San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

July 12, 2021

Ms. Kristie Wdowiak
Frito-Lay, Inc.
600 Garner Rd
Modesto, CA 95357

Re: Proposed ATC / Certificate of Conformity (Significant Mod)
Facility Number: N-1919
Project Number: N-1203844

Dear Ms. Wdowiak:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. You requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The proposed project includes installation of fried cheese puff process line, cornmeal receiving and storage, dorito tortilla chip process line, and corn receiving and storage operation.

The notice of preliminary decision for this project has been posted on the District's website (www.valleyair.org). After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the Authority to Construct with a Certificate of Conformity. Please submit your comments within the 30-day public comment period, as specified in the enclosed public notice. Prior to operating with modifications authorized by the Authority to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

If you have any questions, please contact Mr. Nick Peirce, Permit Services Manager, at (209) 557-6400.

Thank you for your cooperation in this matter.

Sincerely,

Brian Clements
Director of Permit Services

Enclosures

cc: Courtney Graham, CARB (w/enclosure) via email
cc: Laura Yannayon, EPA (w/enclosure) via EPS

Samir Sheikh
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: (661) 392-5500 FAX: (661) 392-5585

www.valleyair.org www.healthyairliving.com

San Joaquin Valley Air Pollution Control District

Authority to Construct Application Review

Installation of Snack Food Manufacturing Lines

Facility Name:	Frito-Lay, Inc.	Date:	July 8, 2021
Mailing Address:	600 Garner Rd Modesto, CA 95357	Engineer:	Jag Kahlon
		Lead Engineer:	James Harader
Contact Person:	M. Scott Weaver, Consultant		
Telephone:	(626) 720-2015		
Fax:	N/A		
E-Mail:	msweaver@ramboll.com		
Application #(s):	N-1919-18-0, '-19-0, '-20-0 and '-21-0		
Project #:	N-1203844		
Deemed Complete:	December 14, 2020		

I. Proposal

N-1919-18-0
Frito-Lay Inc., is requesting an Authority to Construct (ATC) permit to install a Fried Cheese Puff (FCP) snack food manufacturing line. This line will have two cornmeal sifters served by bag filters, one cornmeal transfer system served by a filter, a blending system, eight extruders served by two rotoclones, a steam-heated vegetable oil fryer equipped with oil mist eliminator (OME), an ambient air cooler served by a high velocity filtration system, and a seasoning system vented to a Tri-Mer 10-H orifice water scrubber for particulate matter control.

N-1919-19-0
Frito-Lay Inc., is requesting an ATC permit to install two corn meal silos, each equipped with a bin vent filtration system and a pneumatic cornmeal unloader filter/receiver system.

N-1919-20-0
Frito-Lay Inc., is requesting an ATC permit to install a Dorito Tortilla Chip (DTC) snack food manufacturing line. This process line will have a grain cleaner served by a cyclone vented to a dust collector system, four steam-operated cooking kettles for corn wash, soak and cook system, a steam-heated vegetable oil fryer with an OME, an 8.5 MMBtu/hr natural gas-fired oven with low-NOx burner system, an ambient air cooler served by a high velocity filtration system, and a seasoning system vented to a Tri-Mer 28-H orifice venturi water scrubber for particulate matter control.

N-1919-21-0
Frito-Lay Inc., is requesting an Authority to Construct permit to install two corn silos each equipped with a bin vent filtration system and two corn unloaders each with a bin vent filter.

Frito-Lay Inc., is also proposing to install two or three new vegetable oil storage tanks. Due to the extremely low vapor pressure of vegetable oils, these storage tanks will not generate any VOC emissions. Therefore, these tanks do not require air permits.

Frito-Lay Inc., received their renewed Title V Permit on December 3, 2018. This modification can be classified as a Title V significant modification pursuant to Rule 2520, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct permits. Frito-Lay, Inc. must apply to administratively amend their Title V permit.

The draft ATCs are included in **Appendix A**.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (8/15/19)
Rule 2410	Prevention of Significant Deterioration (6/16/11)
Rule 2520	Federally Mandated Operating Permits (8/15/19)
Rule 4001	New Source Performance Standards (4/14/99)
Rule 4002	National Emissions Standards for Hazardous Air Pollutants (5/20/04)
Rule 4101	Visible Emissions (2/17/05)
Rule 4102	Nuisance (12/17/92)
Rule 4201	Particulate Matter Concentration (12/17/92)
Rule 4202	Particulate Matter – Emission Rate (12/17/92)
Rule 4301	Fuel Burning Equipment (12/17/92)
Rule 4309	Dryers, dehydrators, and Ovens (12/15/05)
Rule 4801	Sulfur Compounds (12/17/92)
CH&SC 41700	Health Risk Assessment
CH&SC 42301.6	School Notice

Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. Project Location

The facility is located at 600 Garner Rd in Modesto, California. The equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

Frito-Lay, Inc. is in the business of producing various snack food items including potato chips, corn chips, fried cheese puffs, etc. They are proposing to install a Fried Cheese Puff (FCP)

snack manufacturing line, Dorito Tortilla Chip (DTC) snack manufacturing line, and associated support equipment under this project.

V. Equipment Listing

N-1919-18-0: FRIED CHEESE PUFF PROCESS LINE CONSISTS OF TWO SHICK MODEL EZ900G (OR EQUIVALENT MAKE AND MODEL) CORNMEAL SIFTERS SERVED BY BAG FILTERS, ONE SHICK MODEL 8-1250 (OR EQUIVALENT MAKE AND MODEL) CORNMEAL TRANSFER SERVED BY BHA GROUP INC STS 26 (OR EQUIVALENT MAKE AND MODEL) FILTER SYSTEM, A BLENDING SYSTEM, EIGHT R&D MACHINE SUPER HIGH CAPACITY (OR EQUIVALENT MAKE AND MODEL) EXTRUDERS SERVED BY TWO ROTOCLONES, A HEAT & CONTROL MODEL CC-1.5 (OR EQUIVALENT MAKE AND MODEL) VEGETABLE OIL FRYER (STEAM HEATED) EQUIPPED WITH AN OIL MIST ELIMINATOR SYSTEM, A HEAT & CONTROL (OR EQUIVALENT MAKE AND MODEL) AMBIENT AIR COOLER SERVED BY HIGH VELOCITY FILTRATION SYSTEM AND A SEASONING SYSTEM VENTED TO A TRI-MER 10-H (OR EQUIVALENT MAKE AND MODEL) ORIFICE WATER SCRUBBER

N-1919-19-0: CORN MEAL RECEIVING AND STORAGE EQUIPMENT CONSISTING OF TWO CORN MEAL SILOS EQUIPPED WITH BIN VENT FILTERS AND ONE SCHICK MODEL 8-1250 (OR EQUIVALENT MAKE AND MODEL) CORN MEAL UNLOAD FILTER/RECEIVER

N-1919-20-0: DORITO TORTILLA CHIP PROCESS LINE CONSISTS OF A SCHENCK (OR EQUIVALENT MAKE AND MODEL) CORN CLEANER SERVED BY A CYCLONE VENTED TO A DUST COLLECTION SYSTEM, FOUR KETTLES (STEAM-HEATED) FOR CORN WASH, SOAK AND COOK SYSTEM, A HEAT & CONTROL MODEL DTC-4500 (OR EQUIVALENT MAKE AND MODEL)VEGETABLE OIL FRYER (STEAM HEATED) WITH OIL MIST ELIMINATOR, AN IET COMBUSTION LLC MODEL 10D-400-S-F (OR EQUIVALENT MAKE AND MODEL) 8.5 MMBTU/HR OVEN WITH LOW-NOX BURNER, A HEAT & CONTROL MODEL AAC-7212 (OR EQUIVALENT MAKE AND MODEL)AMBIENT AIR COOLER SERVED BY HIGH VELOCITY FILTRATION SYSTEM, AND A SEASONING SYSTEM VENTED TO A TRI-MER 28-H (OR EQUIVALENT MAKE AND MODEL) WATER SCRUBBER

N-1919-21-0: CORN RECEIVING AND STORAGE EQUIPMENT CONSISTING OF TWO SCHENCK (OR EQUIVALENT MAKE AND MODEL) CORN SILOS EQUIPPED WITH BIN VENT FILTERS AND TWO SCHENCK (OR EQUIVALENT MAKE AND MODEL) CORN UNLOADERS WITH BIN VENT FILTERS

VI. Emission Control Technology Evaluation

N-1919-18-0:

Corn meal sifters served by bag filters

Corn meal transfer operation served by a bag filter

These operations are served by bag filters. These filters are expected to reduce at least 99% of the particulate matter emissions. To ensure bag filters are maintained properly, visible emissions from the bag filters will be limited to 5% opacity per guidance in District Policy SSP-1005 (9/16/98).

Eight Extruders served by two rotoclones

The total particulate concentration at rotoclones exhaust (0.0044 gr/dscf) is comparable to that of a typical dust collector with filters; therefore, rotoclones are expected to reduce at least 99% of the particulate matter emissions.

Steam-heated vegetable oil fryer equipped with oil mist eliminator (OME)

PM

Frito-Lay has proposed to use an OME system to reduce filterable and condensable particulate matter emissions. Per the manufacturer, OMEs are expected to reduce at least 95% of the particulate matter.

VOC

Frito-Lay is not proposing any add-on emissions control equipment to reduce VOC emissions. Therefore, control technology evaluation is not required.

Ambient air cooler with high velocity filtration system

The air from the cooler will be discharge through high efficiency filters. These filters are expected to reduce at least 99% of the particulate matter emissions. To ensure filters are maintained properly, visible emissions from the ambient air cooler will be limited to 5% opacity per guidance in District Policy SSP-1005 (9/16/98).

Seasoning system with a Tri-Mer 10-H orifice water scrubber

Per the manufacturer specification sheet, the Tri-Mer 10-H scrubber is expected to reduce at least 99% of particulate matter.

N-1919-19-0:

Corn meal will be delivered to the facility via railcars. The cornmeal will then be transferred to storage silos using a pneumatic unloading system.

Cornmeal silos

Cornmeal unload filter/receiver

Silos and unload filter/receiver are equipped with filters capable of reducing at least 99% of particulate matter emissions. To ensure filters are maintained properly, visible emissions from the ambient air cooler will be limited to 5% opacity per guidance in District Policy SSP-1005 (9/16/98).

N-1919-20-0

Corn cleaner with bin vent filter

Per the applicant, the grain cleaner will have a cyclone which is ducted to a dust collector. The dust collector will reduce particulate matter emissions by at least 99%. To ensure filters are maintained properly, visible emissions will be limited to 5% opacity per guidance in District Policy SSP-1005 (9/16/98).

Corn wash, soak, and steam-operated cooking kettles

These units are not expected to emit any air contaminants.

Steam-heated vegetable oil fryer with oil mist eliminator (OME)

PM

Frito-Lay has proposed to use oil mist eliminators to reduce filterable and condensable particulate matter emissions. Per the manufacturer, OME are expected to reduce at least 95% of the particulate matter.

VOC

Frito-Lay is not proposing any add-on emissions control equipment to reduce VOC emissions. Therefore, control technology evaluation is not required.

8.5 MMBtu/hr oven with low-NOx burner

NOx:

Low-NOx burners reduce NOx formation by producing lower flame temperatures (and longer flames) than conventional burners. Conventional burners thoroughly mix all the fuel and air in a single stage just prior to combustion, whereas low-NOx burners delay the mixing of fuel and air by introducing the fuel (or sometimes the air) in multiple stages. Generally, in the first combustion stage, the air-fuel mixture is fuel rich. In a fuel rich environment, all the oxygen will be consumed in reactions with the fuel, leaving no excess oxygen available to react with nitrogen to produce thermal NOx. In the secondary and tertiary stages, the combustion zone is maintained in a fuel-lean environment. The excess air in these stages helps to reduce the flame temperature so that the reaction between the excess oxygen with nitrogen is minimized.

SOx, PM10, CO and VOC

To reduce these emissions, the applicant has proposed to use natural gas fuel in the oven.

Ambient air cooler with high velocity filtration system

The air from cooler will be discharged through high efficiency filters. These filters are expected to reduce at least 99% of the particulate matter emissions. To ensure the filters are maintained properly, visible emissions from the ambient air cooler will be limited to 5% opacity per guidance in District Policy SSP-1005 (9/16/98).

Seasoning system with a Tri-Mer 28-H orifice water scrubber

Per the manufacturer specification sheet, this scrubber will reduce at least 99% of the particulate matter.

N-1919-21-0:
Corn will be delivered to the facility via railcars. The corn will then be transferred to storage silos using two Schenk pneumatic unloading systems.

Corn silos with bin vent filters
The bin vent filters serving the corn silos will have at least 99% control for PM emissions. To ensure filters are maintained properly, visible emissions from the ambient air cooler will be limited to 5% opacity per guidance in District Policy SSP-1005 (9/16/98).

Corn unloader
This unloader is equipped with bin vent filters. Typically, bin vent filters reduce 99% of PM emissions. To ensure filters are maintained properly, visible emissions from the ambient air cooler will be limited to 5% opacity per guidance in District Policy SSP-1005 (9/16/98).

VII. General Calculations

A. Assumptions

- To streamline emission calculations, PM2.5 emissions are assumed to be equal to PM10 emissions. Only if needed to determine if a project is a Federal major modification for PM2.5 will specific PM2.5 emission calculations be performed.
- Other assumptions will be stated as they are made during the evaluation.

B. Emission Factors

N-1919-18-0:
Corn meal sifters served by bag filters
A PM emission factor of 0.0001153 gr/dscf will be used for the corn meal sifters. This factor is based on source testing of similar units.

EF = 0.0001153 gr-PM/dscf

Corn meal transfer operation served by a bag filter
The bag filter manufacturer guarantees that their bags will reduce emissions to 1.0 mg-PM/N-m^3 (equates to 0.00044 grains/ft^3). Thus, this factor will be used for the corn meal transfer operation.

EF = 0.00044 gr-PM/dscf

Eight Extruders served by two rotoclones
An emission factor of 1.048×10^{-5} was calculated based on source testing of similar extruders at Frito-Lay, Inc., Rancho Cucamonga, CA. The applicant stated that the extruders at Frito-Lay, Inc., Rancho Cucamonga, CA are equipped with rotoclones similar to the ones proposed for the Frito-Lay's Modesto site. A 20% margin of compliance has been applied to the test results, to ensure continuous compliance.

EF = (1.048 x 10^{-5} lb-PM/lb-material)(1.2) = 1.258 x 10^{-5} lb-PM/lb-material

Steam-heated vegetable oil fryer equipped with oil mist eliminator (OME)
PM
An emission factor of 4.583 x 10^{-6} lb-PM/lb-material was calculated based on source testing of a similar fryer at Frito-Lay, Inc., Rancho Cucamonga, CA. The applicant states that the fryer at Frito-Lay, Inc., Rancho Cucamonga, CA are equipped with OME similar to the ones proposed for the Frito-Lay's Modesto site. A 20% margin of compliance has been applied to the test results, to ensure continuous compliance.

EF = (4.583 x 10^{-6} lb-PM/lb-material)(1.2) = 5.500 x 10^{-6} lb-PM/lb-material

VOC
The applicant proposed to use an uncontrolled EF of 0.085 lb-VOC/ton from EPA's AP-42 Table 9.13.3-3 (1/95) for deep fat fryer – other snack chips and to apply 95% control efficiency to this emission factor due to the presence of an OME. The district reviewed the EPA background document for this specific AP-42 emission factor and determined that EPA considers VOC emissions from a fryer with an oil mist eliminator to be an uncontrolled unit; therefore, a 95% control efficiency is not appropriate as the presence of an OME has already been factored into the uncontrolled AP-42 emission factor. The EPA AP-42 factor of 0.085 lb-VOC/ton will be used for this unit.

Ambient air cooler with high velocity filtration system
An average emission factor of 0.098 lb-PM10/ton was derived from two source tests conducted on similar equipment at the Frito-Lay Bakersfield site. A 20% margin of compliance has been applied to the test results, to ensure continuous compliance.

EF = (0.098 lb-PM/ton of material processed)(1.2)
= 0.118 lb-PM/ton of material processed

Seasoning system with a Tri-Mer 10-H orifice water scrubber
The applicant has proposed to use an uncontrolled EF of 0.001 lb-PM/lb-seasoning. This emissions factor was used previously for a similar unit in District project N-1193683. Pursuant to the manufacturer's spec sheet, the proposed scrubber is capable of reducing at least 99% of the particulate matter. Thus, the controlled emission factor is:

EF = (0.001 lb-PM/lb-seasoning)(1-0.99) = 0.00001 lb-PM/lb-seasoning

N-1919-19-0:
Corn meal will be delivered to the facility via railcars. The cornmeal will then be transferred to storage silos using a pneumatic unloading system.

Cornmeal unload filter/receiver
Per the filter manufacturer's specification sheet, the filters are guaranteed at an emissions rate of 1.0 mg-PM/N-m^3 (equates to 0.00044 grains/ft^3).

EF = 0.00044 gr-PM/dscf

Cornmeal silos
An uncontrolled EF of 0.025 lb-PM/ton is taken from AP-42 Table 9.9.1-1 (3/03). The bin vent filters serving each silo are expected to achieve at least 99% control for PM emissions. Thus,

EF = (0.025 lb-PM/ton of material)(1-0.99) = 0.00025 lb-PM/ton of material

N-1919-20-0
Corn cleaner with bin vent filter
The applicant has proposed to use EF of 0.075 lb-PM/ton of grain handled. This EF is taken from AP-42 Table 9.9.1-1 (3/03) for a grain cleaner served by a cyclone.

Per the applicant, the proposed grain cleaner will have a cyclone which is ducted to a dust collector. The dust collector will reduce PM emissions by at least 99%. Thus,

EF = (0.075 lb-PM/ton of grain handled)(1-0.99) = 0.00075 lb-PM/ton of grain handled

Corn wash, soak, and steam-operated cooking kettles
These units are not expected to generate any emissions.

Steam-heated vegetable oil fryer with oil mist eliminator (OME)
PM
The applicant proposed the use of an EF of 0.80 (0.56 lb-PM/ton filterable + 0.24 lb-PM/ton condensable) from EPA's AP-42 Table 9.13.3-2 (1/95) for continuous deep fat fryer – other snack chips. This is an uncontrolled EF per EPA's background document for the emission factor Table 4-4 (https://www.epa.gov/sites/production/files/2020-10/documents/b9s1303_0.pdf) and does not take into account any PM emission reductions from the OME. The OME manufacturer confirmed that their typical OME has a control efficiency of greater than 95% for PM emissions. Thus,

EF = (0.80 lb-PM/ton of chips)(1-0.95) = 0.04 lb-PM/ton of chips

VOC
The applicant has proposed to use an uncontrolled EF of 0.085 lb-VOC/ton from EPA's AP-42 Table 9.13.3-3 (1/95) for deep fat fryer – other snack chips. The applicant also proposed to apply a 95% control efficiency for VOC's to this factor due to their proposed use of an OME for the fryer. The EPA background document was reviewed for the emission factor development. EPA considers VOC emissions from a 'fryer with oil mist eliminator' as uncontrolled source of emissions; therefore, the use of an OME was already factored into the "uncontrolled" VOC emission factor listed in AP-42. Thus, the District will use the AP-42 factor of 0.085 lb-VOC/ton for this unit, without applying any additional control from the OME.

8.5 MMBtu/hr oven with low-NOx burner

Pollutant	EF (lb/MMscf)	Source
NOx	36	Manufacturer specification
SOx	2.85	District Policy
PM_{10}	7.5	SCAQMD AER Reporting Tool Defaults for Combustion Equipment
CO	35	
VOC	7	

Ambient air cooler with high velocity filtration system

The ambient air cooler emissions are derived by taking an average of the PM data from two source tests (source test data from July 1, 2005 test conducted at Frito-Lay, Bakersfield site (E= 0.096 lb-PM/hr, P =1.3 tons/hr) and April 29, 1999 test conducted at Frito Lay Modesto site (E = 0.14 lb-PM/hr, P =1.1 tons/hr). The average emissions for both tests were 0.118 lb-PM/hr and average production was 1.2 tons/hr. Thus, average emission factor would be 0.098 lb-PM10/ton of material processed (0.118/1.2). A 20% margin of compliance has been applied to the test results, to ensure continuous compliance.

EF = (0.098 lb-PM/ton of material)(1.2) = 0.118 lb-PM/ton of material processed

Seasoning system with a Tri-Mer 28-H orifice water scrubber

The applicant has proposed to use an uncontrolled EF of 0.001 lb-PM/lb-seasoning. This emissions factor was used under project N-1193683. Per the manufacturer specification sheet, the proposed scrubber is capable of reducing at least 99% of particulate matter.

EF = (0.001 lb-PM/lb-seasoning)(1-0.99) = 0.00001 lb-PM/lb-seasoning

N-1919-21-0:

Corn will be delivered to the facility via railcars. The corn will then be transferred to storage silos using two Schenk pneumatic unloading systems. Each pneumatic system can unload 45,000 lb/hr of corn.

Corn silos with bin vent filters

An uncontrolled EF of 0.025 lb-PM/ton is taken from AP-42 Table 9.9.1-1 (3/03). The vent filters will each have at least 99% control for PM emissions. Thus,

EF = (0.025 lb-PM/ton of material)(1-0.99) = 0.00025 lb-PM/ton of material

Corn unloader

An uncontrolled EF of 0.032 lb-PM/ton is taken from AP-42 Table 9.9.1-1 (3/03). This EF is for receiving grains via railcar with no controls. The corn unloader will be served by bin vent filter system. Typically, a bin vent filter reduce 99% of PM emissions. Thus,

EF = (0.032 lb-PM/ton of grain loaded)(1-0.99) = 0.00032 lb-PM/ton of grain loaded

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Since all of the emission units under this project are new emissions units, PE1 = 0 for all pollutants.

2. Post-Project Potential to Emit (PE2)

N-1919-18-0:

Corn meal sifters served by bag filters

The design exhaust flow rate for the bag filter system is 114 scfm. Thus,

PE2 (lb/hr) = (0.0001153 gr-PM/dscf)(114 scfm)(60 min/hr)(lb/7,000 gr)
= 0.001 lb-PM/hr

PE2 (lb/day) = (0.0001153 gr-PM/dscf)(114 scfm)(1,440 min/day)(lb/7,000 gr)
= 0.0027 lb-PM/day (0.0 lb-PM/day)

PE2 (lb/yr) = (0.0001153 gr-PM/dscf)(114 scfm)(60 min/hr)(8,760 hr/yr)(lb/7,000 gr)
= 1 lb-PM/yr

Corn meal transfer operation served by a bag filter

The design exhaust flow rate for this system is 700 scfm. Thus,

PE2 (lb/hr) = (0.00044 gr-PM/dscf)(700 scfm)(60 min/hr)(lb/7,000 gr)
= 0.003 lb-PM/hr

PE2 (lb/day) = (0.00044 gr-PM/dscf)(700 scfm)(1,440 min/day)(lb/7,000 gr)
= 0.1 lb-PM/day

PE2 (lb/yr) = (0.00044 gr-PM/dscf)(700 scfm)(60 min/hr)(8,760 hr/yr)(lb/7,000 gr)
= 23 lb-PM/yr

Eight Extruders served by two rotoclones

The proposed process rate is 4,400 lb/hr. Thus,

PE2 (lb/hr) = (1.258×10^{-5} lb-PM/lb-material)(4,400 lb/hr)
= 0.055 lb-PM/hr

PE2 (lb/day) = (1.258×10^{-5} lb-PM/lb-material)(4,400 lb/hr)(24 hr/day)
= 1.3 lb-PM/day

PE2 (lb/yr) = (1.258×10^{-5} lb-PM/lb-material)(4,400 lb/hr)(8,760 hr/yr)
= 485 lb-PM/yr

Steam-heated vegetable oil fryer equipped with oil mist eliminator (OME)
The proposed process rate is 5,400 lb/hr. Thus,

PE2 (lb/hr) = (5.500 x 10^{-6} lb-PM/lb-material)(5,400 lb/hr)
= 0.030 lb-PM/hr

= (0.085 lb-VOC/ton)(5,400 lb/hr)(ton/2,000 lb)
= 0.230 lb-VOC/hr

PE2 (lb/day) = (5.500 x 10^{-6} lb-PM/lb-material)(5,400 lb/hr)(24 hr/day)
= 0.7 lb-PM/day

= (0.085 lb-VOC/ton)(5,400 lb/hr)(ton/2,000 lb)(24 hr/day)
= 5.5 lb-VOC/day

PE2 (lb/yr) = (5.500 x 10^{-6} lb-PM/lb-material)(5,400 lb/hr)(8,760 hr/yr)
= 260 lb-PM/yr

= (0.085 lb-VOC/ton)(5,400 lb/hr)(ton/2,000 lb)(8,760 hr/yr)
= 2,010 lb-VOC/yr

Ambient air cooler with high velocity filtration system
The proposed process rate is 5,400 lb/hr. Thus,

PE2 (lb/hr) = (0.118 lb-PM/ton of material)(5,400 lb/hr)(ton/2,000 lb)
= 0.319 lb-PM/hr

PE2 (lb/day) = (0.118 lb-PM/ton of material)(5,400 lb/hr)(ton/2,000 lb)(24 hr/day)
= 7.6 lb-PM/day

PE2 (lb/yr) = (0.118 lb-PM/ton of material)(5,400 lb/hr)(ton/2,000 lb)(8,760 hr/yr)
= 2,791 lb-PM/yr

Seasoning system with a Tri-Mer 10-H orifice water scrubber
The proposed seasoning use rate is 1,855 lb/hr. Thus,

PE2 (lb/hr) = (0.00001 lb-PM/lb-seasoning)(1,855 lb/hr)
= 0.019 lb-PM/hr

PE2 (lb/day) = (0.00001 lb-PM/lb-seasoning)(1,855 lb/hr)(24 hr/day)
= 0.4 lb-PM/day

PE2 (lb/yr) = (0.00001 lb-PM/lb-seasoning)(1,855 lb/hr)(8,760 hr/yr)
= 162 lb-PM/yr

Summary:

Daily:

Pollutant	Corn meal sifter lb/day	Corn meal transfer lb/day	Extruders lb/day	Fryer lb/day	Cooler lb/day	Seasoner lb/day	Total PE2 lb/day
NOx	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SOx	0.0	0.0	0.0	0.0	0.0	0.0	0.0
*PM_{10}	0.0	0.1	1.3	0.7	7.6	0.4	10.1
CO	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VOC	0.0	0.0	0.0	5.5	0.0	0.0	5.5

*All PM emissions estimated above are conservatively assumed to be PM10 emissions.

Annual:

Pollutant	Corn meal sifter lb/yr	Corn meal transfer lb/yr	Extruders lb/yr	Fryer lb/yr	Cooler lb/yr	Seasoner lb/yr	Total PE2 lb/yr
NOx	0	0	0	0	0	0	0
SOx	0	0	0	0	0	0	0
*PM_{10}	1	23	485	260	2,791	162	3,722
CO	0	0	0	0	0	0	0
VOC	0	0	0	2,010	0	0	2,010

*All PM emissions estimated above are conservatively assumed to be PM10 emissions.

N-1919-19-0:

Cornmeal unload filter/receiver

The design exhaust flow rate for this system is 650 scfm. Thus,

PE2 (lb/hr) = (0.00044 gr-PM/dscf)(650 scfm)(60 min/hr)(lb/7,000 gr)
= 0.002 lb-PM/hr

PE2 (lb/day) = (0.00044 gr-PM/dscf)(650 scfm)(1,440 min/day)(lb/7,000 gr)
= 0.1 lb-PM/day

PE2 (lb/yr) = (0.00044 gr-PM/dscf)(650 scfm)(60 min/hr)(8,760 hr/yr)(lb/7,000 gr)
= 21 lb-PM/yr

Cornmeal silos

The proposed corn meal receiving rate is 54,000 lb/hr. Thus,

PE2 (lb/hr) = (0.00025 lb-PM/ton of material)(54,000 lb/hr)(ton/2,000 lb)
= 0.007 lb-PM/hr

PE2 (lb/day) = (0.00025 lb-PM/ton of material)(54,000 lb/hr)(ton/2,000 lb)(24 hr/day)
= 0.2 lb-PM/day

PE2 (lb/yr) = (0.00025 lb-PM/ton of material)(54,000 lb/hr)(ton/2,000 lb)(8,760 hr/yr)
= 59 lb-PM/yr

Summary:
Daily:

Pollutant	Corn meal unload filter/receiver lb/day	Corn meal silos lb/day	Total PE2 lb/day
*PM_{10}	0.1	0.2	0.3

*All PM emissions estimated above are conservatively assumed to be PM10 emissions.

Annual:

Pollutant	Corn meal unload filter/receiver lb/yr	Corn meal silos lb/yr	Total PE2 lb/yr
*PM_{10}	21	59	80

*All PM emissions estimated above are conservatively assumed to be PM10 emissions.

N-1919-20-0:
Corn cleaner with bin vent filter
The proposed corn cleaning rate is 45,000 lb/hr. Thus,

PE2 (lb/hr) = (0.00075 lb-PM/ton of material)(45,000 lb/hr)(ton/2,000 lb)
= 0.017 lb-PM/hr

PE2 (lb/day) = (0.00075 lb-PM/ton of material)(45,000 lb/hr)(ton/2,000 lb)(24 hr/day)
= 0.4 lb-PM/day

PE2 (lb/yr) = (0.00075 lb-PM/ton of material)(45,000 lb/hr)(ton/2,000 lb)(8,760 hr/yr)
= 148 lb-PM/yr

Corn wash, soak, and steam-operated cooking kettles
PE2 = 0

Steam-heated vegetable oil fryer with oil mist eliminator (OME)
The proposed process rate is 5,400 lb/hr. Thus,

PE2 (lb/hr) = (0.04 lb-PM/ton of chips)(5,400 lb/hr)(ton/2,000 lb)
= 0.108 lb-PM/hr

= (0.085 lb-VOC/ton)(5,400 lb/hr)(ton/2,000 lb)
= 0.230 lb-VOC/hr

PE2 (lb/day) = (0.04 lb-PM/ton of chips)(5,400 lb/hr)(ton/2,000 lb)(24 hr/day)
= 2.6 lb-PM/day

= (0.085 lb-VOC/ton)(5,400 lb/hr)(ton/2,000 lb)(24 hr/day)
= 5.5 lb-VOC/day

PE2 (lb/yr) = (0.04 lb-PM/ton of chips)(5,400 lb/hr)(ton/2,000 lb)(8,760 hr/yr)
= 946 lb-PM/yr

= (0.085 lb-VOC/ton)(5,400 lb/hr)(ton/2,000 lb)(8,760 hr/yr)
= 2,010 lb-VOC/yr

8.5 MMBtu/hr oven with low-NOx burner
Higher heating value of natural gas is assumed to be 1,000 Btu per scf of natural gas.

PE2 (lb/hr) = EF lb/MMscf x 8.5 MMBtu/hr x scf/1,000 Btu
PE2 (lb/day) = EF lb/MMscf x 8.5 MMBtu/hr x scf/1,000 Btu x 24 hr/day
PE2 (lb/yr) = EF lb/MMscf x 8.5 MMBtu/hr x scf/1,000 Btu x 8,760 hr/yr

Pollutant	EF lb/MMscf	PE2 (lb/hr)	PE2 (lb/day)	PE2 (lb/yr)
NOx	36	0.306	7.3	2,681
SOx	2.85	0.024	0.6	212
PM_{10}	7.5	0.064	1.5	558
CO	35	0.298	7.1	2,606
VOC	7	0.060	1.4	521

Ambient air cooler with high velocity filtration system
The proposed process rate is 5,400 lb/hr. Thus,

PE2 (lb/hr) = (0.118 lb-PM/ton of material)(5,400 lb/hr)(ton/2,000 lb)
= 0.319 lb-PM/hr

PE2 (lb/day) = (0.118 lb-PM/ton of material)(5,400 lb/hr)(ton/2,000 lb)(24 hr/day)
= 7.6 lb-PM/day

PE2 (lb/yr) = (0.118 lb-PM/ton of material)(5,400 lb/hr)(ton/2,000 lb)(8,760 hr/yr)
= 2,791 lb-PM/yr

Seasoning system with a Tri-Mer 28-H orifice water scrubber
The proposed seasoning use rate is 835 lb/hr. Thus,

PE2 (lb/hr) = (0.00001 lb-PM/lb-seasoning)(835 lb/hr)
= 0.008 lb-PM/hr

PE2 (lb/day) = (0.00001 lb-PM/lb-seasoning)(835 lb/hr)(24 hr/day)
= 0.2 lb-PM/day

PE2 (lb/yr) = (0.00001 lb-PM/lb-seasoning)(835 lb/hr)(8,760 hr/yr)
= 73 lb-PM/yr

Summary

Daily:

Pollutant	Corn cleaner lb/day	Fryer lb/day	Oven lb/day	Cooler lb/day	Seasoner lb/day	Total PE lb/day
NOx	0.0	0.0	7.3	0.0	0.0	7.3
SOx	0.0	0.0	0.6	0.0	0.0	0.6
*PM_{10}	0.4	2.6	1.5	7.6	0.2	12.3
CO	0.0	0.0	7.1	0.0	0.0	7.1
VOC	0.0	5.5	1.4	0.0	0.0	6.9

*All PM emissions calculated above are conservatively assumed to be PM10 emissions.

Annual:

Pollutant	Corn cleaner lb/yr	Fryer lb/yr	Oven lb/yr	Cooler lb/yr	Seasoner lb/yr	Total PE lb/yr
NOx	0	0	2,681	0	0	2,681
SOx	0	0	212	0	0	212
*PM_{10}	148	946	558	2,791	73	4,516
CO	0	0	2,606	0	0	2,606
VOC	0	2,010	521	0	0	2,531

*All PM emissions calculated above are conservatively assumed to be PM10 emissions.

N-1919-21-0:

Corn silos with bin vent filters

The proposed total corn receiving rate is 90,000 lb/hr. Thus,

PE2 (lb/hr) = (0.00025 lb-PM/ton of material)(90,000 lb/hr)(ton/2,000 lb)
= 0.011 lb-PM/hr

PE2 (lb/day) = (0.00025 lb-PM/ton of material)(90,000 lb/hr)(ton/2,000 lb)(24 hr/day)
= 0.3 lb-PM/day

PE2 (lb/yr) = (0.00025 lb-PM/ton of material)(54,000 lb/hr)(ton/2,000 lb)(8,760 hr/yr)
= 99 lb-PM/yr

Corn unloader

The proposed total corn receiving rate is 90,000 lb/hr. Thus,

PE2 (lb/hr) = (0.00032 lb-PM/ton of material)(90,000 lb/hr)(ton/2,000 lb)
= 0.014 lb-PM/hr

PE2 (lb/day) = (0.00032 lb-PM/ton of material)(90,000 lb/hr)(ton/2,000 lb)(24 hr/day)
= 0.3 lb-PM/day

PE2 (lb/yr) = (0.00032 lb-PM/ton of material)(54,000 lb/hr)(ton/2,000 lb)(8,760 hr/yr)
= 126 lb-PM/yr

Summary
Daily:

Pollutant	Corn silos lb/day	Corn unloader lb/day	Total PE2 lb/day
*PM_{10}	0.3	0.3	0.6

*All PM emissions calculated above are conservatively assumed to be PM10 emissions

Annual:

Pollutant	Corn silos lb/yr	Corn unloader lb/yr	Total PE2 lb/yr
*PM_{10}	99	126	225

*All PM emissions calculated above are conservatively assumed to be PM10 emissions

3. Pre-Project Stationary Source Potential to Emit (SSPE1)

Pursuant to District Rule 2201, the SSPE1 is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of Emission Reduction Credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions (AER) that have occurred at the source, and which have not been used on-site.

The following table is taken from the application review prepared under project N-1193683.

SSPE1 (lb/year)					
Permit Unit	**NO_X**	**SO_X**	**PM_{10}**	**CO**	**VOC**
N-1919-1-11	5,742	168	7,171	26,350	1,502
N-1919-2-12	10,012	293	5,371	45,948	1,686
N-1919-3-9	0	0	16,571	0	621
N-1919-4-7	0	0	3,249	0	292
N-1919-5-3	0	0	2,701	0	0
N-1919-6-10	3,541	1,261	1,371	32,680	2,787
N-1919-7-8	0	0	3,614	0	1,606
N-1919-8-7	0	0	3,137	0	1,489
N-1919-11-4	0	0	0	0	0
N-1919-12-3	0	0	0	0	0
N-1919-13-4	0	0	183	0	0
N-1919-14-3	0	0	0	0	0
N-1919-16-3	4,314	1,397	3,329	32,412	2,409
SSPE1	**23,609**	**3,119**	**46,697**	**137,390**	**12,392**

4. Post-Project Stationary Source Potential to Emit (SSPE2)

Pursuant to District Rule 2201, the SSPE2 is the PE from all units with valid ATCs or PTOs at the Stationary Source and the quantity of ERCs which have been banked since September 19, 1991 for AER that have occurred at the source, and which have not been used on-site.

SSPE2 (lb/year)					
Permit Unit	**NO_X**	**SO_X**	**PM_{10}**	**CO**	**VOC**
N-1919-1-11	5,742	168	7,171	26,350	1,502
N-1919-2-12	10,012	293	5,371	45,948	1,686
N-1919-3-9	0	0	16,571	0	621
N-1919-4-7	0	0	3,249	0	292
N-1919-5-3	0	0	2,701	0	0
N-1919-6-10	3,541	1,261	1,371	32,680	2,787
N-1919-7-8	0	0	3,614	0	1,606
N-1919-8-7	0	0	3,137	0	1,489
N-1919-11-4	0	0	0	0	0
N-1919-12-3	0	0	0	0	0
N-1919-13-4	0	0	183	0	0
N-1919-14-3	0	0	0	0	0
N-1919-16-3	4,314	1,397	3,329	32,412	2,409
N-1919-18-0	**0**	**0**	**3,722**	**0**	**2,010**
N-1919-19-0	**0**	**0**	**80**	**0**	**0**
N-1919-20-0	**2,681**	**212**	**4,516**	**2,606**	**2,531**
N-1919-21-0	**0**	**0**	**225**	**0**	**0**
SSPE2	**26,290**	**3,331**	**55,240**	**139,996**	**16,933**

5. Major Source Determination

Rule 2201 Major Source Determination:

Pursuant to District Rule 2201, a Major Source is a stationary source with a SSPE2 equal to or exceeding one or more of the following threshold values. For the purposes of determining major source status the following shall not be included:

- any ERCs associated with the stationary source
- Emissions from non-road IC engines (i.e. IC engines at a particular site at the facility for less than 12 months), pursuant to the Clean Air Act, Title 3, Section 302, US Codes 7602(j) and (z)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 70.2

Rule 2201 Major Source Determination (lb/year)						
	NO_X	**SO_X**	**PM_{10}**	***$PM_{2.5}$**	**CO**	**VOC**
SSPE1	23,609	3,119	46,697	46,697	137,390	12,392
SSPE2	26,290	3,331	55,240	55,240	139,996	16,933
Major Source Threshold	20,000	140,000	140,000	140,000	200,000	20,000
Major Source?	Yes	No	No	No	No	No

*$PM_{2.5}$ assumed to be equal to PM_{10}

As seen in the table above, the facility is an existing Major Source for NOx emissions and will remain a Major Source for NOx after this project.

Rule 2410 Major Source Determination:

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(iii). Therefore the PSD Major Source threshold is 250 tpy for any regulated NSR pollutant.

PSD Major Source Determination (tons/year)						
	NO_2	**VOC**	**SO_2**	**CO**	**PM**	**PM_{10}**
Estimated Facility PE before Project Increase	11.8	6.2	1.6	68.7	23.3	23.3
PSD Major Source Thresholds	250	250	250	250	250	250
PSD Major Source?	No	No	No	No	No	No

As shown above, the facility is not an existing PSD major source for any regulated NSR pollutant expected to be emitted at this facility.

6. Baseline Emissions (BE)

The BE calculation (in lb/year) is performed pollutant-by-pollutant for each unit within the project to calculate the QNEC, and if applicable, to determine the amount of offsets required.

Pursuant to District Rule 2201, BE = PE1 for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, located at a Major Source.

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to District Rule 2201.

N-1919-18-0 through '-21-0:
Since these emissions units are new emissions units, BE = PE1 = 0 for all pollutants.

7. SB 288 Major Modification

40 CFR Part 51.165 defines a SB 288 Major Modification as any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act.

Per section VII.C.5 above, this facility is a major source for NOx emissions. Thus, the project's PE2 is compared to the SB 288 Major Modification Thresholds in the following table in order to determine if further SB 288 Major Modification calculations are required.

SB 288 Major Modification Thresholds			
Pollutant	**Project PE2 (lb/year)**	**Threshold (lb/year)**	**SB 288 Major Modification Calculation Required?**
NOx	2,681	50,000	No

Since none of the SB 288 Major Modification Thresholds are surpassed with this project, this project does not constitute an SB 288 Major Modification and no further discussion is required.

8. Federal Major Modification / New Major Source

Federal Major Modification

District Rule 2201 states that a Federal Major Modification is the same as a "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA.

As defined in 40 CFR 51.165, Section (a)(1)(v) and part D of Title I of the CAA, a Federal Major Modification is any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act. The significant net emission increase threshold for each criteria pollutant is included in Rule 2201.

The determination of Federal Major Modification is based on a two-step test. For the first step, only the emission *increases* are counted. In step 1, emission decreases can not cancel out the increases. Step 2 allows consideration of the project's net emissions increase as described in 40 CFR 51.165 and the Federal Clean Air Act Section 182 (e), as applicable.

Step 1: Project Emissions Increase

For new emissions units, the increase in emissions is equal to the PE2 for each new unit included in this project:

Emission Increase = PE2

Project Emissions Increase
This project's combined total emission increases summarized in the following table and are compared to the Federal Major Modification Thresholds in the following table.

Federal Major Modification Thresholds for Emission Increases			
Pollutant	**Total Emissions Increases (lb/yr)**	**Thresholds (lb/yr)**	**Federal Major Modification?**
NO_x*	2,681	0	Yes

*If there is any emission increases in NO_x or VOC, this project is a Federal Major Modification and no further analysis is required.

Since there is an increase in NO_x emissions, this project constitutes a Federal Major Modification. Consequently, as discussed below in the offset section of this evaluation, pursuant to Section 7.4.2.1 of District Rule 2201, NOx Emission Reduction Credits (ERCs) used to satisfy the offset quantity required under District Rule 2201 must surplus at the time of use (ATC issuance).

Separately, Federal Offset Quantity is calculated below.

Federal Offset Quantity Calculation

The Federal Offset Quantity (FOQ) is only calculated for the pollutants for which a project is a Federal Major Modification or a New Major Source as determined above.

Pursuant to 40 CFR 51.165(a)(3)(ii)(J), the federal offset quantity is the sum of the annual emission changes for all new and modified emission units in a project calculated as the potential to emit after the modification (PE2) minus the actual emissions (AE) for each emission unit times the applicable federal offset ratio.

FOQ = ∑(PE2 – AE) x Federal offset ratio

Actual Emissions

As described in 40 CFR 51.165(a)(1)(xii), actual emissions (AE), as of a particular date, shall equal the average rate, in tons per year, at which the unit actually emitted the pollutant during a consecutive 24-month period which precedes the particular date and which is representative of normal source operation. The reviewing authority shall allow the use of a different time period upon a determination that it is more representative of normal source operation.

Since the proposed unit (i.e., an 8.5 MMBtu/hr oven (N-1919-20)) is a new unit, AE is zero for this unit.

Federal Offset Ratio

According the CAA 182(e), the federal offset ratio for VOC and NOx is 1.5 to 1 (due to the District extreme non-attainment status for ozone). Otherwise, the federal offset ratio for PM2.5, PM10, and SOx is 1.0 to 1.

Federal Offset Quantity (FOQ)

Since this project only include new unit(s)

FOQ = PE2 x Federal offset ratio

NOx **Federal Offset Ratio** **1.5**

Permit No.	Post-Project Potential to Emit (PE2) (lb/year)	Actual Emissions (lb/year)	Emissions Change (lb/yr)
N-1919-20-0	2,681	0	2,681
		∑(PE2 – AE) (lb/year):	**2,681**
		Federal Offset Quantity (lb/year): ∑(PE2 – AE) x 1.5	**4,022**
		Federal Offset Quantity (tons/year): ∑(PE2 – AE) x 1.5 ÷ 2,000	**2.0**

9. Rule 2410 – Prevention of Significant Deterioration (PSD) Applicability Determination

Rule 2410 applies to any pollutant regulated under the Clean Air Act, except those for which the District has been classified nonattainment. The pollutants which must be addressed in the PSD applicability determination for sources located in the SJV and which are emitted in this project are: (See 52.21 (b) (23) definition of significant)

- NO2 (as a primary pollutant)
- SO2 (as a primary pollutant)
- CO
- PM
- PM10

I. Project Emissions Increase - New Major Source Determination

The post-project potentials to emit from all new and modified units are compared to the PSD major source thresholds to determine if the project constitutes a new major source subject to PSD requirements.

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(i). The PSD Major Source threshold is 250 tpy for any regulated NSR pollutant.

PSD Major Source Determination: Potential to Emit (tons/year)						
	NO_2	VOC	SO_2	CO	PM	PM_{10}
Total PE from New and Modified Units	1.3	2.3	0.1	1.3	4.3	4.3
PSD Major Source threshold	250	250	250	250	250	250
New PSD Major Source?	No	No	No	No	No	No

As shown in the table above, the potential to emit for the project, by itself, does not exceed any PSD major source threshold. Therefore Rule 2410 is not applicable and no further analysis is required.

10. Quarterly Net Emissions Change (QNEC)

The QNEC is calculated solely to establish emissions that are used to complete the District's PAS emissions profile screen. Detailed QNEC calculations are included in **Appendix E**.

VIII. Compliance Determination

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

Pursuant to District Rule 2201, Section 4.1, BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless specifically exempted by Rule 2201, BACT shall be required for the following actions*:

a. Any new emissions unit with a potential to emit exceeding two pounds per day,
b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an Adjusted Increase in Permitted Emissions (AIPE) exceeding two pounds per day, and/or
d. Any new or modified emissions unit, in a stationary source project, which results in an SB 288 Major Modification or a Federal Major Modification, as defined by the rule.

*Except for CO emissions from a new or modified emissions unit at a Stationary Source with an SSPE2 of less than 200,000 pounds per year of CO.

a. New emissions units – PE > 2 lb/day

N-1919-18-0:

Corn meal sifters served by bag filters

Per section VII.C.2 above, PE2 is not greater than 2 lb/day for PM_{10} emissions; therefore, BACT is not triggered for PM_{10} emissions from this operation.

Corn meal transfer operation served by a bag filter

Per section VII.C.2 above,, PE2 is not greater than 2 lb/day for PM_{10} emissions; therefore, BACT is not triggered for PM_{10} emissions for this operation.

Eight Extruders served by two rotoclones

Per section VII.C.2 above, PE2 is not greater than 2 lb/day for PM_{10} emissions; therefore, BACT is not triggered for PM_{10} emissions from this operation.

Steam-heated vegetable oil fryer equipped with oil mist eliminator (OME)

PM_{10}:

Per section VII.C.2 above, PE2 is not greater than 2 lb/day for PM_{10} emissions; therefore, BACT is not triggered for PM_{10} emissions from this operation.

VOC:

Per section VII.C.2 above, PE2 is greater than 2 lb/day for VOC emissions; therefore, BACT is triggered for VOC emissions from this operation.

Ambient air cooler with high velocity filtration system

Per section VII.C.2 above, PE2 is greater than 2 lb/day for PM_{10} emissions; therefore, BACT is triggered for PM_{10} emissions from this operation.

Seasoning system with a Tri-Mer 10-H orifice water scrubber

Per section VII.C.2 above, PE2 is not greater than 2 lb/day for PM_{10} emissions; therefore, BACT is not triggered for PM_{10} emissions from this operation.

N-1919-19-0:

Cornmeal silos:

Per section VII.C.2 above, PE2 is not greater than 2 lb/day for PM_{10} emissions; therefore, BACT is not triggered for PM_{10} emissions from this operation.

Cornmeal unload filter/receiver:

Per section VII.C.2 above, PE2 is not greater than 2 lb/day for PM_{10} emissions; therefore, BACT is not triggered for PM_{10} emissions from this operation.

N-1919-20-0:

Corn cleaner with bin vent filter

Per section VII.C.2 above, PE2 is not greater than 2 lb/day for PM_{10} emissions; therefore, BACT is not triggered for PM_{10} emissions from this operation.

Corn wash, soak, and steam-operated cooking kettles
Per section VII.C.2 above, PE2 is not greater than 2 lb/day for any pollutant; therefore, BACT is not triggered for any pollutant from these units.

Steam-heated vegetable oil fryer with oil mist eliminator (OME)
PM_{10}:
Per section VII.C.2 above, PE2 is greater than 2 lb/day for PM_{10} emissions; therefore, BACT is triggered for PM10 emissions from this operation.

VOC:
Per section VII.C.2 above, PE2 is greater than 2 lb/day for VOC emissions; therefore, BACT is triggered for VOC emissions from this operation.

8.5 MMBtu/hr oven with low-NOx burner
Per section VII.C.2 above, PE2 is greater than 2 lb/day for NOx and CO emissions. Facility's total SSPE2 for CO emissions is below 200,000 lb/yr. Thus, BACT is triggered for NOx emissions only.

Ambient air cooler with high velocity filtration system
Per section VII.C.2 above, PE2 is greater than 2 lb/day for PM_{10} emissions; therefore, BACT is triggered for PM_{10} emissions from this operation.

Seasoning system with a Tri-Mer 28-H orifice water scrubber
Per section VII.C.2 above, PE2 is not greater than 2 lb/day for PM_{10} emissions; therefore, BACT is not triggered for PM_{10} emissions from this operation.

N-1919-21-0:
Corn silos with bin vent filters:
Per section VII.C.2 above, PE2 is not greater than 2 lb/day for PM_{10} emissions; therefore, BACT is not triggered for PM_{10} emissions from this operation.

Corn unloader:
Per section VII.C.2 above, PE2 is not greater than 2 lb/day for PM_{10} emissions; therefore, BACT is not triggered for PM_{10} emissions from this operation.

b. Relocation of emissions units – PE > 2 lb/day

None of the emissions units are being relocated from one stationary source to another; therefore BACT is not triggered.

c. Modification of emissions units – AIPE > 2 lb/day

None of the existing units are being modified in this project; therefore BACT is not triggered.

d. SB 288/Federal Major Modification

As discussed in Sections VII.C.7 above, this project does not constitute an SB 288 Major Modification for any pollutant. Therefore BACT is not triggered for any pollutant.

As discussed in Sections VII.C.8 above, this project constitutes Federal Major Modification for NO_X emissions. Therefore BACT is triggered for NO_X for emissions units in the project for which there is an emission increase.

2. BACT Guideline

N-1919-18-0:
Steam-heated vegetable oil fryer equipped with oil mist eliminator (OME)
As discussed above, BACT is triggered for VOC emissions.

BACT guideline 5.5.1 for snack chip steam-heated conditioning units (fryer and de-oiler) will be used to address the BACT requirements for VOC emissions (refer to **Appendix B** of this document).

Ambient air cooler with high velocity filtration system
As discussed, BACT is triggered for PM_{10} emissions.

BACT guideline 5.5.2 for tortilla chip line ambient air cooler addressed BACT requirements for these type of units. The guideline has been rescinded since 2020. A project specific BACT analysis will be prepared to address the BACT requirements for PM_{10} emissions.

N-1919-19-0:
None of the units under this permit triggered BACT. Therefore, no BACT guideline is listed here.

N-1919-20-0:
Steam-heated vegetable oil fryer with oil mist eliminator (OME)
As seen above, BACT is triggered for VOC and PM_{10} emissions.

BACT guideline 5.5.1 for snack chip steam-heated conditioning units (fryer and de-oiler) will be used to address the BACT requirements for VOC and PM_{10} emissions (refer to **Appendix B** of this document).

8.5 MMBtu/hr oven with low-NOx burner
As seen above, BACT is triggered for NOx emissions.

BACT guideline 1.6.4 – Oven snack food will be used to address the BACT requirements for NOx emissions.

Ambient air cooler with high velocity filtration system
As discussed, BACT is triggered for PM_{10} emissions.

BACT guideline 5.5.2 for tortilla chip line ambient air cooler covered ambient air cooler addressed BACT requirements for these type of units. The guideline has been rescinded since 2020. A project specific BACT analysis will be prepared to address the BACT requirements for PM_{10} emissions.

N-1919-21-0:
None of the units under this permit triggered BACT. Therefore, no BACT guideline is listed here.

3. Top-Down BACT Analysis

Per Permit Services Policies and Procedures for BACT, a Top-Down BACT analysis shall be performed as a part of the application review for each application subject to the BACT requirements pursuant to the District's NSR Rule.

Pursuant to the attached Top-Down BACT Analysis (see **Appendix C**), BACT has been satisfied with the following:

N-1919-18-0:
Steam-heated vegetable oil fryer equipped with oil mist eliminator (OME)
Per the BACT analysis in **Appendix C** of this document, the use of thermal/catalytic oxidizer or carbon adsorber is not cost effective; therefore, these controls will not be required for this unit. There are no emissions controls listed in the guideline that have been achieved-in-practice at this time. Therefore, the proposed fryer is not required to use any emissions controls to reduce VOC emissions.

Ambient air cooler with high velocity filtration system
Per BACT analysis in **Appendix C** of this document, use of high velocity filtration system is required to reduce PM_{10} emissions. The applicant has proposed to install the filtration system; therefore, BACT requirements are satisfied.

N-1919-19-0:
None of the units under this permit triggered BACT. Therefore, no BACT analysis is required.

N-1919-20-0:
Steam-heated vegetable oil fryer with oil mist eliminator (OME)
VOC:
Per BACT analysis in **Appendix C** of this document, use of thermal/catalytic oxidizer or carbon adsorber is not cost effective; therefore, these controls will not be required for this unit. There are no emissions controls listed in the guideline that have been achieved-in-practice at this time. Therefore, the proposed fryer is not required to use any emissions controls to reduce VOC emissions.

PM_{10}:
Per BACT analysis in **Appendix C** of this document, use of oil mist eliminator is required as BACT to reduce PM_{10} emissions. Use of thermal/catalytic oxidizer or carbon adsorber is not cost effective; therefore, the use of a thermal/catalytic oxidizer or carbon adsorber is not required for this unit. The applicant has proposed the use of an oil mist eliminator; therefore, BACT requirements are satisfied.

8.5 MMBtu/hr oven with low-NOx burner
Per BACT analysis in **Appendix C** of this document, the use of an SCR system to reduce NOx is not cost effective; therefore, an SCR system is not required for this oven. The use of natural gas is achieved-in-practice BACT for the oven. The applicant has proposed to use natural gas fuel in this unit; therefore, BACT requirements are satisfied.

Ambient air cooler with high velocity filtration system
Per BACT analysis in **Appendix C** of this document, the use of a high velocity filtration system is required to reduce PM_{10} emissions. The applicant has proposed to install high velocity air filtration system; therefore, BACT requirements are satisfied.

N-1919-21-0:
None of the units under this permit triggered BACT. Therefore, no BACT analysis is required.

B. Offsets

1. Offset Applicability

Pursuant to District Rule 2201, Section 4.5, offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the SSPE2 equals or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

The SSPE2 is compared to the offset thresholds in the following table.

Offset Determination (lb/year)					
	NO_X	**SO_X**	**PM_{10}**	**CO**	**VOC**
SSPE2	**26,290**	**3,331**	**55,240**	**139,996**	**16,933**
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets Triggered?	Yes	No	Yes	No	No

2. Quantity of District Offsets Required

As seen in the table above, District offsets are triggered for NOx and PM_{10} emissions under Rule 2201. Therefore, offsets analysis is required for these pollutants.

2.1 NOx

District Offset Quantities Calculation

As demonstrated above, the facility's SSPE2 for NOx is greater than the offset threshold. Therefore, offset calculations are required.

The quantity of offsets in pounds per year for NO_X is calculated as follows for sources with an SSPE1 greater than the offset threshold levels before implementing the project being evaluated.

Offsets Required (lb/year) = (Σ[PE2 – BE] + ICCE) x DOR, for all new or modified emissions units in the project,

Where,
PE2 = Post-Project Potential to Emit, (lb/year)
BE = Baseline Emissions, (lb/year)
ICCE = Increase in Cargo Carrier Emissions, (lb/year)
DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = PE1 for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, Located at a Major Source.

otherwise,

BE = HAE

N-1919-20-0
As calculated in Section VII.C.6 above, the BE is zero for the new 8.5 MMBtu/hr natural gas-fired oven. Note that this is only source of NOx emissions under this project.

There is no increases in cargo carrier emissions. Therefore offsets can be determined as follows:

Offsets Required (lb/year) = ([PE2 – BE] + ICCE) x DOR

PE2 (NO_X) = 2,681 lb/year
BE (NO_X) = 0 lb/year
ICCE = 0 lb/year
DOR = 1.5 per section 4.8.1 of Rule 2201 since the project is a Federal Major Modification for NOx emissions

Offsets Required (lb/year) = ([2,681 – 0] + 0) x 1.5
= 4,022 lb-NO_X/year

The quarterly emissions to be offset is as follows:

Quarterly offsets required (lb/qtr) = (4,022 lb-NO_X/year) ÷ (4 quarters/year)
= 1,005.5 b-NO_X/qtr

As demonstrated in the calculation above, the quarterly amount of offsets required for this project, when evenly distributed to each quarter, results in fractional pounds of offsets being required each quarter. Since offsets are required to be withdrawn as whole pounds, the quarterly amounts of offsets need to be adjusted to ensure the quarterly values sum to the total annual amount of offsets required.

To adjust the quarterly amount of offsets required, the fractional amount of offsets required in each quarter will be summed and redistributed to each quarter based on the number of days in each quarter. The redistribution is based on the Quarter 1 having the fewest days and the Quarters 3 and 4 having the most days. The redistribution method is summarized in the following table:

Redistribution of Required Quarterly Offsets (where X is the annual amount of offsets, and X ÷ 4 = Y.z)				
Value of z	**Quarter 1**	**Quarter 2**	**Quarter 3**	**Quarter 4**
0.0	Y	Y	Y	Y
0.25	Y	Y	Y	Y+1
0.5	Y	Y	Y+1	Y+1
0.75	Y	Y+1	Y+1	Y+1

Therefore the appropriate quarterly emissions to be offset are as follows:

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	**Total Annual**
1,005	1,005	1,006	1,006	**4,022**

District and Federal Offset Quantities

As discussed above, District offsets are triggered and required for NOx under Rule 2201. In addition, as demonstrated above, this project does trigger Federal Major Modification requirements for NOx emissions.

Since District offsets and federal offsets are required, the facility must provide offset amounts equal to the greatest value between the District offset quantity and the federal offset quantity.

Comparison of District vs Federal VOC Offset Quantity			
	DOQ	**FOQ**	**FOQ ≥ DOQ**
NOx	4,022	4,022	**Yes**

As demonstrated above, the federal offset quantity required is equal or greater than the District offset quantity. Therefore, pursuant to Section 7.4.1.2 of District Rule 2201, the facility must comply with the required federal offset quantities.

Surplus at the Time Of Use Emission Reduction Credits
The applicant has stated that the facility plans to use ERC certificate S-3765-2 to satisfy the federal offset quantities for NOx required for this project. Pursuant to the ERC surplus analysis in **Appendix G**, the District has verified that the credits from the ERC certificate provided by the applicant are sufficient to satisfy the federal offset quantities for NOx required for this project.

Proposed Rule 2201 Offset Permit Conditions

The following permit conditions will be added to the Authority to Construct N-1919-20-0:

- Prior to operating equipment under Authority to Construct N-1919-20-0, permittee shall surrender NO_X emission reduction credits for the following quantity of emissions: 1st quarter – 1,005 lb, 2nd quarter – 1,005 lb, 3rd quarter – 1,006 lb, and fourth quarter – 1,006 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 8/15/19) for the ERC specified below. [District Rule 2201]

- ERC Certificate Number S-3765-2 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]

2.2 PM10

As demonstrated above, the facility's SSPE2 for PM10 is greater than the offset threshold. Therefore, offset calculations are required.

The quantity of offsets in pounds per year for PM10 is calculated as follows for sources with an SSPE1 greater than the offset threshold levels before implementing the project being evaluated.

Offsets Required (lb/year) = (Σ[PE2 – BE] + ICCE) x DOR, for all new or modified emissions units in the project,

Where,
PE2 = Post-Project Potential to Emit, (lb/year)
BE = Baseline Emissions, (lb/year)
ICCE = Increase in Cargo Carrier Emissions, (lb/year)
DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = PE1 for:

- Any unit located at a non-Major Source,

- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, Located at a Major Source.

otherwise,

BE = HAE

N-1919-18 through '-21-0
As stated in Section VII.C.6 above, BE is zero for emission units under this project, as all units are new emission units.

There is no increases in cargo carrier emissions. Therefore offsets can be determined as follows:

Offsets Required (lb/year) = ([PE2 – BE] + ICCE) x DOR

PE2 (PM10) = 8,543 lb/year
BE (PM10) = 0 lb/year
ICCE = 0 lb/year
DOR = 1.5 for the emission reductions that were banked 15-miles or more from Frito-Lay, Modesto site
= 1.2 for the emission reductions that were banked within 15 miles from Frito-Lay, Modesto site; note there is one ERC N-890-4 (61 lb-PM10, total in quarter 1) which is within 15-miles from Frito-Lay Modesto site

Offsets Required (lb/year) = ([8,492 – 0] + 0) x 1.5 + ([51 – 0] + 0) x 1.2
=12,738 + 61
= 12,799 lb-PM10/year

The quarterly emissions to be offset is as follows:

Quarterly offsets required (lb/qtr) = (12,799 lb-PM10/year) ÷ (4 quarters/year)
= 3,199.75 lb-PM10/qtr

As demonstrated in the calculation above, the quarterly amount of offsets required for this project, when evenly distributed to each quarter, results in fractional pounds of offsets being required each quarter. Since offsets are required to be withdrawn as whole pounds, the quarterly amounts of offsets need to be adjusted to ensure the quarterly values sum to the total annual amount of offsets required.

To adjust the quarterly amount of offsets required, the fractional amount of offsets required in each quarter will be summed and redistributed to each quarter based on the number of days in each quarter. The redistribution is based on the Quarter 1 having the fewest days and the Quarters 3 and 4 having the most days. The redistribution method is summarized in the following table:

Redistribution of Required Quarterly Offsets (where X is the annual amount of offsets, and X ÷ 4 = Y.z)				
Value of z	**Quarter 1**	**Quarter 2**	**Quarter 3**	**Quarter 4**
0.0	Y	Y	Y	Y
0.25	Y	Y	Y	Y+1
0.5	Y	Y	Y+1	Y+1
0.75	Y	Y+1	Y+1	Y+1

Therefore the appropriate quarterly emissions to be offset are as follows:

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	**Total Annual**
3,199	3,200	3,200	3,200	**12,799**

Proposed Rule 2201 Offset Permit Conditions

The following permit conditions will be added to the Authority to Construct permits N-1919-18-0:

- Prior to operating equipment under Authority to Construct permits N-1919-18-0, '-19-0, '-20 and '-21, permittee shall surrender PM10 emission reduction credits for the following quantity of emissions: 1st quarter – 3,199 lb, 2nd quarter – 3,200 lb, 3rd quarter – 3,200 lb, and fourth quarter – 3,200 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 8/15/19) for the ERCs specified below, including mandatory withdrawal of ERC certificate N-890-4. [District Rule 2201]

- ERC Certificate Number C-1068-4, C-1069-4, C-1136-4, N-888-4, N-890-4, S-3437-4 or S-3418-4 (or a certificate split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct permits shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of these Authority to Construct permits. [District Rule 2201]

The following permit conditions will be added to the Authority to Construct permits N-1919-19-0 through '-21-0:

- Prior to operating equipment under this Authority to Construct, permittee shall surrender PM10 emission reduction credits as required by Authority to Construct N-1919-18-0. [District Rule 2201]

3. ERC Withdrawal Calculations

The applicant must identify the ERC Certificate(s) to be used to offset the increase of NOx and PM10 emissions for the project. As indicated in previous section, the applicant is proposing to use multiple ERC certificates to mitigate the increases of NOx and PM10

emissions associated with this project. See **Appendix H** for detailed ERC Withdrawal Calculations.

C. Public Notification

1. Applicability

Pursuant to District Rule 2201, Section 5.4, public noticing is required for:

a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications,
b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
c. Any project which results in the offset thresholds being surpassed,
d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant, and/or
e. Any project which results in a Title V significant permit modification

a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications

As demonstrated in Section VII.C.8 of this evaluation, this project is a Federal Major Modification. Therefore, public noticing is required for this project for Federal Major Modification purposes.

b. PE > 100 lb/day

Applications which include a new emissions unit with a PE greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. As seen in Section VII.C.2 above, this project does not include a new emissions unit which has daily emissions greater than 100 lb/day for any pollutant, therefore public noticing for PE > 100 lb/day purposes is not required.

c. Offset Threshold

Public notification is required if the pre-project Stationary Source Potential to Emit (SSPE1) is increased to a level exceeding the offset threshold levels. The following table compares the SSPE1 with the SSPE2 in order to determine if any offset thresholds have been surpassed with this project.

Offset Thresholds				
Pollutant	**SSPE1 (lb/year)**	**SSPE2 (lb/year)**	**Offset Threshold**	**Public Notice Required?**
NO_X	23,609	26,290	20,000 lb/year	No
SO_X	3,119	3,331	54,750 lb/year	No
PM_{10}	46,697	55,240	29,200 lb/year	No
CO	137,390	139,996	200,000 lb/year	No
VOC	12,392	16,933	20,000 lb/year	No

As demonstrated above, there were no thresholds surpassed with this project; therefore public noticing is not required for offset purposes.

d. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a SSIPE of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE = SSPE2 – SSPE1. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table.

SSIPE Public Notice Thresholds					
Pollutant	**SSPE2 (lb/year)**	**SSPE1 (lb/year)**	**SSIPE (lb/year)**	**SSIPE Public Notice Threshold**	**Public Notice Required?**
NO_x	26,290	23,609	2,681	20,000 lb/year	No
SO_x	3,331	3,119	212	20,000 lb/year	No
PM_{10}	55,240	46,697	8,543	20,000 lb/year	No
CO	139,996	137,390	2,606	20,000 lb/year	No
VOC	16,933	12,392	4,541	20,000 lb/year	No

As demonstrated above, the SSIPE for each pollutants is less than 20,000 lb/year; therefore public noticing for SSIPE purposes is not required.

e. Title V Significant Permit Modification

As shown in the Discussion of Rule 2520 below, this project constitutes a Title V significant modification. Therefore, public noticing for Title V significant modifications is required for this project.

2. Public Notice Action

As discussed above, public noticing is required for this project due to Federal Major Modification for NO_X emissions. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and a public notice will be electronically published on the District's website prior to the issuance of the ATC for this equipment.

D. Daily Emission Limits (DELs)

DELs and other enforceable conditions are required by Rule 2201 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. The DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

Proposed Rule 2201 (DEL) Conditions:

N-1919-18-0

Corn meal sifters served by bag filters

- PM10 emissions from the corn meal sifting operation shall not exceed 0.0027 pounds during any one day. [District Rule 2201]

Corn meal transfer operation served by a bag filter

- PM10 emissions from the corn meal transfer operation shall not exceed 0.1 pounds during any one day. [District Rule 2201]

Eight Extruders served by two rotoclones

- Total PM10 emissions from all eight extruders vented through two rotoclones shall not exceed 1.3 pounds during any one day. [District Rule 2201]

Steam-heated vegetable oil fryer equipped with oil mist eliminator (OME)

- PM10 emissions from the vegetable oil fryer shall not exceed 0.7 pounds during any one day. [District Rule 2201]
- VOC emissions from the vegetable oil fryer shall not exceed 5.5 pounds during any one day. [District Rule 2201]

Ambient air cooler with high velocity filtration system

- PM10 emissions from the ambient air cooler exhaust shall not exceed 7.6 pounds during any one day. [District Rule 2201]

Seasoning system with a Tri-Mer 10-H orifice water scrubber

- PM10 emissions from the seasoning system scrubber exhaust shall not exceed 0.4 pounds during any one day. [District Rule 2201]

N-1919-19-0

Cornmeal unload filter/receiver

- PM10 emissions from the corn meal unload filter/receiver shall not exceed 0.1 pounds during any one day. [District Rule 2201]

Cornmeal silos

- Total PM10 emissions from the corn meal silos served by bin vent filter systems shall not exceed 0.2 pounds during any one day. [District Rule 2201]

N-1919-20-0:

Corn cleaner with bin vent filter

- PM10 emissions from the corn cleaner system served by filtration system shall not exceed 0.4 pounds during any one day. [District Rule 2201]

Corn wash, soak, and steam-operated cooking kettles
These units are not expected to generate any emissions; therefore, no DELs are established for these units.

Steam-heated vegetable oil fryer with oil mist eliminator (OME)
- PM10 emissions from the vegetable oil fryer shall not exceed 2.6 pounds during any one day. [District Rule 2201]
- VOC emissions from the vegetable oil fryer shall not exceed 5.5 pounds during any one day. [District Rule 2201]

8.5 MMBtu/hr oven with low-NOx burner
- Emissions from the oven shall not exceed any of the following limits: 36 lb-NOx/MMscf, 2.85 lb-SOx/MMscf, 7.5 lb-PM10/MMscf, 35 lb-CO/MMscf and 7 lb-VOC/MMscf of natural gas combusted. [District Rule 2201]
- The oven shall only be fired on PUC-quality natural gas. [District Rule 2201]

Ambient air cooler with high velocity filtration system
- PM10 emissions from the ambient air cooler exhaust shall not exceed 7.6 pounds during any one day. [District Rule 2201]

Seasoning system with a Tri-Mer 28-H orifice water scrubber
- PM10 emissions from the seasoning system scrubber exhaust shall not exceed 0.2 pounds during any one day. [District Rule 2201]

N-1919-21-0:
Corn silos with bin vent filters
- Total PM10 emissions from the corn silos served by bin vent filter systems shall not exceed 0.3 pounds during any one day. [District Rule 2201]

Corn unloader
- PM10 emissions from the corn unloader system served by filtration system shall not exceed 0.3 pounds during any one day. [District Rule 2201]

E. Compliance Assurance

1. Source Testing

N-1919-18-0
Corn meal sifters served by bag filters
The potential emissions are estimated using emission factor taken from filter testing report provided by the applicant. Therefore, no source testing is required.

Corn meal transfer operation served by a bag filter
The potential emissions are estimated using emission factor provided in vendor's published brochure for filter media. Therefore, no source testing is required.

Eight Extruders served by two rotoclones
The potential emissions are estimated using emission factor developed from a source test conducted for a similar set up at Frito-Lay's Rancho Cucamonga, CA site. Therefore, no source testing is required.

Steam-heated vegetable oil fryer equipped with oil mist eliminator (OME)
PM
The potential emissions are estimated using emissions factor developed from a source test conducted for a similar set up at Frito-Lay's Rancho Cucamonga, CA site. Therefore, no source testing is required.

VOC
The potential emissions are estimated using EPA's AP-42 emission factor. Thus, source testing is not required.

Ambient air cooler with high velocity filtration system
The potential emissions are estimated using emission factor derived from the source test conducted at Frito-Lay's, Modesto and Bakersfield site for an identical unit. Thus, source testing is not required.

Seasoning system with a Tri-Mer 10-H orifice water scrubber
The potential emissions are estimated using emission factor used for similar system in N-1193683. Thus, source testing is not required.

N-1919-19-0
Cornmeal unload filter/receiver
The potential emissions are estimated using emission factor provided in vendor's published brochure for filter media. Therefore, no source testing is required.

Cornmeal silos
The potential emissions are estimated using EPA's AP-42 emission factor. Thus, source testing is not required.

N-1919-20-0:
Corn cleaner with bin vent filter
The potential emissions are estimated using EPA's AP-42 emission factor. Thus, source testing is not required.

Corn wash, soak, and steam-operated cooking kettles
These units are not expected to generate any emissions; therefore, no source testing is required.

Steam-heated vegetable oil fryer with oil mist eliminator (OME)
PM_{10}
The potential emissions are estimated using uncontrolled emissions factor from EPA's AP-42 and by applying manufacturer suggested control efficiency for the oil mist eliminator. Therefore, no source testing is required.

VOC
The potential emissions are estimated using EPA's AP-42 emission factor. Thus, source testing is not required.

8.5 MMBtu/hr oven with low-NOx burner
The potential emissions are calculated using the emission factors from SCAQMD's published data. Except for NOx, these emission factors are similar to, or greater than the generally accepted emissions. Therefore, source testing is not required to verify these emission factors.

Per applicant, burner manufacturer's literature indicates that NOx emissions are below 30 ppmvd @ 3% O_2. To verify compliance with the proposed NOx emissions, the applicant is required to conduct an initial source test.

Ambient air cooler with high velocity filtration system
The potential emissions are estimated using emission factor derived from the source test conducted at Frito-Lay's, Modesto and Bakersfield site for an identical unit. Thus, source testing is not required.

Seasoning system with a Tri-Mer 28-H orifice water scrubber
The potential emissions are estimated using emission factor used for similar system in N-1193683. Thus, source testing is not required.

N-1919-21-0:
Corn silos with bin vent filters
The potential emissions are estimated using uncontrolled emissions factor from EPA's AP-42 and applying typical 99% control efficiency for the filters. Therefore, no source testing is required.

Corn unloader
The potential emissions are estimated using uncontrolled emissions factor from EPA's AP-42 and by applying a typical 99% control efficiency for the filters. Therefore, no source testing is required.

2. Monitoring

N-1919-18-0
Corn meal sifters served by bag filters
Corn meal transfer operation served by a bag filter
Eight Extruders served by two rotoclones
Ambient air cooler with high velocity filtration system
Visible emissions at the exhaust of each filter system are required to be monitored at least once a year. The monitoring will ensure on-going compliance with visible emission limits. This requirement is consistent with other similar snack food manufacturing lines at this facility.

Steam-heated vegetable oil fryer equipped with oil mist eliminator (OME)
No monitoring is required.

Seasoning system with a Tri-Mer 10-H orifice water scrubber
Water circulation rate (gallon per minute) is required to be monitored at least once a day.

N-1919-19-0
Cornmeal unload filter/receiver
Cornmeal silos
Visible emissions at the exhaust of each filter system are required to be monitored at least once a year. The monitoring will ensure on-going compliance with visible emission limits. This requirement is consistent with other similar snack food manufacturing lines at this facility.

N-1919-20-0:
Corn cleaner with bin vent filter
Seasoning system with a Tri-Mer 28-H orifice water scrubber
Visible emissions at the exhaust of each filter system are required to be monitored at least once a year. The monitoring will ensure on-going compliance with visible emission limits. This requirement is consistent with other similar snack food manufacturing lines at this facility.

Corn wash, soak, and steam-operated cooking kettles
Steam-heated vegetable oil fryer with oil mist eliminator (OME)
8.5 MMBtu/hr oven with low-NOx burner
No monitoring is required for these units.

Seasoning system with a Tri-Mer 28-H orifice water scrubber
Water circulation rate (gallon per minute) is required to be monitored at least once a day.

N-1919-21-0:
Corn silos with bin vent filters
Corn unloader
Visible emissions at the exhaust of each filter system are required to be monitored at least once a year. The monitoring will ensure on-going compliance with visible emission limits. This requirement is consistent with other similar snack food manufacturing lines at this facility.

3. Recordkeeping

The owner or operator will be required to maintain sufficient records to demonstrate compliance with the daily emission limits under each permit.

N-1919-18-0 through '-21-0
- The owner or operator shall maintain records sufficient to demonstrate compliance with each emission limit and permit requirement. These records shall contain each

calculated emission quantity as well as each process variable used in the respective calculations. [District Rule 2201]

- Records of equipment & associated control device(s) maintenance, inspections, and repair shall be maintained. The records shall include the identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2201]

4. Reporting

Source test report for the oven under permit N-1919-20 is required to be submitted within 60 days after the test. No other reports are required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

Section 4.14 of District Rule 2201 requires that an AAQA be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The District's Technical Services Division conducted the required analysis. Refer to **Appendix D** of this document for the AAQA summary sheet.

The proposed location is in an attainment area for NO_X, CO, and SO_X. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for NO_X, CO, or SO_X.

The proposed location is in a non-attainment area for the state's PM_{10} as well as federal and state $PM_{2.5}$ thresholds. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for PM_{10} and $PM_{2.5}$.

G. Compliance Certification

Section 4.15.2 of this Rule requires the owner of a New Major Source or a source undergoing a Federal Major Modification to demonstrate to the satisfaction of the District that all other Major Sources owned by such person and operating in California are in compliance or are on a schedule for compliance with all applicable emission limitations and standards. As discussed in Section VIII above, the proposed project constitutes a Federal Major Modification, therefore this requirement is applicable. Frito-Lay, Inc.'s compliance certification is included in **Appendix F**.

H. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant proposes to install a Fried Cheese Puff (FCP) snack manufacturing line, Dorito Tortilla Chip snack manufacturing line, and associated raw material receiving and storage equipment such as corn and corn meal silos, etc.

Since the proposed equipment will use existing utilities such as steam from existing boilers, existing railroad tracks to receive materials, and finished product packaging and storage

infrastructure, the existing site will result in the least possible impact from the project. Alternative sites would involve the relocation and/or construction of various support structures on a much greater scale, and would therefore result in a much greater impact.

Rule 2410 Prevention of Significant Deterioration

As shown in Section VII.C.9 above, this project does not result in a new PSD major source or PSD major modification. No further discussion is required.

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. A significant permit modification is defined as a "permit amendment that does not qualify as a minor permit modification or administrative amendment."

This facility is subject to this Rule, and has received their Title V Operating Permit. A significant permit modification is defined as a "permit amendment that does not qualify as a minor permit modification or administrative amendment."

Section 3.20.5 of Rule 2520 states a minor permit modifications are permit modifications that are not Title I modifications, modifications as defined in section 111 or 112 of the Federal Clean Air Act, or major modification under the prevention of significant deterioration (PSD) provisions of Title I of the CAA or under EPA PSD regulations. Since this project is a Title I modification (i.e. Federal Major Modification), the proposed project is considered to be a modification under the Federal Clean Air Act. As a result, the proposed project constitutes a Significant Modification to the Title V Permit pursuant to Section 3.29.

As discussed above, the facility has applied for a Certificate of Conformity (COC); therefore, the facility must apply to modify their Title V permit with an administrative amendment, prior to operating with the proposed modifications. Continued compliance with this rule is expected. The facility shall not implement the changes requested until the final permit is issued.

Rule 4001 New Source Performance Standards (NSPS)

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60. However, no subparts of 40 CFR Part 60 apply to the operations proposed under this project.

Rule 4002 National Emission Standards for Hazardous Air Pollutants (NESHAPs)

This rule incorporates NESHAPs from Part 61, Chapter I, Subchapter C, Title 40, CFR and the NESHAPs from Part 63, Chapter I, Subchapter C, Title 40, CFR; and applies to all sources of hazardous air pollution listed in 40 CFR Part 61 or 40 CFR Part 63. However, no subparts of 40 CFR Part 61 or 40 CFR Part 63 apply to the operations proposed under this project.

Rule 4101 Visible Emissions

Section 5.0, indicates that no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour, which is dark or darker than Ringlemann 1 or equivalent to 20% opacity.

The following condition will be included in each permit:

- No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]

Compliance is expected with this Rule.

Rule 4102 Nuisance

Rule 4102 prohibits discharge of air contaminants which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. Therefore, compliance with this rule is expected.

California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905 – *Risk Management Policy for Permitting New and Modified Sources* specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

District policy APR 1905 also specifies that the increase in emissions associated with a proposed new source or modification of an existing source shall not result in an increase in cancer risk greater than the District's significance level (20 in a million) and shall not result in acute and/or chronic risk indices greater than 1.

According to the Technical Services Memo for this project, the total facility prioritization score including this project was greater than one. Therefore, an HRA was required to determine the short-term acute and long-term chronic exposure from this project. The resulting prioritization score, acute hazard index, chronic hazard index, and cancer risk for this project is shown below.

Health Risk Assessment Summary	
	Worst Case Potential
Prioritization Score	>1
Cancer Risk	2.22E-09
Acute Hazard Index	0.00
Chronic Hazard Index	0.00
T-BACT Required?	No

Discussion of T-BACT

BACT for toxic emission control (T-BACT) is required if the cancer risk exceeds one in one million. As demonstrated above, T-BACT is not required for this project because the HRA indicates that the risk is not above the District's thresholds for triggering T-BACT requirements; therefore, compliance with the District's Risk Management Policy is expected.

In accordance with District policy APR 1905, no further analysis is required, and compliance with District Rule 4102 requirements is expected.

See **Appendix D**: Health Risk Assessment Summary

Compliance is expected with this rule.

Rule 4201 Particulate Matter Concentration

Section 3.1 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot.

N-1919-18-0

Corn meal sifters served by bag filters

As seen in section VII.B. of this document, the bagfilter outlet grain loading is 0.0001153 gr-PM/dscf. Since the grain loading is below 0.1 gr-PM/dscf, compliance is expected with this rule.

Corn meal transfer operation served by a bag filter

As seen in section VII.B. of this document, the bagfilter outlet grain loading is 0.00044 gr-PM/dscf. Since the grain loading is not excess of the 0.1 gr-PM/dscf, compliance is expected with this rule.

Eight Extruders served by two rotoclones

As seen in section VII.B. of this document, the outlet grain loading at the outlet of rotoclones is 0.0044 gr-PM/dscf. With 20% margin of compliance that was used to develop the emission factor, the maximum outlet grain loading would be 0.0053 gr-PM/dscf. Since the grain loading is not excess of the 0.1 gr-PM/dscf, compliance is expected with this rule.

Steam-heated vegetable oil fryer equipped with oil mist eliminator (OME)

As seen in section VII.B. of this document, the outlet grain loading at the outlet of rotoclones is 0.0010 gr-PM/dscf. With 20% margin of compliance that was used to develop the emission factor, the maximum outlet grain loading would be 0.0012 gr-PM/dscf. Since the grain loading is not excess of the 0.1 gr-PM/dscf, compliance is expected with this rule.

Ambient air cooler with high velocity filtration system

PM emissions = 0.319 lb-PM/hr (per section VII.C.2 above)
Exhaust flow rate = 7,700 scfm (per applicant)

$$\text{PM}\left(\frac{\text{gr}}{\text{dscf}}\right)=\frac{\left(0.319\ \frac{\text{lb-PM}}{\text{hr}}\right)\left(7{,}000\frac{\text{gr-PM}}{\text{lb-PM}}\right)\left(\frac{\text{hr}}{60\ \text{min}}\right)}{\left(7{,}700\frac{\text{ft}^3}{\text{min}}\right)}=0.005\ \frac{\text{gr-PM}}{\text{dscf}}<0.1\ \frac{\text{gr-PM}}{\text{dscf}}$$

Since the grain loading is not in excess of the 0.1 gr-PM/dscf limit, compliance is expected with this rule.

Seasoning system with a Tri-Mer 10-H orifice water scrubber
PM emissions = 0.019 lb-PM/hr (per section VII.C.2 above)
Exhaust flow rate = 1,050 scfm (per applicant)

$$\text{PM}\left(\frac{\text{gr}}{\text{dscf}}\right)=\frac{\left(0.019\ \frac{\text{lb-PM}}{\text{hr}}\right)\left(7{,}000\frac{\text{gr-PM}}{\text{lb-PM}}\right)\left(\frac{\text{hr}}{60\ \text{min}}\right)}{\left(1{,}050\frac{\text{ft}^3}{\text{min}}\right)}=0.002\ \frac{\text{gr-PM}}{\text{dscf}}<0.1\ \frac{\text{gr-PM}}{\text{dscf}}$$

Since the grain loading is not in excess of the 0.1 gr-PM/dscf limit, compliance is expected with this rule.

N-1919-19-0
Cornmeal unload filter/receiver
As seen in section VII.B. of this document, the bagfilter outlet grain loading is 0.00044 gr-PM/dscf. Since the grain loading is below 0.1 gr-PM/dscf, compliance is expected with this rule.

Cornmeal silos
PM emissions = 0.007lb-PM/hr (per section VII.C.2 above)
Exhaust flow rate = 450 scfm (per applicant)

$$\text{PM}\left(\frac{\text{gr}}{\text{dscf}}\right)=\frac{\left(0.007\ \frac{\text{lb-PM}}{\text{hr}}\right)\left(7{,}000\frac{\text{gr-PM}}{\text{lb-PM}}\right)\left(\frac{\text{hr}}{60\ \text{min}}\right)}{\left(450\frac{\text{ft}^3}{\text{min}}\right)}=0.002\ \frac{\text{gr-PM}}{\text{dscf}}<0.1\ \frac{\text{gr-PM}}{\text{dscf}}$$

Since the grain loading is not in excess of the 0.1 gr-PM/dscf limit, compliance is expected with this rule.

N-1919-20-0:
Corn cleaner with bin vent filter
PM emissions = 0.017 lb-PM/hr (per section VII.C.2 above)
Exhaust flow rate = 5,000 scfm (per applicant)

$$\text{PM}\left(\frac{\text{gr}}{\text{dscf}}\right)=\frac{\left(0.017\ \frac{\text{lb-PM}}{\text{hr}}\right)\left(7{,}000\frac{\text{gr-PM}}{\text{lb-PM}}\right)\left(\frac{\text{hr}}{60\ \text{min}}\right)}{\left(5{,}000\frac{\text{ft}^3}{\text{min}}\right)}=0.0004\ \frac{\text{gr-PM}}{\text{dscf}}<0.1\ \frac{\text{gr-PM}}{\text{dscf}}$$

Corn wash, soak, and steam-operated cooking kettles
These units are not expected to generate any PM emissions.

Steam-heated vegetable oil fryer with oil mist eliminator (OME)
PM emissions = 0.108 lb-PM/hr (per section VII.C.2 above)
Exhaust flow rate = 3,100 scfm (per applicant)

$$\mathrm{PM}\left(\frac{\mathrm{gr}}{\mathrm{dscf}}\right)=\frac{\left(0.108\ \frac{\text{lb-PM}}{\mathrm{hr}}\right)\left(7{,}000\,\frac{\text{gr-PM}}{\text{lb-PM}}\right)\left(\frac{\mathrm{hr}}{60\ \mathrm{min}}\right)}{\left(3{,}100\,\frac{\mathrm{ft}^3}{\mathrm{min}}\right)}=0.004\ \frac{\text{gr-PM}}{\mathrm{dscf}}<0.1\ \frac{\text{gr-PM}}{\mathrm{dscf}}$$

8.5 MMBtu/hr oven with low-NOx burner

$$\mathrm{PM}\left(\frac{\mathrm{gr}}{\mathrm{dscf}}\right)=\frac{\left(0.0075\ \frac{\text{lb-PM}}{\mathrm{MMBtu}}\right)\left(8.5\,\frac{\mathrm{MMBtu}}{\mathrm{hr}}\right)\left(7{,}000\,\frac{\text{gr-PM}}{\text{lb-PM}}\right)}{\left(1{,}024.2\,\frac{\mathrm{ft}^3}{\mathrm{min}}\right)\left(\frac{100\%}{12\%}\right)}=0.052\ \frac{\text{gr-PM}}{\mathrm{dscf}}<0.1\ \frac{\text{gr-PM}}{\mathrm{dscf}}$$

Ambient air cooler with high velocity filtration system
PM emissions = 0.319 lb-PM/hr (per section VII.C.2 above)
Exhaust flow rate = 17,750 scfm (per applicant)

$$\mathrm{PM}\left(\frac{\mathrm{gr}}{\mathrm{dscf}}\right)=\frac{\left(0.319\ \frac{\text{lb-PM}}{\mathrm{hr}}\right)\left(7{,}000\,\frac{\text{gr-PM}}{\text{lb-PM}}\right)\left(\frac{\mathrm{hr}}{60\ \mathrm{min}}\right)}{\left(17{,}750\,\frac{\mathrm{ft}^3}{\mathrm{min}}\right)}=0.002\ \frac{\text{gr-PM}}{\mathrm{dscf}}<0.1\ \frac{\text{gr-PM}}{\mathrm{dscf}}$$

Seasoning system with a Tri-Mer 28-H orifice water scrubber
PM emissions = 0.008 lb-PM/hr (per section VII.C.2 above)
Exhaust flow rate = 2,800 scfm (per applicant)

$$\mathrm{PM}\left(\frac{\mathrm{gr}}{\mathrm{dscf}}\right)=\frac{\left(0.008\ \frac{\text{lb-PM}}{\mathrm{hr}}\right)\left(7{,}000\,\frac{\text{gr-PM}}{\text{lb-PM}}\right)\left(\frac{\mathrm{hr}}{60\ \mathrm{min}}\right)}{\left(2{,}800\,\frac{\mathrm{ft}^3}{\mathrm{min}}\right)}=0.0003\ \frac{\text{gr-PM}}{\mathrm{dscf}}<0.1\ \frac{\text{gr-PM}}{\mathrm{dscf}}$$

Since the grain loading for each operation is not exceeding 0.1 gr-PM/dscf limit, each operation is expected to operate in compliance with this rule.

N-1919-21-0:
Corn silos with bin vent filters
PM emissions = 0.011 lb-PM/hr (per section VII.C.2 above)
Exhaust flow rate = 50 scfm (per applicant)

$$\mathrm{PM}\left(\frac{\mathrm{gr}}{\mathrm{dscf}}\right)=\frac{\left(0.011\ \frac{\text{lb-PM}}{\mathrm{hr}}\right)\left(7{,}000\,\frac{\text{gr-PM}}{\text{lb-PM}}\right)\left(\frac{\mathrm{hr}}{60\ \mathrm{min}}\right)}{\left(50\,\frac{\mathrm{ft}^3}{\mathrm{min}}\right)}=0.03\ \frac{\text{gr-PM}}{\mathrm{dscf}}<0.1\ \frac{\text{gr-PM}}{\mathrm{dscf}}$$

Corn unloader
PM emissions = 0.014 lb-PM/hr (per section VII.C.2 above)
Exhaust flow rate = 650 scfm (per applicant)

$$\text{PM}\left(\frac{\text{gr}}{\text{dscf}}\right)=\frac{\left(0.014\ \frac{\text{lb-PM}}{\text{hr}}\right)\left(7{,}000\,\frac{\text{gr-PM}}{\text{lb-PM}}\right)\left(\frac{\text{hr}}{60\ \text{min}}\right)}{\left(650\,\frac{\text{ft}^3}{\text{min}}\right)}=0.003\ \frac{\text{gr-PM}}{\text{dscf}}<0.1\ \frac{\text{gr-PM}}{\text{dscf}}$$

Since the grain loading for each operation is not exceeding 0.1 gr-PM/dscf, each operation is expected to operate in compliance with this rule.

Rule 4202 Particulate Matter – Emission Rate

Section 4.0 of this rule, a person shall not discharge into the atmosphere PM emissions in excess of the maximum allowable limit (E_{Max}), in lb/hr, determined by the following equations:

E_{Max} = 3.59 $P^{0.62}$, for Process weight (P) less than or equal to 30 tons/hr
E_{Max} = 17.31 $P^{0.16}$, for Process weight (P) greater than 30 tons/hr

N-1919-18-0
Corn meal sifters served by bag filters
Processing Rate: 13.5 tons/hr (per applicant)

E_{Max} = 3.59 (13.5 tons/hr)$^{0.62}$
= 18.0 lb-PM/hr

$E_{Proposed}$ = 0.001 lb-PM/hr

Corn meal transfer operation served by a bag filter
Processing Rate: 12.2 tons/hr (per applicant)

E_{Max} = 3.59 (12.2 tons/hr)$^{0.62}$
= 16.9 lb-PM/hr

$E_{Proposed}$ = 0.003 lb-PM/hr

Eight Extruders served by two rotoclones
Processing Rate: 2.2 tons/hr (per applicant)

E_{Max} = 3.59 (2.2 tons/hr)$^{0.62}$
= 5.9 lb-PM/hr

$E_{Proposed}$ =0.055 lb-PM/hr

Steam-heated vegetable oil fryer equipped with oil mist eliminator (OME)
Processing Rate: 2.7 tons/hr (per applicant)

E_{Max} = 3.59 (2.7 tons/hr)$^{0.62}$
= 6.6 lb-PM/hr

$E_{Proposed}$ = 0.030 lb-PM/hr

Ambient air cooler with high velocity filtration system
Processing Rate: 2.7 tons/hr (per applicant)

E_{Max} = 3.59 (2.7 tons/hr)$^{0.62}$
= 6.6 lb-PM/hr

$E_{Proposed}$ = 0.319 lb-PM/hr

Seasoning system with a Tri-Mer 10-H orifice water scrubber
Processing Rate: 3.6 tons/hr (per applicant)

E_{Max} = 3.59 (3.6 tons/hr)$^{0.62}$
= 7.9 lb-PM/hr

$E_{Proposed}$ = 0.019 lb-PM/hr

For each operation above, the proposed emission rate ($E_{Proposed}$) is less than the maximum allowable emission rate (E_{Max}); therefore, compliance is expected with this rule.

N-1919-19-0
Cornmeal unload filter/receiver
Processing Rate: 12.0 tons/hr (per applicant)

E_{Max} = 3.59 (12.0 tons/hr)$^{0.62}$
= 16.8 lb-PM/hr

$E_{Proposed}$ = 0.002 lb-PM/hr

Cornmeal silos
Processing Rate: 27.0 tons/hr (per applicant)

E_{Max} = 3.59 (27.0 tons/hr)$^{0.62}$
= 27.7 lb-PM/hr

$E_{Proposed}$ = 0.007 lb-PM/hr

For each operation above, the proposed emission rate ($E_{Proposed}$) is less than the maximum allowable emission rate (E_{Max}); therefore, compliance is expected with this rule.

N-1919-20-0:
Corn cleaner with bin vent filter
Processing Rate: 22.5 tons/hr (per applicant)

E_{Max} = 3.59 (22.5 tons/hr)$^{0.62}$
= 24.7 lb-PM/hr

$E_{Proposed}$ = 0.017 lb-PM/hr

Corn wash, soak, and steam-operated cooking kettles
These units are not expected to generate any PM emissions.

Steam-heated vegetable oil fryer with oil mist eliminator (OME)
Processing Rate: 2.7 tons/hr (per applicant)

E_{Max} = 3.59 (2.7 tons/hr)$^{0.62}$
= 6.6 lb-PM/hr

$E_{Proposed}$ = 0.108 lb-PM/hr

8.5 MMBtu/hr oven with low-NOx burner
Gas and liquid fuels are excluded from the definition of process weight. Therefore, this rule does not apply to this unit.

Ambient air cooler with high velocity filtration system
Processing Rate: 2.7 tons/hr (per applicant)

E_{Max} = 3.59 (2.7 tons/hr)$^{0.62}$
= 6.6 lb-PM/hr

$E_{Proposed}$ = 0.319 lb-PM/hr

Seasoning system with a Tri-Mer 28-H orifice water scrubber
Processing Rate: 2.7 ton/hr (chips) + 0.4 tons/hr (seasoning) = 3.1 tons/hr (per applicant)

E_{Max} = 3.59 (3.1 tons/hr)$^{0.62}$
= 7.2 lb-PM/hr

$E_{Proposed}$ = 0.008 lb-PM/hr

For each operation above, the proposed emission rate ($E_{Proposed}$) is less than the maximum allowable emission rate (E_{Max}); therefore, compliance is expected with this rule.

N-1919-21-0:
Corn silos with bin vent filters
Processing Rate: 45.0 tons/hr (per applicant)

E_{Max} = 17.31 (45.0 tons/hr)$^{0.16}$
= 31.8 lb-PM/hr

$E_{Proposed}$ = 0.011 lb-PM/hr

Corn unloader
Processing Rate: 45.0 tons/hr (per applicant)

E_{Max} = 17.31 (45.0 tons/hr)$^{0.16}$
= 31.8 lb-PM/hr

For each operation above, the proposed emission rate ($E_{Proposed}$) is less than the maximum allowable emission rate (E_{Max}); therefore, compliance is expected with this rule.

Rule 4301 Fuel Burning Equipment

The requirements of section 5.0 are as follows:

- Combustion contaminates (TSP) - Not to exceed 0.1 gr/dscf @ 12% CO_2 and 10 lb/hr.
- SO_x emissions - Not to exceed 200 lb/hr
- NO_x emissions - Not to exceed 140 lb/hr

N-1919-20-0
8.5 MMBtu/hr oven with low-NOx burner

NOx = 0.306 lb/hr
SOx = 0.024 lb/hr
PM = 0.064 lb/hr

$$\text{PM}\left(\frac{\text{gr}}{\text{dscf}}\right)=\frac{\left(0.0075\ \frac{\text{lb-PM}}{\text{MMBtu}}\right)\left(8.5\frac{\text{MMBtu}}{\text{hr}}\right)\left(7{,}000\frac{\text{gr-PM}}{\text{lb-PM}}\right)}{\left(1{,}024.2\frac{\text{ft}^3}{\text{min}}\right)\left(\frac{100\%}{12\%}\right)}=0.052\ \frac{\text{gr-PM}}{\text{dscf}}<0.1\ \frac{\text{gr-PM}}{\text{dscf}}$$

Since the potential emissions from the oven are below the threshold for each pollutant, compliance is expected with this rule.

Rule 4309 Dryers, dehydrators, and Ovens

This rule applies to any dryer, dehydrator, or oven that is fired on gaseous fuel, liquid fuel, or is fired on gaseous and liquid fuel sequentially, and the total rated heat input for the unit is 5.0 million British thermal units per hour (5.0 MMBtu/hr) or greater.

Per Section 4.1.4, the requirements of this rule shall not apply to units used to bake or fry food for human consumption. The proposed 8.5 MMBtu/hr natural gas-fired oven will be used to bake tortilla chips. Therefore, this unit is not subject to the requirements of this rule.

Rule 4801 Sulfur Compounds

Section 3.1 states that a person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding a concentration of two-

tenths (0.2) percent by volume calculated as sulfur dioxide (SO_2) at the point of discharge on a dry basis averaged over 15 consecutive minutes.

For the proposed gaseous fuel combustion at a reference state of 60 °F, the Rule 4801 limit of 2,000 ppmvd is equivalent to:

$$\frac{(2000\ \text{ppmvd})\left(8{,}578\frac{\text{dscf}}{\text{MMBtu}}\right)\left(64\frac{\text{lb}-\text{SO}_x}{\text{lb}-\text{mol}}\right)}{\left(379.5\frac{\text{dscf}}{\text{lb}-\text{mol}}\right)(10^6)} \cong 2.9\frac{\text{lb}-\text{SO}_x}{\text{MMBtu}}$$

SO_x emissions from the proposed 8.5 MMBtu/hr tortilla oven are 0.00285 lb/MMBtu. Since these emissions are less than 2.9 lb/MMBtu, compliance is expected with this Rule.

California Health & Safety Code 42301.6 (School Notice)

The District has verified that this site is not located within 1,000 feet of a school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

California Environmental Quality Act (CEQA)

CEQA requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The District adopted its *Environmental Review Guidelines* (ERG) in 2001. The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities;
- Identify the ways that environmental damage can be avoided or significantly reduced;
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

District CEQA Findings

The County of Stanislaus (County) is the public agency having principal responsibility for approving the project. As such, the County served as the Lead Agency (CCR §15367). In approving the project, the Lead Agency prepared and adopted a Negative Declaration. The Lead agency filed a Notice of Determination, stating that the environmental document was adopted pursuant to the provisions of CEQA and concluding that the project would not have a significant effect on the environment.

The District is a Responsible Agency for the project because of its discretionary approval power over the project via its Permits Rule (Rule 2010) and New Source Review Rule (Rule 2201), (CCR §15381). As a Responsible Agency the District complies with CEQA by considering the environmental document prepared by the Lead Agency, and by reaching its own conclusion on whether and how to approve the project (CCR §15096).

The District has considered the Lead Agency's environmental document. Furthermore, the District has conducted an engineering evaluation of the project, this document, which demonstrates that Stationary Source emissions from the project would be below the District's thresholds of significance for criteria pollutants. Thus, the District finds that through a combination of project design elements, compliance with applicable District rules and regulations, and compliance with District air permit conditions, project specific stationary source emissions will have a less than significant impact on air quality. The District does not have authority over any of the other project impacts and has, therefore, determined that no additional findings are required (CEQA Guidelines §15096(h)).

Indemnification Agreement/Letter of Credit Determination

According to District Policy APR 2010 (CEQA Implementation Policy), when the District is the Lead or Responsible Agency for CEQA purposes, an indemnification agreement and/or a letter of credit may be required. The decision to require an indemnity agreement and/or a letter of credit is based on a case-by-case analysis of a particular project's potential for litigation risk, which in turn may be based on a project's potential to generate public concern, its potential for significant impacts, and the project proponent's ability to pay for the costs of litigation without a letter of credit, among other factors.

The criteria pollutant emissions and toxic air contaminant emissions associated with the proposed project are not significant, and there is minimal potential for public concern for this particular type of facility/operation. Therefore, an Indemnification Agreement and/or a Letter of Credit will not be required for this project in the absence of expressed public concern.

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue N-1919-18-0, '-19-0, '-20-0 and '-21-0 subject to the permit conditions on the attached draft ATCs in **Appendix A**.

X. Billing Information

Annual Permit Fees			
Permit Number	**Fee Schedule**	**Fee Description**	**Annual Fee**
N-1919-18-0	3020-01-F	585.75 hp (total) electric motors	$731
N-1919-19-0	3020-01-D	102.5 hp (total) electric motors	$379
N-1919-20-0	3020-02-G	8.5 MMBtu/hr oven	$980
N-1919-21-0	3020-01-H	62 hp (total) electric motors	$239

Appendixes

A: Draft ATCs
B: BACT Guidelines
C: BACT Analysis
D: HRA & AAQA Summary
E: Quarterly Net Emissions Change
F: Compliance Certification
G: ERC Surplus Analysis
H: ERC Withdrawal Calculations

Appendix A
Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: N-1919-18-0 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: FRITO-LAY INC
MAILING ADDRESS: 600 GARNER RD
MODESTO, CA 95357-0514

LOCATION: 600 GARNER RD
MODESTO, CA 95357-0514

EQUIPMENT DESCRIPTION:
FRIED CHEESE PUFF PROCESS LINE CONSISTS OF TWO SHICK MODEL EZ900G (OR EQUIVALENT MAKE AND MODEL) CORNMEAL SIFTERS SERVED BY BAG FILTERS, ONE SHICK MODEL 8-1250 (OR EQUIVALENT MAKE AND MODEL) CORNMEAL TRANSFER SERVED BY BHA GROUP INC STS 26 (OR EQUIVALENT MAKE AND MODEL) FILTER SYSTEM, A BLENDING SYSTEM, EIGHT R&D MACHINE SUPER HIGH CAPACITY (OR EQUIVALENT MAKE AND MODEL) EXTRUDERS SERVED BY TWO ROTOCLONES, A HEAT & CONTROL MODEL CC-1.5 (OR EQUIVALENT MAKE AND MODEL) VEGETABLE OIL FRYER (STEAM HEATED) EQUIPPED WITH AN OIL MIST ELIMINATOR SYSTEM, A HEAT & CONTROL (OR EQUIVALENT MAKE AND MODEL) AMBIENT AIR COOLER SERVED BY HIGH VELOCITY FILTRATION SYSTEM AND A SEASONING SYSTEM VENTED TO A TRI-MER 10-H (OR EQUIVALENT MAKE AND MODEL) ORIFICE WATER SCRUBBER

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. Particulate matter emissions from each operation under this permit shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Samir Sheikh, Executive Director / APCO

DRAFT

Brian Clements, Director of Permit Services

Northern Regional Office • 4800 Enterprise Way • Modesto, CA 95356-8718 • (209) 557-6400 • Fax (209) 557-6475

5. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

6. Visible emissions from each dust collection system serving the cornmeal sifters, corn meal transfer operation, and ambient air cooler shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 2201] Federally Enforceable Through Title V Permit

7. PM10 emissions from the corn meal sifting operation shall not exceed 0.0027 pounds during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit

8. PM10 emissions from the corn meal transfer operation shall not exceed 0.1 pounds during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Total PM10 emissions from all eight extruders vented through two rotoclones shall not exceed 1.3 pounds during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit

10. PM10 emissions from the vegetable oil fryer shall not exceed 0.7 pounds during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit

11. VOC emissions from the vegetable oil fryer shall not exceed 5.5 pounds during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit

12. PM10 emissions from the ambient air cooler exhaust shall not exceed 7.6 pounds during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit

13. PM10 emissions from the seasoning system scrubber exhaust shall not exceed 0.4 pounds during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit

14. The seasoning system scrubber water circulation rate (gallons per minute) range shall be established per manufacturer's recommendation at time of startup inspection. This information shall be administratively incorporated in the Permit to Operate. [District Rule 2201] Federally Enforceable Through Title V Permit

15. The seasoning system scrubber water circulation rate (gallons per minute) shall be monitored and recorded each day the seasoning system operates. [District Rule 2201] Federally Enforceable Through Title V Permit

16. The owner or operator shall maintain records sufficient to demonstrate compliance with each emission limit and permit requirement. These records shall contain each calculated emission quantity as well as each process variable used in the respective calculations. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Visible emissions from each dust collection system shall be inspected annually during operation. If visible emissions are observed, corrective action shall be taken to eliminate visible emissions. If visible emissions cannot be corrected within 24 hours, a visible emissions test using EPA Method 9 shall be conducted. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Bags or filters associated with each dust collection system shall be thoroughly inspected annually for tears, scuffs, abrasions, holes, or any evidence of particulate matter leaks and shall be replaced as needed. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Records of equipment & associated control device(s) maintenance, inspections, and repair shall be maintained. The records shall include the identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2201] Federally Enforceable Through Title V Permit

20. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

21. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. [District Rule 2201]

22. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

23. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

24. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or increase in firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

25. Prior to operating equipment under Authority to Construct permits N-1919-18-0, '-19-0, '-20 and '-21, permittee shall surrender PM10 emission reduction credits for the following quantity of emissions: 1st quarter - 3,199 lb, 2nd quarter - 3,200 lb, 3rd quarter - 3,200 lb, and fourth quarter - 3,200 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 8/15/19) for the ERCs specified below, including mandatory withdrawal of ERC certificate N-890-4. [District Rule 2201] Federally Enforceable Through Title V Permit

26. ERC Certificate Number C-1068-4, C-1069-4, C-1136-4, N-888-4, N-890-4, S-3437-4 or S-3418-4 (or a certificate split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct permits shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of these Authority to Construct permits. [District Rule 2201] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: N-1919-19-0 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: FRITO-LAY INC
MAILING ADDRESS: 600 GARNER RD
MODESTO, CA 95357-0514

LOCATION: 600 GARNER RD
MODESTO, CA 95357-0514

EQUIPMENT DESCRIPTION:
CORN MEAL RECEIVING AND STORAGE EQUIPMENT CONSISTING OF TWO CORN MEAL SILOS EQUIPPED WITH BIN VENT FILTERS AND ONE SCHICK MODEL 8-1250 (OR EQUIVALENT MAKE AND MODEL) CORN MEAL UNLOAD FILTER/RECEIVER

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. Particulate matter emissions from each operation under this permit shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
6. Visible emissions from each dust collection system serving the cornmeal unload receiver and cornmeal silos shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Samir Sheikh, Executive Director / APCO

Brian Clements, Director of Permit Services
N-1919-19-0 : Jun 24 2021 4:33PM -- KAHLONJ : Joint Inspection NOT Required

7. PM10 emissions from the corn meal unload filter/receiver shall not exceed 0.1 pounds during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Total PM10 emissions from the corn meal silos served by bin vent filter systems shall not exceed 0.2 pounds during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Visible emissions from each dust collection system shall be inspected annually during operation. If visible emissions are observed, corrective action shall be taken to eliminate visible emissions. If visible emissions cannot be corrected within 24 hours, a visible emissions test using EPA Method 9 shall be conducted. [District Rule 2201] Federally Enforceable Through Title V Permit

10. The owner or operator shall maintain records sufficient to demonstrate compliance with each emission limit and permit requirement. These records shall contain each calculated emission quantity as well as each process variable used in the respective calculations. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Bags or filters associated with each dust collection system shall be thoroughly inspected annually for tears, scuffs, abrasions, holes, or any evidence of particulate matter leaks and shall be replaced as needed. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Records of equipment & associated control device(s) maintenance, inspections, and repair shall be maintained. The records shall include the identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2201] Federally Enforceable Through Title V Permit

13. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

14. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

15. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

16. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

17. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or increase in firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Prior to operating equipment under this Authority to Construct, permittee shall surrender PM10 emission reduction credits as required by Authority to Construct N-1919-18-0. [District Rule 2201] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: N-1919-20-0 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: FRITO-LAY INC
MAILING ADDRESS: 600 GARNER RD
MODESTO, CA 95357-0514

LOCATION: 600 GARNER RD
MODESTO, CA 95357-0514

EQUIPMENT DESCRIPTION:
DORITO TORTILLA CHIP PROCESS LINE CONSISTS OF A SCHENCK (OR EQUIVALENT MAKE AND MODEL) CORN CLEANER SERVED BY A CYCLONE VENTED TO A DUST COLLECTION SYSTEM, FOUR KETTLES (STEAM-HEATED) FOR CORN WASH, SOAK AND COOK SYSTEM, A HEAT & CONTROL MODEL DTC-4500 (OR EQUIVALENT MAKE AND MODEL)VEGETABLE OIL FRYER (STEAM HEATED) WITH OIL MIST ELIMINATOR, AN IET COMBUSTION LLC MODEL 10D-400-S-F (OR EQUIVALENT MAKE AND MODEL) 8.5 MMBTU/HR OVEN WITH LOW-NOX BURNER, A HEAT & CONTROL MODEL AAC-7212 (OR EQUIVALENT MAKE AND MODEL)AMBIENT AIR COOLER SERVED BY HIGH VELOCITY FILTRATION SYSTEM, AND A SEASONING SYSTEM VENTED TO A TRI-MER 28-H (OR EQUIVALENT MAKE AND MODEL) WATER SCRUBBER

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. Particulate matter emissions from each operation under this permit shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Samir Sheikh, Executive Director / APCO

Brian Clements, Director of Permit Services
N-1919-20-0 : Jun 24 2021 4:33PM -- KAHLONJ : Joint Inspection NOT Required

6. Visible emissions from each dust collection system serving the corn cleaner and ambient air cooler shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 2201] Federally Enforceable Through Title V Permit
7. PM10 emissions from the corn cleaner system served by filtration system shall not exceed 0.4 pounds during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Corn wash, soak, and steam-operated cooking kettles shall not cause any emissions into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
9. PM10 emissions from the vegetable oil fryer shall not exceed 2.6 pounds during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
10. VOC emissions from the vegetable oil fryer shall not exceed 5.5 pounds during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Emissions from the oven shall not exceed any of the following limits: 36 lb-NOx/MMscf, 2.85 lb-SOx/MMscf, 7.5 lb-PM10/MMscf, 35 lb-CO/MMscf and 7 lb-VOC/MMscf of natural gas combusted. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The oven shall only be fired on PUC-quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
13. PM10 emissions from the ambient air cooler exhaust shall not exceed 7.6 pounds during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
14. PM10 emissions from the seasoning system scrubber exhaust shall not exceed 0.2 pounds during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Source testing to measure NOx and CO emissions from the 8.5 MMBtu/hr oven shall be conducted within 60 days of initial startup of the unit. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
17. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rule 2201] Federally Enforceable Through Title V Permit
18. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rule 2201] Federally Enforceable Through Title V Permit
20. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the oven shut off for 30 minutes or longer, or within 30 minutes after a re-ignition. [District Rule 2201] Federally Enforceable Through Title V Permit
21. The results of initial source test shall be submitted to the District within 60 days after conducting the test. [District Rule 1081] Federally Enforceable Through Title V Permit
22. The seasoning system scrubber water circulation rate (gallons per minute) range shall be established per manufacturer's recommendation at time of startup inspection. This information shall be administratively incorporated in the Permit to Operate. [District Rule 2201] Federally Enforceable Through Title V Permit
23. The seasoning system scrubber water circulation rate (gallons per minute) shall be monitored and recorded each day the seasoning system operates. [District Rule 2201] Federally Enforceable Through Title V Permit
24. The owner or operator shall maintain records sufficient to demonstrate compliance with each emission limit and permit requirement. These records shall contain each calculated emission quantity as well as each process variable used in the respective calculations. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

25. Visible emissions from each dust collection system shall be inspected annually during operation. If visible emissions are observed, corrective action shall be taken to eliminate visible emissions. If visible emissions cannot be corrected within 24 hours, a visible emissions test using EPA Method 9 shall be conducted. [District Rule 2201] Federally Enforceable Through Title V Permit

26. Bags or filters associated with each dust collection system shall be thoroughly inspected annually for tears, scuffs, abrasions, holes, or any evidence of particulate matter leaks and shall be replaced as needed. [District Rule 2201] Federally Enforceable Through Title V Permit

27. Records of equipment & associated control device(s) maintenance, inspections, and repair shall be maintained. The records shall include the identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2201] Federally Enforceable Through Title V Permit

28. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

29. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

30. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

31. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

32. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or increase in firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

33. Prior to operating equipment under this Authority to Construct, permittee shall surrender PM10 emission reduction credits as required by Authority to Construct N-1919-18-0. [District Rule 2201] Federally Enforceable Through Title V Permit

34. Prior to operating equipment under this Authority to Construct, permittee shall surrender NOx emission reduction credits for the following quantity of emissions: 1st quarter - 1,005 lb, 2nd quarter - 1,005 lb, 3rd quarter - 1,006 lb, and fourth quarter - 1,006 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 8/15/19) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

35. ERC Certificate Number S-3765-2 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: N-1919-21-0 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: FRITO-LAY INC
MAILING ADDRESS: 600 GARNER RD
MODESTO, CA 95357-0514

LOCATION: 600 GARNER RD
MODESTO, CA 95357-0514

EQUIPMENT DESCRIPTION:
CORN RECEIVING AND STORAGE EQUIPMENT CONSISTING OF TWO SCHENCK (OR EQUIVALENT MAKE AND MODEL) CORN SILOS EQUIPPED WITH BIN VENT FILTERS AND TWO SCHENCK (OR EQUIVALENT MAKE AND MODEL) CORN UNLOADERS WITH BIN VENT FILTERS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. Particulate matter emissions from each operation under this permit shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
6. Visible emissions from each dust collection system serving the corn unloader system and corn silos shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Samir Sheikh, Executive Director / APCO

DRAFT

Brian Clements, Director of Permit Services

N-1919-21-0 : Jun 24 2021 4:33PM -- KAHLONJ : Joint Inspection NOT Required

7. PM10 emissions from the corn unloader system served by filtration system shall not exceed 0.3 pounds during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Total PM10 emissions from the corn silos served by bin vent filter systems shall not exceed 0.3 pounds during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Visible emissions from each dust collection system shall be inspected annually during operation. If visible emissions are observed, corrective action shall be taken to eliminate visible emissions. If visible emissions cannot be corrected within 24 hours, a visible emissions test using EPA Method 9 shall be conducted. [District Rule 2201] Federally Enforceable Through Title V Permit

10. The owner or operator shall maintain records sufficient to demonstrate compliance with each emission limit and permit requirement. These records shall contain each calculated emission quantity as well as each process variable used in the respective calculations. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Bags or filters associated with each dust collection system shall be thoroughly inspected annually for tears, scuffs, abrasions, holes, or any evidence of particulate matter leaks and shall be replaced as needed. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Records of equipment & associated control device(s) maintenance, inspections, and repair shall be maintained. The records shall include the identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2201] Federally Enforceable Through Title V Permit

13. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

14. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

15. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

16. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

17. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or increase in firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Prior to operating equipment under this Authority to Construct, permittee shall surrender PM10 emission reduction credits as required by Authority to Construct N-1919-18-0. [District Rule 2201] Federally Enforceable Through Title V Permit

Appendix B
BACT Guidelines

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 1.6.4*

Last Update: 6/16/1999

Oven - Snack Food

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
SOx	Natural gas and LPG as backup fuel		
PM10	Natural gas and LPG as backup fuel		
NOx	Natural gas and LPG as backup fuel	Selective Catalytic Reduction	
CO	Natural gas and LPG as backup fuel	Catalytic Oxidation	

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

***This is a Summary Page for this Class of Source**

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 5.5.1*

Last Update: 1/15/2003

Snack Chip Steam-heated Conditioning Units - Fryer and De-oiler

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC		1. 85% Control (Combined VOC and PM control by Thermal oxidizer, or equal). 2. 80% Control (Combined VOC and PM control by carbon adsorber, or equal).	
PM10	75% control (Oil Mist Eliminator or equal)	1. 85% Control (Combined VOC and PM control by Thermal oxidizer, or equal). 2. 80% Control (Combined VOC and PM control by carbon adsorber, or equal).	

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

***This is a Summary Page for this Class of Source**

Appendix C
BACT Analysis

Top-Down BACT Analysis

Important Note: This project was deemed complete prior to June 1, 2021, therefore, BACT Cost Effectiveness Thresholds and Interest Rate in effect at the time of completeness will be used for this project. BACT cost effectiveness thresholds are taken from May 14, 2008 memo (Revised BACT Cost Effectiveness Thresholds Memo). The purchase equipment cost are annualized using 10% interest over 10-year period per District's BACT Policy APR-1305 (version 11/9/99) in effect at the time of completeness of this project.

N-1919-18-0:

Steam-heated vegetable oil fryer equipped with oil mist eliminator (OME)
BACT is triggered for VOC emissions.

BACT guideline 5.5.1 for snack chip steam-heated conditioning units (fryer and de-oiler) will be used to address the BACT requirements for VOC emissions.

Step 1: Identify All Possible Control Technologies

BACT guideline 5.5.1 for snack chip steam-heated conditioning units (fryer and de-oiler) lists the following controls

Achieved-in-Practice (AIP):
None

Technologically Feasible:
1. 85% control (combined VOC and PM control by thermal oxidizer, or equal)
2. 80% control (combined VOC and PM control by carbon adsorber, or equal)

Alternate Basic Equipment:
None

Step 2: Eliminate Technologically Infeasible Options

All control options listed in step 1 are technologically feasible.

Step 3: Rank Remaining Control Technologies by Control Effectiveness

1. 85% control (combined VOC and PM control by thermal oxidizer, or equal)
2. 80% control (combined VOC and PM control by carbon adsorber, or equal)

Step 4: Cost Effectiveness Analysis

This project involves two steam operated oil fryers (N-1919-18 and '-20). BACT analysis assumes that exhaust from both fryers can be routed to a single emissions control equipment. This assumption will give best chance for a technology to be cost-effective.

Option 1: Regenerative thermal oxidizer or catalytic oxidizer
As seen in the worksheet below, the use of this technology is not cost-effective; therefore, it is not required as BACT at this time.

Cost Item	Reasons & Remarks	Estimated Cost
Direct Costs		
Purchased equipment costs		
Equipment Purchase (RTO), EC	Ref: Anguil Environmental Systems, Inc. cost quote (July 26, 2019) provided under project N-1192453	$323,600
Instrumentation (included)		
Sales taxes	3.1825% EC	$10,299
*Freight	0.05 EC	$16,180
Purchased equipment costs, PEC	**sum of above items**	**$360,079**
Direct installation costs	Ref: Section 3 Table 2.8 of EPA Air Pollution Control Cost Manual (Sixth Edition) EPA/452/B-02-001	
Foundations & supports	0.08 PEC	$28,006
Handling & erection	0.14 PEC	$49,011
Electrical	0.02 PEC	$7,002
Piping	0.01 PEC	$3,501
Insulation for duct work	0.01 PEC	$3,501
Painting	0.01 PEC	$3,501
Direct installation costs	**sum of above items**	**$94,621**
Site preparation	not included	
Buildings	not included	
Total Direct Costs, DC		**$444,800**
Indirect Costs (Installation)	Ref: Section 3 Table 2.8 of EPA Air Pollution Control Cost Manual (Sixth Edition) EPA/452/B-02-001	
Engineering	0.10 PEC	$35,008
Construction & field expenses	0.05 PEC	$17,504
Contractor fees	0.10 PEC	$35,008
Start-up	0.02 PEC	$7,002
Performance test	0.01 PEC	$3,501
Contingencies	0.03 PEC	$10,502
Total Indirect Costs, IC	**sum of above items**	**$108,624**
Total Capital Investment (TCI)	**DC + IC**	**$553,124**
Direct Annual Costs		
Operating labor	Ref: EPA Table 2.10 of EPA/452/B-02-001	
Operator	0.5 hr/shift, $32.00/hr, 3 shifts/day, 365 days/yr	$17,520
Supervisor	15% of operator	$2,628
Maintenance	Ref: EPA Table 2.10 of EPA/452/B-02-001	
Labor	0.5 hr/shift, $32.00/hr, 3 shifts/day, 365 days/yr	$17,520
Materials	100% of maintenance labor	$17,520
Utilities		
Supplemental fuel (Natural gas)	Ref: Anguil Environmental Systems, Inc. cost quote (July 26, 2019)	$37,800
Electricity (RTO)		$18,984
Total Direct Annual Costs, DAC	**sum of above items**	**$111,972**
Indirect Annual Costs	Ref: Section 3 Table 2.8 of EPA Air Pollution Control Cost Manual (Sixth Edition) EPA/452/B-02-001	
Overhead	60% of sum of operating, supervisor, & maintenance labie & maintenance materials	$33,112.80
Administrative Charges	2%TCI	$11,062
Property Taxes	1%TCI	$5,531
Insurance	1%TCI	$5,531
Total Indirect Annual Costs, IAC	**sum of above items**	**$56,238**
Total Annual Costs, TAC	**DAC + IAC**	**$167,210**
Cost Effectiveness		
Annualized Total Capital Investment, ATCI	0.163 TCI, amortization factor determined using 10 year, 10% interest	$90,018
Cost of controls ($/yr)	ATCI + TAC	$257,228
**MCET ($/yr)	Combined 85% control for VOC and PM emissions of both FCP&DTC fryers = VOC Reduction (tons/yr) x Cost effectiveness threshold ($/ton) + PM10 Reduciton (tons/yr) x Cost Effectiveness threshold ($/ton) = 0.85*(2010/2000+2010/2000)*17500+0.85*(260/2000+946/2000)*11400	$35,742
Control Required?	Cost of controls ($/yr) < MCET ($/yr)	No

*Ref: Section 3 Table 2.8 of EPA Air Pollution Control Cost Manual (Sixth Edition) EPA/452/B-02-001

**MCET = Multi-Pollutant Cost Effectiveness Threshold

Cost Item	Reasons & Remarks	Estimated Cost
Direct Costs		
Purchased equipment costs		
Equipment Purchase (RTO), EC	Ref: Angull Environmental Systems, Inc. cost quote (July 26, 2019), provided under project N-1192453	$300,000
Instrumentation (Included)		
Sales taxes	3.1825% EC	$9,548
*Freight	0.05 EC	$15,000
Purchased equipment costs, PEC	**sum of above items**	**$324,548**
Direct installation costs	Ref: Section 3 Table 2.8 of EPA Air Pollution Control Cost Manual (Sixth Edition) EPA/452/B-02-001	
Foundations & supports	0.08 PEC	$25,964
Handling & erection	0.14 PEC	$45,437
Electrical	0.02 PEC	$6,491
Piping	0.01 PEC	$3,245
Insulation for duct work	0.01 PEC	$3,245
Painting	0.01 PEC	$3,245
Direct installation costs	**sum of above items**	**$87,628**
Site preparation	not included	
Buildings	not included	
Total Direct Costs, DC		**$412,175**
Indirect Costs (installation)	Ref: Section 3 Table 2.8 of EPA Air Pollution Control Cost Manual (Sixth Edition) EPA/452/B-02-001	
Engineering	0.10 PEC	$32,455
Construction & field expenses	0.05 PEC	$16,227
Contractor fees	0.10 PEC	$32,455
Start-up	0.02 PEC	$6,491
Performance test	0.01 PEC	$3,245
Contingencies	0.03 PEC	$9,736
Total Indirect Costs, IC	**sum of above items**	**$100,610**
Total Capital Investment (TCI)	**DC + IC**	**$512,785**
Direct Annual Costs		
Operating labor	Ref: EPA Table 2.10 of EPA/452/B-02-001	
Operator	0.5 hr/shift, $32.00/hr, 3 shifts/day, 365 days/yr	$17,520
Supervisor	15% of operator	$2,628
Maintenance	Ref: EPA Table 2.10 of EPA/452/B-02-001	
Labor	0.5 hr/shift, $32.00/hr, 3 shifts/day, 365 days/yr	$17,520
Materials	100% of maintenance labor	$17,520
Utilities		
Supplemental fuel (Natural gas)	Ref: Angull Environmental Systems, Inc. cost quote (July 26, 2019)	$37,800
Electricity (RTO)		$18,984
Total Direct Annual Costs, DAC	**sum of above items**	**$111,972**
Indirect Annual Costs	Ref: Section 3 Table 2.8 of EPA Air Pollution Control Cost Manual (Sixth Edition) EPA/452/B-02-001	
Overhead	60% of sum of operating, supervisor, & maintenance labie & maintenance materials	$33,112.80
Administrative Charges	2%TCI	$10,256
Property Taxes	1%TCI	$5,128
Insurance	1%TCI	$5,128
Total Indirect Annual Costs, IAC	**sum of above items**	**$53,624**
Total Annual Costs, TAC	**DAC + IAC**	**$165,596**
Cost Effectiveness		
Annualized Total Capital Investment, ATCI	0.163 TCI, amortization factor determined using 10 year, 10% interest	$83,453
Cost of controls ($/yr)	ATCI + TAC	$249,049
**MCET ($/yr)	Combined 85% control for VOC and PM emissions of both FCP&DTC fryers = VOC Reduction (tons/yr) x Cost effectiveness threshold ($/ton) + PM10 Reduciton (tons/yr) x Cost Effectiveness threshold ($/ton) = 0.85*(2010/2000+2010/2000)*17500+0.85*(250/2000+946/2000)*11400	$35,742
Control Required?	Cost of controls ($/yr) < MCET ($/yr)	No

*Ref: Section 3 Table 2.8 of EPA Air Pollution Control Cost Manual (Sixth Edition) EPA/452/B-02-001

**MCET = Multi-Pollutant Cost Effectiveness Threshold

Option 2: Carbon adsorber

As seen in the worksheet below, the use of this technology is not cost-effective; therefore, it is not required as BACT at this time.

Cost Item	Reasons & Remarks	Estimated Cost
Direct Costs		
Purchased equipment costs		
Equipment Purchase (Carbon adsorber), EC	Ref: KCH Engineered Systems (August 2, 2019 quote), provided under project N-1192453	$168,000
Instrumentation	0.1 EC	$16,800
Sales taxes	3.1825% EC	$5,347
Freight	0.05 EC	$8,400
Purchased equipment costs, PEC	**sum of above items**	**$198,547**
Direct installation costs	Ref: Section 3 Table 1.3 of EPA Air Pollution Control Cost Manual (Sixth Edition) EPA/452/B-02-001	
Foundations & supports	0.08 PEC	$15,884
Handling & erection	0.14 PEC	$27,797
Electrical	0.04 PEC	$7,942
Piping	0.02 PEC	$3,971
Insulation	0.01 PEC	$1,985
Painting	0.01 PEC	$1,985
Direct installation costs	**sum of above items**	**$59,564**
Site preparation	not included	
Buildings	not included	
Total Direct Costs, DC		$258,111
Indirect Costs (Installation)	Ref: Section 3 Table 1.3 of EPA Air Pollution Control Cost Manual (Sixth Edition) EPA/452/B-02-001	
Engineering	0.10 PEC	$19,855
Construction & field expenses	0.05 PEC	$9,927
Contractor fees	0.10 PEC	$19,855
Start-up	0.02 PEC	$3,971
Performance test	0.01 PEC	$1,985
Contingencies	0.03 PEC	$5,956
Total Indirect Costs, IC	**sum of above items**	**$61,549**
Total Capital Investment (TCI) = DC + IC		**$319,660**
Direct Annual Costs	Ref: Section 3 Table 1.6 of EPA Air Pollution Control Cost Manual (Sixth Edition) EPA/452/B-02-001	
Operating labor		
Operator	0.5 hr/shift, $32.00/hr, 3 shifts/day, 365 days/yr	$17,520
Supervisor	15% of operator	$2,628
Maintenance		
Labor	0.5 hr/shift, $32.00/hr, 3 shifts/day, 365 days/yr	$17,520
Materials	100% of maintenance labor	$17,520
Replacement Parts, carbon		
Replacement labor	Not determined	
Carbon cost	Not determined	
Utilities		
Electricity (carbon adsorber system)	Not determined	
Total Direct Annual Costs, DAC	**sum of above items**	**$55,188**
Indirect Annual Costs	Ref: Section 3 Table 1.6 of EPA Air Pollution Control Cost Manual (Sixth Edition) EPA/452/B-02-001	
Overhead	60% of sum of operating, supervisor, & maintenance labor & maintenance materials	$33,112.80
Administrative Charges	2%TCI	$6,393
Property Taxes	1%TCI	$3,197
Insurance	1%TCI	$3,197
Total Indirect Annual Costs, IAC	**sum of above items**	**$45,899**
Total Annual Costs, TAC	**DAC + IAC**	**$101,087**
Cost Effectiveness		
Annualized Total Capital Investment, ATCI	0.163 TCI, amortization factor determined using 10 year, 10% interest	$52,023
Cost of controls ($/yr)	ATCI + TAC	$153,110
**MCET ($/yr)	Combined 85% control for VOC and PM emissions of both FCP&DTC fryers = VOC Reduction (tons/yr) x Cost effectiveness threshold ($/ton) + PM10 Reduction (tons/yr) x Cost Effectiveness threshold ($/ton) = 0.80*(2010/2000+2010/2000)*17500+0.80*(260/2000+946/2000)*11400	$33,639
Control Required?	Cost of controls ($/yr) < MCET ($/yr)	No

*Ref. Ref: Section 3 Table 1.3 of EPA Air Pollution Control Cost Manual (Sixth Edition) EPA/452/B-02-001
**MCET = Multi-Pollutant Cost Effectiveness Threshold

Step 5: Select BACT

As seen above, the technologically feasible options are not cost effective, therefore, none of them is required at this time.

The applicant has proposed to install a steam-operated fryer without the use of any control equipment.

Ambient air cooler with high velocity filtration system

BACT is triggered for PM10 emissions.

Ambient air cooler will be used to reduce moisture in the fried and conditioned chips. This step is necessary to achieve the desired quality. Some residual oily particulate matters as well as PM10 resulting from breaking off of chips during material handling are emitted.

The District used to have a BACT guideline 5.5.2 for tortilla chip line ambient air coolers that was prepared under project N-950709. The guideline was rescinded in April 2020, as it was rarely used in the past permitting actions. However, the technologies listed in the older BACT guideline can used in reducing PM_{10} emissions. Therefore, for the purpose of this project, technologies that were practically feasible in the older BACT analysis will be evaluated in this project.

Step 1: Identify All Possible Control Technologies

The following technologies are determined to be practically feasible in reducing PM_{10} emissions from snack chip cooling process:

1. High velocity filtration system (70% control efficiency)
2. Wet scrubber (90% control efficiency)

Step 2: Eliminate Technologically Infeasible Options

All control options listed in step 1 are technologically feasible.

Step 3: Rank Remaining Control Technologies by Control Effectiveness

1. Wet scrubber (90% control efficiency)
2. High velocity filtration system (70% control efficiency)

Step 4: Cost Effectiveness Analysis

This project involves two ambient air coolers (N-1919-18 and '-20). BACT analysis assumes that exhaust from both ambient air coolers can be routed to a single emissions control device. This assumption will give best chance for a technology to be cost-effective.

Option 1: Wet Scrubber

As seen in the worksheet below, the use of this technology is not cost-effective; therefore, it is not required as BACT at this time.

Cost Item	Reasons & Remarks	Estimated Cost
Direct Costs		
Purchased equipment costs		
Equipment Purchase (Scrubber), EC	Ref: HEE-Duall Environmental Technologies (2/25/19) provided under project N-1183142	$76,980
Instrumentation (included)		
Sales taxes	3.1825% EC	$2,450
*Freight	0.05 EC	$3,849
Purchased equipment costs, PEC	sum of above items	$83,279
Direct installation costs	Ref: Section 5 Table 1.3 of EPA Air Pollution Control Cost Manual (Sixth Edition) EPA/452/B-02-001	
Foundations & supports	0.12 PEC	$9,993
Handling & erection	0.40 PEC	$33,312
Electrical	0.01 PEC	$833
Piping	0.30 PEC	$24,984
Insulation for duct work	0.01 PEC	$833
Painting	0.01 PEC	$833
Direct installation costs	**sum of above items**	**$70,787**
Site preparation	not included	
Buildings	not included	
Total Direct Costs, DC		**$154,066**
Indirect Costs (installation)	Ref: Section 5 Table 1.3 of EPA Air Pollution Control Cost Manual (Sixth Edition) EPA/452/B-02-001	
Engineering	0.10 PEC	$8,328
Construction & field expenses	0.10 PEC	$8,328
Contractor fees	0.10 PEC	$8,328
Start-up (scrubber)	Ref: HEE-Duall Environmental Technologies (2/25/19) provided under project N-1183142	$5,250
Performance test	0.01 PEC	$833
Contingencies	0.03 PEC	$2,498
Total Indirect Costs, IC	**sum of above items**	**$33,565**
Total Capital Investment (TCI)	**DC + IC**	**$187,631**
Direct Annual Costs	Ref: Section 5 Table 1.4 of EPA Air Pollution Control Cost Manual (Sixth Edition) EPA/452/B-02-001	
Operating labor		
Operator	0.5 hr/shift, $32.00/hr, 3 shifts/day, 365 days/yr	$17,520
Supervisor	15% of operator	$2,628
Operating materials		
	not included	--
Wastewater disposal (scrubber water)	not included	--
Maintenance		
Labor	0.5 hr/shift, $32.00/hr, 3 shifts/day, 365 days/yr	$17,520
Materials	100% of maintenance labor	$17,520
Utilities		
Electricity (Scrubber)	Not determined	
Total Direct Annual Costs, DAC	**sum of above items**	**$55,188**
Indirect Annual Costs	Ref: Section 5 Table 1.4 of EPA Air Pollution Control Cost Manual (Sixth Edition) EPA/452/B-02-001	
Overhead	60% of sum of operating, supervisor, & maintenance labor & maintenance materials	$33,112.80
Administrative Charges	2%TCI	$3,753
Property Taxes	1%TCI	$1,876
Insurance	1%TCI	$1,876
Total Indirect Annual Costs, IAC	**sum of above items**	**$40,618**
Total Annual Costs, TAC	**DAC + IAC**	**$95,806**
Cost of Emission Reductions ($/ton)		
Amoritization factor		
Interest rate (%)	10%	
Equipment life (years)	10	
Amoritization factor	0.163	
Annualized Total Capital Investment, ATCI	Amoritization factor x TCI	$30,584
Total annualized cost ($/yr)	ATCI + TAC	$126,389.85
Overall emissions control effectiveness	90%	
Emission Reductions (tons/yr)	Overall emission control (%) x PE (lb/yr) from both Ambient coolers vented to a single scrubber system	2.512
Cost of Emission Reductions ($/ton)	Toal annualized cost($/yr)/Emission Reductions (tons/yr)	**$50,316.43**
*Ref. Section 5 Table 1.3 of EPA Air Pollution Control Cost Manual (Sixth Edition) EPA/452/B-02-001		

Option 2: High velocity filtration system

The applicant has proposed to use high velocity filter system to reduce PM10 emissions. Therefore, cost effectiveness analysis is not required.

Step 5: Select BACT

As seen above, the use of wet scrubber is not cost effective, therefore, use of this technology is not required at this time.

BACT is to use high velocity filter system on each ambient air cooler. The applicant has proposed to this technology. Therefore, BACT requirements are satisfied.

N-1919-20-0:

Steam-heated vegetable oil fryer with oil mist eliminator (OME)

BACT is triggered for VOC and PM10 emissions.

VOC:

BACT guideline 5.5.1 for snack chip steam-heated conditioning units (fryer and de-oiler) will be used to address the BACT requirements for VOC emissions.

Step 1: Identify All Possible Control Technologies

BACT guideline 5.5.1 for snack chip steam-heated conditioning units (fryer and de-oiler) lists the following controls

Achieved-in-Practice (AIP):
None

Technologically Feasible:

1. 85% control (combined VOC and PM control by thermal oxidizer, or equal)
2. 80% control (combined VOC and PM control by carbon adsorber, or equal)

Alternate Basic Equipment:
None

Step 2: Eliminate Technologically Infeasible Options

All control options listed in step 1 are technologically feasible.

Step 3: Rank Remaining Control Technologies by Control Effectiveness

1. 85% control (combined VOC and PM control by thermal oxidizer, or equal)
2. 80% control (combined VOC and PM control by carbon adsorber, or equal)

Step 4: Cost Effectiveness Analysis

As stated previously, this project involves two steam operated oil fryers (N-1919-18 and '-20). BACT analysis assumes that exhaust from both fryers can be routed to a single emissions control equipment. This assumption will give best chance for a technology to be cost-effective.

Based on the worksheets under permit N-1919-18-0, none of technologically feasible options are cost effective at this time.

Step 5: Select BACT

As seen above, the technologically feasible options are not cost effective, therefore, none of them is required at this time. The applicant has proposed to install a steam-operated fryer without the use of any control equipment.

PM10:
BACT guideline 5.5.1 for snack chip steam-heated conditioning units (fryer and de-oiler) will be used to address the BACT requirements for VOC emissions.

Step 1: Identify All Possible Control Technologies

BACT guideline 5.5.1 for snack chip steam-heated conditioning units (fryer and de-oiler) lists the following controls

Achieved-in-Practice (AIP):
1. 75% control (oil mist eliminator or equal)

Technologically Feasible:
1. 85% control (combined VOC and PM control by thermal oxidizer, or equal)
2. 80% control (combined VOC and PM control by carbon adsorber, or equal)

Alternate Basic Equipment:
None

Step 2: Eliminate Technologically Infeasible Options

All control options listed in step 1 are technologically feasible.

Step 3: Rank Remaining Control Technologies by Control Effectiveness

1. 85% control (combined VOC and PM control by thermal oxidizer, or equal)
2. 80% control (combined VOC and PM control by carbon adsorber, or equal)
3. 75% control (oil mist eliminator or equal)

Step 4: Cost Effectiveness Analysis

Option 1: 85% control (combined VOC and PM control by thermal oxidizer, or equal)
Option 2: 80% control (combined VOC and PM control by carbon adsorber, or equal)
As stated previously, this project involves two steam operated oil fryers (N-1919-18 and '-20). BACT analysis assumes that exhaust from both fryers can be routed to a single emissions control equipment. This assumption will give best chance for a technology to be cost-effective.

Based on the worksheets under permit N-1919-18-0, none of technologically feasible options are cost effective at this time.

Option 3: 75% control (oil mist eliminator or equal)
The applicant has proposed to equip the fryer with oil mist eliminator. Thus, cost-effectiveness analysis is not required for this technology.

Step 5: Select BACT

BACT would be to use a technology that can achieve at least 75% control for PM10 emissions.

The applicant has proposed to install a steam-operated fryer with oil mist eliminators (OME). Per manufacturer, OMEs achieve at least 95% control for PM10 emissions. Thus, BACT requirements are satisfied.

8.5 MMBtu/hr oven with low-NOx burner
As seen above, BACT is triggered for NOx emissions.

BACT guideline 1.6.4 – Oven snack food will be used to address the BACT requirements for NOx emissions.

Step 1: Identify All Possible Control Technologies

BACT guideline 1.6.4 – Oven snack food lists the following controls:

Achieved-in-Practice (AIP):
1. Use of natural gas fuel, and LPG as backup fuel

Technologically Feasible:
1. Selective catalytic reduction (SCR) system

Alternate Basic Equipment:
None

Step 2: Eliminate Technologically Infeasible Options

All control options listed in step 1 are technologically feasible.

Step 3: Rank Remaining Control Technologies by Control Effectiveness

1. 90% NOx reduction using SCR system
2. Use of natural gas with LPG as backup fuel

Step 4: Cost Effectiveness Analysis

Option 1: 90% NOx reduction using SCR system
Per R.F. MacDonald Company, base cost of an SCR system would be about $250,000-$300,000 (2020 $ value). This quote includes the installation costs. Per guidance in District's BACT policy, using 10 years with 10% interest rate, the annualized cost would be:

$$\mathrm{A} = (\$250{,}000)\left[\frac{(0.1)(1+0.1)^{10}}{(1+0.1)^{10}-1}\right] = \frac{\$40{,}686}{yr}$$

In determining the cost of reduction, typically the District uses the emission reduction that can be achieved from the current "industry standard". Use of low-NOx burner that can achieve 30 ppmvd @ 3% O_2 (0.036 lb/MMBtu) is assumed to be the "industry standard". SCR is presumed to achieve 2.5 ppmvd NOx @ 3% O2 (0.003 lb/MMBtu). Therefore, the reduction from the

"industry standard" would be 2,457 lb-NOx/yr [(0.036-0.003 lb/MMBtu)(8.5 MMBtu/hr)(8,760 hr/yr)]. The cost of reduction ($/ton) would be:

$$= \frac{\left(\frac{\$40{,}686}{yr}\right)\left(2{,}000\,\frac{lb}{ton}\right)}{\left(2{,}457\,\frac{lb-NOx}{yr}\right)} = \frac{\$33{,}118}{ton}$$

Since the cost of NO_x reductions is greater than the threshold limit of $24,500/ton; therefore, it is not cost effective to require this control at this time. Note that actual cost of NOx reduction will be much higher than the $33,118/ton if annual operating and maintenance costs are included in the analysis.

Option 2: Use of natural gas with LPG as backup fuel
This is a achieved-in-practice option. Therefore, cost-effectiveness analysis is not performed.

Step 5: Select BACT

BACT would be to use natural gas, with an option LPG fuel as a backup fuel. The applicant has proposed to use natural gas fuel in the oven. Thus, BACT requirements are satisfied.

Ambient air cooler with high velocity filtration system
BACT is triggered for PM10 emissions.

Ambient air cooler will be used to reduce moisture in the fried and conditioned chips. This step is necessary to achieve the desired quality. Some residual oily particulate matters as well as PM10 resulting from breaking off of chips during material handling are emitted.

The District used to have a BACT guideline 5.5.2 for tortilla chip line ambient air coolers that was prepared under project N-950709. The guideline was rescinded in April 2020, as it was rarely used in the past permitting actions. However, the technologies listed in the older BACT guideline can used in reducing PM_{10} emissions. Therefore, for the purpose of this project, technologies that were practically feasible in the older BACT analysis will be evaluated in this project.

Step 1: Identify All Possible Control Technologies

The following technologies are determined to be practically feasible in reducing PM_{10} emissions from snack chip cooling process:

1. High velocity filtration system (70% control efficiency)
2. Wet scrubber (90% control efficiency)

Step 2: Eliminate Technologically Infeasible Options

All control options listed in step 1 are technologically feasible.

Step 3: Rank Remaining Control Technologies by Control Effectiveness

1. Wet scrubber (90% control efficiency)
2. High velocity filtration system (70% control efficiency)

Step 4: Cost Effectiveness Analysis

As stated previously, this project involves two ambient air cooler (N-1919-18 and '-20). BACT analysis assumes that exhaust from both coolers can be routed to a single emissions control device. This assumption will give best chance for a technology to be cost-effective.

Based on the worksheet under permit N-1919-18-0, use of wet scrubber is not cost effective at this time, and will not be required under this project.

Step 5: Select BACT

BACT is to use high velocity filter system for the ambient cooler. The applicant has proposed to this technology. Therefore, BACT requirements are satisfied.

Appendix D
HRA & AAQA Summary

San Joaquin Valley Air Pollution Control District
Risk Management Review and Ambient Air Quality Analysis

To:	Jag S Kahlon – Permit Services
From:	Diana Walker – Technical Services
Date:	February 10, 2021
Facility Name:	FRITO-LAY INC
Location:	600 GARNER RD, MODESTO
Application #(s):	N-1919-18-0, -19-0, -20-0, -21-0
Project #:	N-1203844

1. Summary

1.1 RMR

Units	Prioritization Score	Acute Hazard Index	Chronic Hazard Index	Maximum Individual Cancer Risk	T-BACT Required	Special Permit Requirements
18	0.00	0.00	0.00	3.89E-13	No	No
19	N/A[1]	N/A[1]	N/A[1]	N/A[1]	No	No
20	0.07	0.00	0.00	2.22E-09	No	No
21	N/A[1]	N/A[1]	N/A[1]	N/A[1]	No	No
Project Totals	0.07	0.00	0.00	2.22E-09		
Facility Totals	>1	0.00	0.00	2.22E-09		

Notes:
1. A prioritization was not performed since it was determined that no hazardous air pollutants were present. No further analysis was required.

1.2 AAQA

Pollutant	Air Quality Standard (State/Federal)				
	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	Pass		Pass		
NO_x	Pass				Pass
SO_x	Pass	Pass		Pass	Pass
PM10				Pass[3]	Pass[3]
PM2.5				Pass[4]	Pass[4]

Notes:
1. Results were taken from the attached AAQA Report.
2. The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2) unless otherwise noted below.
3. Modeled PM10 concentrations were below the District SIL for non-fugitive sources of 5 $\mu g/m^3$ for the 24-hour average concentration and 1 $\mu g/m^3$ for the annual concentration.
4. Modeled PM2.5 concentrations were below the District SIL for non-fugitive sources of 1.2 $\mu g/m^3$ for the 24-hour average concentration and 0.2 $\mu g/m^3$ for the annual concentration.

To ensure that human health risks will not exceed District allowable levels; the following shall be included as requirements for:

Unit # 18-0, 19-0, 20-0, 21-0

1. No special requirements.

2. Project Description

Technical Services received a request on December 22, 2020 to perform a Risk Management Review (RMR) and Ambient Air Quality Analysis (AAQA) for the following:

- Unit -18-0: FRIED CHEESE PUFF PROCESS LINE CONSISTS OF TWO CORNMEAL SIFTERS WITH BAG FILTER, ONE CORNMEAL TRANSFER WITH FILTER, A BLENDING SYSTEM, SIX EXTRUDERS CONTROLLED VIA TWO ROTOCLONES, A VEGETABLE OIL FRYER (STEAM HEATED) EQUIPPED WITH OIL MIST ELIMINATOR, AND A SEASONING SYSTEM WITH A TRI-MER 10-H, ORIFICE WATER SCRUBBER
- Unit -19-0: CORN MEAL RECEIVING AND STORAGE EQUIPMENT CONSISTING OF TWO CORN MEAL SILOS EQUIPPED WITH BIN VENT FILTERS AND ONE CORN MEAL UNLOAD FILTER/RECEIVER
- Unit -20-0: DORITO TORTILLA CHIP PROCESS LINE CONSISTS OF A CORN CLEANER WITH BIN VENT FILTER, FOUR KETTLES (STEAM-HEATED) FOR CORN COOK, SOAK AND WASH SYSTEM, A VEGETABLE OIL FRYER (STEAM HEATED) WITH OIL MIST ELIMINATOR, AN 8.5 MMBTU/HR OVEN WITH LOW-NOX BURNER, ONE AMBIENT AIR COOLER SERVED BY HIGH VELOCITY FILTER, AND A SEASONING SYSTEM EQUIPPED WITH A TRI-MER 28-H WATER SCRUBBER
- Unit -21-0: CORN RECEIVING AND STORAGE EQUIPMENT CONSISTING OF TWO NEW CORN SILOS EQUIPPED WITH BIN VENT FILTERS AND TWO CORN UNLOADERS WITH BIN VENT FILTERS

3. RMR Report

3.1 Analysis

The District performed an analysis pursuant to the District's Risk Management Policy for Permitting New and Modified Sources (APR 1905, May 28, 2015) to determine the possible cancer and non-cancer health impact to the nearest resident or worksite. This policy requires that an assessment be performed on a unit by unit basis, project basis, and on a facility-wide basis. If a preliminary prioritization analysis demonstrates that:

- A unit's prioritization score is less than the District's significance threshold and;
- The project's prioritization score is less than the District's significance threshold and;
- The facility's total prioritization score is less than the District's significance threshold

Then, generally no further analysis is required.

The District's significant prioritization score threshold is defined as being equal to or greater than 1.0. If a preliminary analysis demonstrates that either the unit's or the project's or the facility's total prioritization score is greater than the District threshold, a screening or a refined assessment is required.

If a refined assessment is greater than one in a million but less than 20 in one million for carcinogenic impacts (Cancer Risk) and less than 1.0 for the Acute and Chronic hazard indices (Non-Carcinogenic) on a unit by unit basis, project basis and on a facility-wide basis the proposed application is considered less than significant. For units that exceed a cancer risk of 1 in one million, Toxic Best Available Control Technology (TBACT) must be implemented.

Toxic emissions for this project were calculated using the following methods:

- Unit 19 and 21 PM_{10} emissions occur from pre-cleaned food grade products which are considered non-hazardous by the District.
- Toxic emissions for Units 18 and 20 (Process 1) were derived based on emission factors from the 2009 study, Emissions of volatile aldehydes from heated cooking oils, done by the University of Dayton, Environmental Sciences and Engineering Group.
- Toxic emissions for Unit 20 (Process 2) were calculated using 2001 Ventura County's Air Pollution Control District's emission factors for Natural Gas Fired external combustion.

These emissions were input into the San Joaquin Valley APCD's Hazard Assessment and Reporting Program (SHARP). In accordance with the District's Risk Management Policy, risks from the proposed unit's toxic emissions were prioritized using the procedure in the 2016 CAPCOA Facility Prioritization Guidelines. The prioritization score for this proposed facility was greater than 1.0 (see RMR Summary Table). Therefore, a refined health risk assessment was required.

The AERMOD model was used, with the parameters outlined below and meteorological data for 2013-2017 from Modesto (rural dispersion coefficient selected) to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid. These dispersion factors were input into the SHARP Program, which then used the Air Dispersion Modeling and Risk Tool (ADMRT) of the Hot Spots Analysis and Reporting Program Version 2 (HARP 2) to calculate the chronic and acute hazard indices and the carcinogenic risk for the project.

The following parameters were used for the review:

Source Process Rates

Unit ID	Process ID	Process Material	Process Units	Hourly Process Rate	Annual Process Rate
18	1	Canola Oil Evaporated	Gallons	0.004	35.04
20	1	Canola Oil Evaporated	Gallons	0.01	112.64
20	2	Natural Gas VOC	MMscf	0.01	74.46

Point Source Parameters						
Unit ID	**Unit Description**	**Release Height (m)**	**Temp. (°K)**	**Exit Velocity (m/sec)**	**Stack Diameter (m)**	**Vertical/ Horizontal/ Capped**
18	Fried Cheese Puff Manufacturing Line Fryer	17.37	394	2.87	0.46	Vertical
20	8.5 MMBTU/HR NG OVEN	17.68	422	2.38	0.71	Vertical
20	Tortilla Chip Manufacturing Line Fryer	17.07	394	5.01	0.61	Vertical

4. AAQA Report

The District modeled the impact of the proposed project on the National Ambient Air Quality Standard (NAAQS) and/or California Ambient Air Quality Standard (CAAQS) in accordance with District Policy APR-1925 (Policy for District Rule 2201 AAQA Modeling) and EPA's Guideline for Air Quality Modeling (Appendix W of 40 CFR Part 51). The District uses a progressive three level approach to perform AAQAs. The first level (Level 1) uses a very conservative approach. If this analysis indicates a likely exceedance of an AAQS or Significant Impact Level (SIL), the analysis proceeds to the second level (Level 2) which implements a more refined approach. For the 1-hour NO_2 standard, there is also a third level that can be implemented if the Level 2 analysis indicates a likely exceedance of an AAQS or SIL.

The modeling analyses predicts the maximum air quality impacts using the appropriate emissions for each standard's averaging period. Required model inputs for a refined AAQA include background ambient air quality data, land characteristics, meteorological inputs, a receptor grid, and source parameters including emissions. These inputs are described in the sections that follow.

Ambient air concentrations of criteria pollutants are recorded at monitoring stations throughout the San Joaquin Valley. Monitoring stations may not measure all necessary pollutants, so background data may need to be collected from multiple sources. The following stations were used for this evaluation:

Monitoring Stations				
Pollutant	**Station Name**	**County**	**City**	**Measurement Year**
CO	Modesto-14th Street	Stanislaus	Modesto	2018
NOx	Turlock	Stanislaus	Turlock	2018
PM10	Modesto-14th Street	Stanislaus	Modesto	2018
PM2.5	Modesto-14th Street	Stanislaus	Modesto	2018
SOx	Fresno - Garland	Fresno	Fresno	2018

Technical Services performed modeling for directly emitted criteria pollutants with the emission rates below:

Emission Rates (lbs/hour)						
Unit ID	**Process**	**NOx**	**SOx**	**CO**	**PM10**	**PM2.5**
18	1	0.00	0.00	0.00	0.43	0.03
19	1	0.00	0.00	0.00	0.01	0.0002
20	1	0.31	0.02	0.30	0.52	0.10
21	1	0.00	0.00	0.00	0.03	0.001

Emission Rates (lbs/year)						
Unit ID	**Process**	**NOx**	**SOx**	**CO**	**PM10**	**PM2.5**
18	1	0.00	0.00	0.00	3,722	236.12
19	1	0.00	0.00	0.00	80.00	1.60
20	1	2,681	212	2,606	4,516	905
21	1	0.00	0.00	0.00	225	9.50

The AERMOD model was used to determine if emissions from the project would cause or contribute to an exceedance of any state of federal air quality standard. The parameters outlined below and meteorological data for 2013-2017 from Modesto (rural dispersion coefficient selected) were used for the analysis:

The following parameters were used for the review:

Point Source Parameters						
Unit ID	**Unit Description**	**Release Height (m)**	**Temp. (°K)**	**Exit Velocity (m/sec)**	**Stack Diameter (m)**	**Vertical/ Horizontal/ Capped**
18	Two Rotoclones	13.87	316	52.39	0.20	Vertical
18	Scrubber	3.96	316	6.79	0.30	Vertical
18	Cooler	17.37	322	12.45	0.61	Vertical
18	Fryer 1	17.37	394	2.87	0.46	Vertical
18	Cornmeal Sifters	4.57	Ambient	9.46	0.20	Vertical
18	Cornmeal Transfer	15.85	334	10.19	0.20	Vertical
19	Cornmeal Silo Dust Collector	4.57	339	6.55	0.20	Vertical
19	Cornmeal Unload Filter	4.57	Ambient	16.82	0.15	Vertical
20	Corn Cleaner	15.85	Ambient	11.36	0.51	Vertical
20	Scrubber	2.74	316	26.08	0.25	Vertical
20	Cooler	16.46	339	17.20	0.79	Vertical
20	8.5 MMBTU/HR Oven	17.68	422	2.38	0.71	Vertical
20	Fryer 2	17.07	394	5.01	0.61	Vertical
21	Corn Silo	2.43	Ambient	2.91	0.10	Vertical
21	Corn Unloaders	6.71	Ambient	16.82	0.15	Vertical

5. Conclusion

5.1 RMR

The cumulative acute and chronic indices for this facility, including this project, are below 1.0; and the cumulative cancer risk for this facility, including this project, is less than 20 in a million. In addition, the cancer risk for each unit in this project is less than 1.0 in a million. **In accordance with the District's Risk Management Policy, the project is approved without Toxic Best Available Control Technology (T-BACT).**

These conclusions are based on the data provided by the applicant and the project engineer. Therefore, this analysis is valid only as long as the proposed data and parameters do not change.

5.2 AAQA

The emissions from the proposed equipment will not cause or contribute significantly to a violation of the State and National AAQS.

6. Attachments

A. Modeling request from the project engineer

B. Additional information from the applicant/project engineer

C. Prioritization score w/ toxic emissions summary

D. Facility Summary

E. AAQA results

Appendix E
Quarterly Net Emissions Change

Quarterly Net Emissions Change (QNEC)

The Quarterly Net Emissions Change is used to complete the emission profile screen for the District's PAS database. The QNEC shall be calculated as follows:

QNEC = PE2 - PE1, where:

QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr.
PE2 = Post-Project Potential to Emit for each emissions unit, lb/qtr.
PE1 = Pre-Project Potential to Emit for each emissions unit, lb/qtr.

Using the values in Sections VII.C.2 and VII.C.1 in the evaluation above, quarterly PE2 and quarterly PE1 can be calculated as follows:

$PE2_{quarterly}$ = $PE2_{annual}$ ÷ 4 quarters/year
$PE1_{quarterly}$ = $PE1_{annual}$ ÷ 4 quarters/year

N-1919-18-0:

Quarterly NEC [QNEC]			
Pollutant	**PE2 (lb/qtr)**	**PE1 (lb/qtr)**	**QNEC (lb/qtr)**
NO_X	0	0	0
SO_X	0	0	0
PM_{10}	930.5	0	930.5
CO	0	0	0
VOC	502.5	0	502.5

N-1919-19-0:

Quarterly NEC [QNEC]			
Pollutant	**PE2 (lb/qtr)**	**PE1 (lb/qtr)**	**QNEC (lb/qtr)**
NO_X	0	0	0
SO_X	0	0	0
PM_{10}	20.0	0	20.0
CO	0	0	0
VOC	0	0	0

N-1919-20-0:

Quarterly NEC [QNEC]			
Pollutant	**PE2 (lb/qtr)**	**PE1 (lb/qtr)**	**QNEC (lb/qtr)**
NO_X	670.25	0	670.25
SO_X	53.0	0	53.0
PM_{10}	1,129.0	0	1,129.0
CO	651.5	0	651.5
VOC	632.75	0	632.75

N-1919-21-0:

Quarterly NEC [QNEC]			
Pollutant	**PE2 (lb/qtr)**	**PE1 (lb/qtr)**	**QNEC (lb/qtr)**
NO_X	0	0	0
SO_X	0	0	0
PM_{10}	56.25	0	56.25
CO	0	0	0
VOC	0	0	0

Appendix F
Compliance Certification

Frito-Lay

August 28, 2020

Mr. Nick Peirce
Manager, Northern Region
San Joaquin Valley Air Pollution Control District
4800 Enterprise Way
Modesto, CA 95356

Subject: **Compliance Certification**
Frito-Lay, Inc.
600 Garner Road, Modesto, California
SJVAPCD Facility ID N-1919

Dear Mr. Peirce,

In accordance with Rule 2201, Section 4.15, "Additional Requirements for New Major Sources and Federal Major Modifications," Frito-Lay, Inc. (Frito-Lay) is providing this compliance statement related to its proposed project to install new corn and cornmeal transfer equipment, and new snack food production lines at the above referenced facility.

All major stationary sources in California owned or operated by Frito-Lay, Inc., or by any entity controlling, controlled by, or under common control with Frito-Lay, and which are subject to emission limitations, are in compliance or on a schedule for compliance with all applicable emission limitations and standards. These sources include the following facilities:

Facility	Facility ID	City of Operation	Regional Air District
Frito-Lay, Modesto	N-1919	Modesto	San Joaquin Valley Air Pollution Control District
Frito-Lay, Kern	S-2076	Bakersfield	San Joaquin Valley Air Pollution Control District
Frito-Lay, Rancho Cucamonga	346	Rancho Cucamonga	South Coast Air Quality Management District

Based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Should you or your staff have any questions concerning this certification, please do not hesitate to contact me (858.775.4347 or Kristie.Wdowiak@pepsico.com) or our consultant, Scott Weaver of Ramboll (213.943.6360 or msweaver@ramboll.com).

Best regards,

Kristie Wdowiak

Kristie Wdowiak
Regional Vice President
Frito-Lay, Inc. Southwest Supply Chain

Enclosures

Cc: Cedric Robinson, Frito-Lay (Plano, TX)
Alexander Kabbaj, Frito-Lay (Plano, TX)
Scott Weaver, Ramboll US Corporation (Los Angeles, CA)

Appendix G
ERC Surplus Analysis

San Joaquin Valley Air Pollution Control District

Surplus ERC Analysis

Facility Name:	Frito-Lay, Inc.	**Date:**	June 23, 2021
Mailing Address:	28801 Highway 58 Bakersfield, CA 93314	**Engineer:**	Jag Kahlon
		Lead Engineer:	James Harader
Contact Person:	M. Scott Weaver, Consultant		
Telephone:	(626) 720-2015		
ERC Certificate(s) #:	S-3765-2		
Project #:	S-1211693		

I. Proposal

Frito-Lay, Inc. (N-1919) is proposing the use of the following Emission Reduction Credit (ERC) certificate(s) to meet the federal offset requirements of District project N-1203844.

Proposed ERC Certificate(s)	
Certificate #	**Criteria Pollutant**
S-3765-2	NOx

The purpose of this analysis is to ensure that the emission reductions on this ERC certificate are surplus of all applicable Federal requirements; therefore, this analysis establishes the surplus value of the ERC certificate as of the date of this analysis. The current face value and surplus value of the ERC certificate evaluated in this analysis is summarized in the following table

Criteria Pollutant Summary: NOx

ERC Certificate S-3765-2				
Pollutant	1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
Current Value	7,432	7,619	7,790	7,789
Surplus Value	7,432	7,619	7,790	7,789

II. Individual ERC Certificate Analysis

ERC Certificate S-3765-2

A. ERC Background

Criteria Pollutant: NOx

ERC Certificate S-3765-2 is a certificate that was split out from parent ERC Certificate S-47-2. Original ERC Certificate S-47-2 was issued to Frito-Lay, Inc. on December 16, 1992 under project S-920416. The ERCs were generated from the shutdown of a carbon black manufacturing facility, facility ID S-1637, Continental Carbon Corporation (CCC), that was purchased by Frito-Lay, Inc. The CCC facility was comprised of two reactors units and associated carbon collection process units with bagfilters. Each reactor unit had two main bagfilters, oil preheater, firebox stack and exhaust bagfilter stacks. These stacks were tested for NOx emissions and results were used in determining the actual reductions.

The reactor units at the CCC facility used an oil furnace process for producing carbon black. Per EPA's AP-42, section 6.1.1.1 (1/95), in the oil furnace process, an aromatic liquid hydrocarbon feed stock is heated and injected continuously into the combustion zone of a natural gas-fired furnace, where the hydrocarbon feedstock decomposes to form carbon black. Primary quench water cools the gases to 500°C (1000°F) to stop the cracking. The exhaust gases entraining the carbon particles are further cooled to about 230°C(450°F) by passing them through heat exchangers and direct water sprays. The black carbon is then separated from the gas stream, usually by fabric filters. A cyclone for primary collection and particle agglomeration may precede the filter. A single collection system often serves several manifolded furnaces.

The following table summarizes the values of the original parent certificate and the current value of the subject certificate proposed to be utilized as a part of the current District analysis:

ERC Certificate S-3765-2				
Pollutant	1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
Original Value of Parent Certificate S-47-2	18,702	18,910	19,118	19,118
Current Value of ERC Certificate S-3765-2	7,432	7,619	7,790	7,789

B. Applicable Rules and Regulations at Time of Original Banking Project

Based on the application review for the original ERC banking project, the following rules and regulations were evaluated to determine the surplus value of actual emission reductions of NOx generated by the reduction project.

1. District Rules

Rule 2301 - Emission Reduction Credit Banking (12/17/92)
The application review for the original ERC banking project demonstrated that the ERC credit complied with the Kern County APCD Rule 230.1 – Emission Reduction Credit Banking (3/11/92). Kern County APCD Rule 230.1 requirements are similar to the requirements in section 4.1.2 of Rule 2301. Therefore, emission reductions have complied with the requirements of this rule.

Rule 4301 Fuel Burning Equipment (12/17/92)
Section 3.1 defines 'fuel burning equipment' as any furnace, boiler, apparatus, stack and all appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat or power by indirect heat transfer.

As explained in the section II.A above, in the oil furnace process of producing carbon, an aromatic liquid hydrocarbon feedstock is heated and injected continuously in the combustion zone of a natural gas-fired furnace. This process does not meet the 'fuel burning equipment' definition above as the heat from natural gas is 'directly' transferred to the oil to break carbon and hydrogen in the fuel. Therefore, the reactors are not subject to the limits in this rule.

Rule 4305 Boilers, Steam Generators, and Process Heaters – Phase 2 (8/21/03)
Rule 4306 Boilers, Steam Generators, and Process Heaters – Phase 3 (12/17/20)
Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters (12/17/20)
Rule 4351 Boilers, Steam Generators, and Process Heaters – Phase 1 (8/21/03)
These rules defines 'process heater' as any combustion equipment fired with liquid and/or gaseous fuel and which transfers heat from combustion gases to water or process streams. This definition excludes: kilns or ovens used for drying, baking, cooking, calcining, or vitrifying; and unfired waste heat recovery heaters used to recover sensible heat from the exhaust of combustion equipment.

As explained in the section II.A above, in the oil furnace process of producing carbon, an aromatic liquid hydrocarbon feedstock is heated and injected continuously into the combustion zone of a natural gas-fired furnace. This process does not meet the 'process heater' definition above as the carbon black producing units are chemical reactors that separate carbon and hydrogen bonds in a temperature controlled heating environment in order to recover the carbon as a solid material;.

Further, for the purposes of Rules 4305, 4306, 4320, and 4351, process heaters are units that combust fuel for the purpose of transferring heat indirectly to water flowing through the convection tubes (such as in boilers units) or other process streams where the combustion gasses do not come into direct contact with the material that is being heated. The process streams, that is, water or other media, never comes in direct contact with the heat generated from fuel combustion.

Since carbon black reactors do not meet 'process heater' definition, these reactors are not subject to the limits in these rules.

2. Federal Rules and Regulations

There were no applicable federal rules or regulations identified that applied at the time of this original ERC banking action; therefore, no further discussion is required.

C. New or Modified Rule and Regulations Applicable to the Original Banking Project

All District and federal rules and regulations that have been adopted or amended since the date the original banking project was finalized will be evaluated below:

1. District Rules:

As noted in section II.B above, the District rules that were adopted or amended since the ERC banking under project S-920416 are not applicable to the carbon black reactor units. Consequently, these rules do not alter the amount of original NOx emission reductions. Therefore, the original NOx emission reductions are surplus of District Rule requirements.

2. Federal Rules and Regulations:

<u>40 CFR Part 63 Subpart MMMMMM- National Emission Standards for Hazardous Air Pollutants for Carbon Black Production Area Sources</u>
This subpart is applicable to a carbon black production facility that is area source of hazardous air pollutant emissions.

Section 63.11402 requires the owner or operator to meet all the requirements in section 63.1103(f) of subpart YY.

<u>40 CFR Part 63 Subpart YY—National Emission Standards for Hazardous Air Pollutants for Source Categories: Generic Maximum Achievable Control Technology Standards</u>
Section 63.1103(f) requires that a carbon black production main unit filter process vent with HAP concentration of equal to greater than 260 ppmv by volume must reduce emissions of HAP by using a flare meeting the requirements of subpart SS of this part; or reduce emissions of total HAP by 98 weight percent or to a concentration of 20 ppmv, whichever is less stringent, by venting emissions through a closed vent system to any combination of control devices meeting the requirements of section 63,982(a)(2).

This subpart does not have any requirements for NOx emissions. Therefore, the emission reductions are surplus of this subpart.

D. Surplus at Time of Use Adjustments to ERC Quantities

As demonstrated in the section above, the emissions reductions from permit units in the original banking project continue to be surplus of all applicable District and Federal Rules and Regulations. Therefore, no discounting to the ERC values are necessary for surplus at time of use considerations.

E. Surplus Value of ERC Certificate

The emissions continue to be Surplus of all District and Federal Rules and Regulations; therefore, no adjustments to the ERC values are necessary.

ERC Certificate S-3765-2 – Criteria Pollutant NOx					
		1st Qtr. (lb/qtr)	2nd Qtr. (lb/qtr)	3rd Qtr. (lb/qtr)	4th Qtr. (lb/qtr)
(A)	Current ERC Quantity	7,432	7,619	7,790	7,789
(B)	Percent Discount	**0.0%**	**0.0%**	**0.0%**	**0.0%**
(C) = (A) x [1 – (B)]	**Surplus Value**	7,432	7,619	7,790	7,789

Appendix H
ERC Withdrawal Calculations

ERC Withdrawal Calculations

NOx:

NO_x	1st Quarter (lb)	2nd Quarter (lb)	3rd Quarter (lb)	4th Quarter (lb)
ERC S-3765-2	7,432	7,619	7,790	7,789
Offsets Required (Includes distance offset ratio)	1,005	1,005	1,006	1,006
Amount Remaining	6,427	6,614	6,784	6,783
Credits reissued under ERC S-YYYY-2	6,427	6,614	6,784	6,783

PM10:

Except for ERC certificate N-890-4, all other ERCs were banked 15 miles or more away from the Frito-Lay's Modesto plant (N-1919).

ERC certificate N-890-4 was banked at facility N-2217 Signature Fruit Company, LLC, at 736 Mariposa Rd, Modesto. This facility is within 15 miles of the Frito-Lay's Modesto plant (N-1919). Further, Frito-Lay's Modesto plant (N-1919) is not a Major Source for PM10 emissions. Therefore, distance offset ratio of 1.2 will be applied to a portion of PM10 emissions increase such that 61 pounds of credits are expended.

PM_{10}	1st Quarter (lb)	2nd Quarter (lb)	3rd Quarter (lb)	4th Quarter (lb)
ERC C-1068-4	69	70	67	63
ERC C-1069-4	286	280	268	259
ERC C-1136-4	0	0	0	699
ERC N-888-4	0	0	2,339	0
ERC N-890-4	61	0	0	0
ERC S-3437-4	210	288	195	174
ERC S-3418-4	5,000	5,000	5,000	5,000
Total ERCs (A)	**5,626**	**5,638**	**7,869**	**6,195**
Offsets Required (distance offset ratio 1.2 to 1)	61	0	0	0
Offsets Required (distance offset ratio 1.5 to 1)	3,138	3,200	3,200	3,200
Total Offsets (B)	**3,199**	**3,200**	**3,200**	**3,200**
Amount Remaining (A - B)	2,427	2,438	4,669	2,995
Credits reissued under ERC N-YYYY-4	2,427	2,438	4,669	2,995