



Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs

## Department of Environmental Protection

Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

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Commissioner

June 22, 2012

Mr. Jeff Wadsworth  
North Division Vice President  
Frito-Lay, Inc.  
85 Commerce Drive  
Somerset, NJ 08873

RE: **ADMINISTRATIVE AMENDMENT**  
310 CMR 7.02(13) Administrative Amendment to Plan Approval  
Application No.: SE-12-029  
Transmittal No.: X234542

AT: Frito-Lay, Inc.  
663 North Street  
Randolph

Dear Mr. Wadsworth:

On October 11, 2011, the Department of Environmental Protection, (MassDEP), Bureau of Waste Prevention (BWP), received information from your facility required by Special Condition F.10 of the February 16, 2011 Plan Approval (4P11008) issued by MassDEP to Frito-Lay, Inc. (Frito-Lay), located at 663 North Street, Randolph, Massachusetts ("Facility"). On February 29, 2012, MassDEP received an e-mail (Application) from your facility requesting clarification of the facility's operational limitations and reporting requirements, as contained in Plan Approval 4P11008. This Administrative Amendment satisfies Special Condition F.11 of Plan Approval 4P11008 and provides the requested clarifications.

The application was submitted in accordance with section 7.02 Plan Approval and Emissions Limitations as contained in 310 CMR 7.00 "Air Pollution Control Regulations", adopted by the Department pursuant to the authority granted by Massachusetts General Laws, Chapter 111, Section 142 A-J, and Chapter 21C, Sections 4 and 6.

The Department's review has been limited to air pollution regulation compliance and does not relieve you of the obligation to comply with all other permitting requirements.

The Department is of the opinion that the Application is in conformance with current air pollution control engineering practices, and hereby approves ADMINISTRATIVE AMENDMENT TO PLAN APPROVAL, Application No. SE-12-029. Non Major Comprehensive Plan Approval (NMCPA) No. 4P11008 is superseded in its entirety and is replaced with this Plan Approval (SE-12-029).

#### **FACILITY / EQUIPMENT DESCRIPTION**

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Departmental Approval No. 4P11008, dated February 16, 2011, authorized Frito-Lay to operate seven existing ovens, and install/operate an additional bread oven and a Regenerative Thermal Oxidizer (RTO). Approval No. 4P11008 required the Frito Lay to test the RTO for compliance, and subsequently propose final operating conditions.

Flour, yeast, and water are mixed, shaped, sent to a proofer, and baked at 900°F, at which point ethanol gas, a volatile organic compound, is released from the bread. The bread is then cut into smaller pieces, seasoned, and baked in chip ovens at 350°F. The bread is then cooled, and stored in air-tight packaging. The previously existing bread oven had a maximum operational capacity of 5,130 lbs/hr of bread. The bread oven will have a maximum operational capacity of 4,400 lbs/hr of bread. Thus, the facility's long-term emissions are based on maximum operational capacity of 9,530 lbs/hr of bread, operated continuously.

Each of these eight (8) ovens has a maximum heat input rate of less than 10 Million British Thermal Units per hour (10 MMBtu/hr). The bread ovens are fired with natural gas fuel only. The chip ovens are fired with natural gas or propane gas fuel only.

Frito-Lay operates the production lines in 13 operating periods per "year" of 28 days duration each and has requested, for recordkeeping purposes, that production, operational, and emission limitations be structured to be consistent with Frito-Lay operations. Unless otherwise specified, the term "year" as it appears throughout this document means any thirteen consecutive 4-week operational periods, comprised of 364 or 371 days. For recordkeeping purposes, production "year" 2012 started on January 1, 2012.

Process emissions from the facility include volatile organic compounds (VOCs).

The VOC emissions from the bread oven are controlled by an Adwest model 10.0RT097 regenerative thermal oxidizer (RTO), or equivalent. The RTO will operate at a minimum temperature of 1,500 °F, and be equipped with a Maxon Kinemax burner, or equivalent, which is capable of a maximum heat rate input of 2.89 MMBtu/hour. The burner will use natural gas as the only fuel at a maximum rate of 2,890 cubic feet per hour. A temperature chart recorder will record this temperature continuously. The RTO will achieve a 99% overall destruction efficiency of VOCs for inlet concentrations above 2,500 parts per million (ppm), measured as methane. For VOC inlet concentrations equal to or below 2,500 ppm, VOC outlet concentrations will not exceed 25 ppm. The RTO's long-term emissions are based on the RTO's maximum firing rate, operated continuously.

The treated process air stream will leave the RTO at approximately 115 °F to 410 °F. This air stream will be vertically discharged to the atmosphere, the top of which will be 45 feet above ground level. The inside diameter of the stack will be 28 inches and will provide a stack exit velocity ranging from 10 to 70 feet per second.

The Department acknowledges that Frito-Lay operates two (2) natural gas fired boilers in the facility, each having a maximum heat input of less than 10 MMBtu/hr. In accordance with 310 CMR 7.02(2)(b).(15)(a.), combustion sources with a maximum heat input of less than 10 MMBtu/hr are not subject to (i.e. exempt from) plan application filing and approval requirements. Frito-Lay has an obligation to maintain appropriate records and perform any necessary reporting as required by 310 CMR 7.02(2)(e) and (f) to maintain compliance with the respective exempt status.

The Department also recognizes that equipment at the facility includes a 11,500 gallon vegetable oil storage tank. In accordance with 310 CMR 7.02(2)(b)11, this unit is not subject to (i.e. exempt from) plan application filing and approval requirements. Frito-Lay has an obligation to maintain appropriate records and perform any necessary reporting as required by 310 CMR 7.02(2)(e) and (f) to maintain compliance with the exempt status.

**A. PRODUCTION LIMITATIONS**

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None.

**B. OPERATIONAL LIMITATIONS**

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1. Frito-Lay shall take any and all measures necessary to ensure the operation of the facility does not result in odor conditions that cause or contribute to a condition of air pollution as defined in 310 CMR 7.09.
2. Frito-Lay shall burn only natural gas fuel in the bread ovens located at the facility. Frito-Lay shall burn only natural gas or propane gas fuel in the chip ovens located at the facility.
3. Frito-Lay shall achieve and maintain the following Volatile Organic Compounds (VOCs) requirements in the RTO:
  - a) Minimum capture efficiency: 100%
  - b) Minimum destruction efficiency: 99% for VOC inlet concentrations above 2,500 ppm
  - c) Maximum VOC outlet concentration: 25 ppm for VOC inlet concentrations equal to or below 2,500 ppm
  - d) Minimum control efficiency: 99% for VOC inlet concentrations above 2,500 ppm

Capture efficiency is defined in 310 CMR 7.00, and is determined in accordance with EPA Reference Test Method 204, as specified in 40 CFR Part 51 Appendix M. Control efficiency is the product of capture efficiency and destruction efficiency.

4. While operating the bread ovens in production (i.e., dough is passed through and cooked in the ovens), Frito-Lay shall continuously meet the following RTO temperature requirement:
  - a) Minimum temperature: 1,500 °F  
 Minimum average temperature as measured by the thermocouples located on the downstream end of the combustion chamber. Records shall be maintained in accordance with Section D, Monitoring and Record Keeping Requirements,” of this approval.
5. Frito-Lay shall install and operate an electronic interlock system that prevents the bread ovens from being fed product until the RTO achieves a minimum (average) combustion chamber temperature of 1,500 °F. The electronic interlock system shall also prevent the bakery ovens from being fed product if the RTO’s (average) combustion chamber temperature falls below 1,500 °F or exceeds 2,000 °F.

**C. EMISSION LIMITATIONS**

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1. Frito-Lay shall not exceed the emission limitations as contained in Table No. 1. of this Approval, as follows:

Table No. 1. VOC Emission Limitations	
Equipment	Limitation
Two (2) Bread Ovens <sup>2</sup> and RTO <sup>3</sup> , combined	2.73 tons VOC per “year” <sup>1</sup>
Six (6) Chip Ovens <sup>4</sup> , combined	7.74 tons VOC per “year” <sup>1</sup>

Notes:

1. The term "year" means any thirteen consecutive 4-week operational periods.
2. Emission factor of 0.0007 lbs of VOC per lb of bread produced, based on credible test data contained in Non Major Comprehensive Plan Approval (NMCPA) Application 4P09020, and the maximum operational capacity for the two ovens combined of 9,530 lbs/hr, operated continuously per “year”.
3. RTO outlet emissions are based on AP-42 Tables 1.4-1 and 1.4-2, except for VOC, which is based on 25 parts per million (ppm) measured as methane. Fuel VOC emissions are included in RTO outlet emission calculations.
4. Emission factor of 0.294 lbs of VOC per hour, based on credible test data contained in NMCPA Application No. 4P09020, and 8760 hours per calendar year.

2. The operation of equipment used in the production process shall not result in visible emissions (i.e., zero percent opacity), exclusive of uncombined water vapor.

**D. MONITORING AND RECORDKEEPING REQUIREMENTS**

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1. Records shall be maintained on an operational period basis and on a consecutive 13-operational period basis (the total from the latest operational period plus the sum for the twelve operational periods preceding the latest operational period). These records, including any other “credible evidence,” shall document the compliance status of the facility regarding the conditions, provisions, and limits contained in this Plan Approval.
2. A copy of these records must be kept readily available on-site for a period of five (5) calendar years and shall be available to Department and/or US EPA personnel upon request.

**E. NOTIFICATIONS AND REPORTING**

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1. The Permittee shall notify the Southeast Regional Office of MassDEP, BWP Compliance and Enforcement Chief by telephone (508) 946-2878, email, [sair@state.ma.us](mailto:sair@state.ma.us) or fax (508) 947-6557 as soon as possible, but no later than three (3) business day after the occurrence of any upsets or malfunctions to the facility equipment, air pollution control equipment, or monitoring equipment that result in an excess emission to the air and/or a condition of air pollution. A written report shall be submitted to Compliance and Enforcement Chief at MassDEP within ten (10) business days thereafter and shall include: identification of exceedance(s), duration of exceedance(s), reason for the exceedance(s), corrective actions taken, and action plan to prevent future exceedance(s).

**F. SPECIAL CONDITIONS**

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1. Plan Approval No. SE-12-029 establishes authorization for Frito-Lay to operate the existing equipment described herein. The facility approved herein shall be operated in accordance with all limits and/or restrictions (i.e., operational limitations, emission limitations, etc.) contained in this Plan Approval. In addition, the facility shall be operated in strict accordance with the conditions, provisions, and/or descriptions contained in this Plan Approval, which include, but are not limited to: standard operating and maintenance procedures, preventative/mitigation measures for air pollution, recordkeeping, reporting, notifications, testing requirements etc.
2. Plan Approval No. SE-12-029 supersedes the following Departmental approval:

- Air Quality Plan Approval 4P11008, dated February 16, 2011.

The above listed approval shall be deemed null and void.

The underlying applications for NMCPA No. 4P11008, NMCPA No. 4P10029 (dated December 6, 2010), and NMCPA No. 4P09029 (dated October 29, 2009) shall continue to remain valid.

3. Frito-Lay shall operate the RTO to control the volatile organic compounds (VOC) emissions from each of the two bread ovens.
4. Frito-Lay shall install temperature monitoring and recording equipment which uses a dated and timed strip chart recorder, or equivalent, to record the temperature in the combustion chamber of the RTO. The temperature records must document actual RTO operating temperature necessary to ensure the proper VOC destruction efficiency of the RTO servicing the bread ovens. The temperature records shall be maintained on-site for a minimum of five years, and shall be made to MassDEP personnel upon request.
5. Bypassing of the RTO during periods of upset, malfunction or routine maintenance (bake-outs) is forbidden other than when provisos F.6.a) and F.6.b), or proviso F.6.c) are met:
  - a) To complete the current production run provided that it shall not exceed eight (8) hours in duration, and,
  - b) "Yearly" VOC potential emissions limits will be complied with; or
  - c) The Department approves in writing a written request from Frito-Lay that supports continued bread production operations.
6. Should the RTO become inoperable for more than 15 minutes during production operations, for any reason, Frito-Lay shall notify the Southeast Regional Office of MassDEP, BWP Compliance & Enforcement (C/E) Chief by telephone (508) 946-2878, email [sero.air@state.ma.us](mailto:sero.air@state.ma.us) or fax (508) 946-2865 or (508) 947-6557 as soon as possible, but no later than three (3) business days and subsequently in writing within ten (10) business days of occurrence describing the reason(s) for and the extent of down time of the equipment and all steps that have been or will be taken to prevent said occurrence from recurring.

**G. GENERAL CONDITIONS**

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Frito Lay is subject to, and shall comply with, the following general conditions:

1. Pursuant to 310 CMR 7.01, 7.02, 7.09 and 7.10, should any nuisance condition(s), including but not limited to smoke, dust, odor or noise, occur as the result of the operation of the Facility, then Frito Lay shall immediately take appropriate steps including shutdown, if necessary, to abate said nuisance condition(s).

2. If asbestos remediation/removal will occur as a result of the approved construction, reconstruction, or alteration of this Facility, Frito Lay shall ensure that all removal/remediation of asbestos shall be done in accordance with Regulation 310 CMR 7.15 in its entirety and 310 CMR 4.00.
3. If construction or demolition of an industrial, commercial or institutional building will occur as a result of the approved construction, reconstruction, or alteration of this Facility, Frito Lay shall ensure that said construction or demolition shall be done in accordance with 310 CMR 7.09(2) and 310 CMR 4.00.
4. Pursuant to 310 CMR 7.01(2)(b) and 7.02(7)(b), Frito Lay shall allow MassDEP and / or USEPA personnel access to the Facility, buildings, and all pertinent records for the purpose of making inspections and surveys, collecting samples, obtaining data, and reviewing records.
5. This Plan Approval does not negate the responsibility of Frito Lay to comply with any other applicable Federal, State, or local regulations now or in the future.
6. Should there be any differences between the Application and this Plan Approval, the Plan Approval shall govern.
7. Pursuant to 310 CMR 7.02(3)(k), MassDEP may revoke this Plan Approval if the construction work is not commenced within two years from the date of issuance of this Plan Approval, or if the construction work is suspended for one year or more.
8. This Plan Approval may be suspended, modified, or revoked by MassDEP if MassDEP determines that any condition or part of this Plan Approval is being violated.
9. This Plan Approval may be modified or amended when in the opinion of MassDEP such is necessary or appropriate to clarify the Plan Approval conditions or after consideration of a written request by Frito Lay to amend the Plan Approval conditions.
10. Frito Lay shall conduct emission testing, if requested by MassDEP, in accordance with USEPA Reference Test Methods and regulation 310 CMR 7.13. If required, a pretest protocol report shall be submitted to MassDEP at least 30 days prior to emission testing and the final test results report shall be submitted within 45 days after emission testing.
11. Pursuant to 310 CMR 7.01(3) and 7.02(3)(f), the Frito Lay shall comply with all conditions contained in this Plan Approval. Should there be any differences between provisions contained in the General Conditions and provisions contained elsewhere in the Plan Approval, the latter shall govern.

The Department has determined that the filing of an Environmental Notification Form (ENF) with the Secretary of Environmental Affairs, for air quality control purposes, was not required prior to

this action by the Department. Notwithstanding this determination, the Massachusetts Environmental Policy Act (MEPA) and Regulations 301 CMR 11.00, Section 11.04, provide certain "Fail-Safe Provisions," which allow the Secretary to require the filing of an ENF and/or an Environmental Impact Report (EIR) at a later time.

Please be advised that the term "year" as it appears throughout this document is not intended to replace the term "year" or "annual" as contained in 310 CMR 7.12 Source Registration.

The enforceable conditions contained herein, establish the federally enforceable status of this ADMINISTRATIVE AMENDMENT TO PLAN APPROVAL. The Department reserves the right to require changes in the standard operating and/or maintenance procedures and record keeping systems, and to require additional process monitoring if it is determined necessary by the Department to ensure continuous compliance with the Air Quality Control Regulations contained in 310 CMR 7.00.

This ADMINISTRATIVE AMENDMENT TO PLAN APPROVAL is an action of the Department; you have a limited right to appeal. Please refer to the attached "APPEAL OF APPROVAL" information.

Should you have any questions pertaining to this ADMINISTRATIVE AMENDMENT TO PLAN APPROVAL, please contact Dan Kamieniecki at the Regional Office at (508) 946-2717.

Very truly yours,

*This final document copy is being provided to you electronically by the Department of Environmental Protection. A signed copy of this document is on file at the DEP office listed on the letterhead.*

John K. Winkler, Chief  
Permit Section  
Bureau of Waste Prevention

W/DK/

Enclosure: Appeal of Approval

ecc: Randolph Health Dept.  
Randolph Fire Dept.  
DEP-SERO – M. Pinaud, J. Winkler, L. Black  
DEP-SERO – Y. Tian  
Frito-Lay, Inc. - A. Dimitroff  
TRC Environmental - M. Hultman

## ATTACHMENT 1

### APPEAL OF APPROVAL

This Approval is an action of the Department. If you are aggrieved by this action, you may request an adjudicatory hearing. A request for a hearing must be made in writing and postmarked within twenty-one (21) days of the date of issuance of this Approval.

Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts, which are the grounds for the request, and the relief sought. Additionally, the request must state why the Approval is not consistent with applicable laws and regulations.

The hearing request along with a valid check payable to Commonwealth of Massachusetts in the amount of one hundred dollars (\$100.00) must be mailed to:

Commonwealth of Massachusetts  
Department of Environmental Protection  
P.O. Box 4062  
Boston, MA 02211

The request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below.

The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority.

The Department may waive the adjudicatory hearing filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.