer

A. Emission Limits

1. Emissions shall not exceed the following limits:

Unit	PM (lb/hr)	Origin and Authority
Specialty Fryer	5.7	06-096 C.M.R. ch. 115, BACT

2. Visible emissions from the Specialty Fryer shall not exceed 20% opacity on a six-minute block average basis except for no more than one (1) six-minute block average in a 1-hour period, during which time visible emissions shall not exceed 40% opacity. [06-096 C.M.R. ch. 115, BACT]

B. McCain shall operate and maintain, in good working order and in accordance with manufacturer's specifications, the wet centrifugal collector rotoclone on the Specialty Fryer. The rotoclone shall be operated at all times the Specialty Fryer is in use. [06-096 C.M.R. ch. 115, BACT]

C. Periodic Monitoring

McCain shall monitor and record the following periodic monitors for the Specialty Fryer and its associated air pollution control equipment:

1. Date, time, duration, and reason for all downtime for the rotoclone. [06-096 C.M.R. ch. 115, BACT]
2. Log detailing all maintenance and any malfunctions for the rotoclone. [06-096 C.M.R. ch. 115, BACT]
3. Records of monthly production (tons of finished product) for the Specialty Fryer. [06-096 C.M.R. ch. 115, BACT]
4. Records of monthly hours of operation for the Specialty Fryer line. [06-096 C.M.R. ch. 115, BACT]

(2) McCain shall submit an application to incorporate this NSR license into the facility's Part 70 air emission license no later than 12 months from commencement of the requested operation. [06-096 C.M.R. ch. 140 § 1(C)(8)]

DONE AND DATED IN AUGUSTA, MAINE THIS 27 DAY OF March, 2017.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Mauro Allen Robert Core for
PAUL MERCER, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 2/28/17

Date of application acceptance: 3/1/17

Date filed with the Board of Environmental Protection:

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

