



Form 2
Company Information/Notice of Intent (NOI)

Date 6-10-20

Utah Division of Air Quality
New Source Review Section

Application for: ☐ Initial Approval Order ☒ Approval Order Modification

General Owner and Source Information

1. Company name and mailing address:

Mountain Country Foods
195. E. 1600-N

Spanish Fork
Phone No.: (801) 798-8634
Fax No.: ()

2. Company** contact for environmental matters:

Randy Butler
Phone no.: (801) 369-0705
Email: randy.butler@mcFoods.Com

** Company contact only; consultant or independent contractor contact information can be provided in a cover letter

3. Source name and physical address (if different from above):

Same

Phone no.: ()
Fax no.: ()

4. Source Property Universal Transverse Mercator coordinates (UTM), including System and Datum:

UTM: Zone 11 Longitude-120
X: Central meridian - 117
Y: _____

5. The Source is located in: Utah County

6. Standard Industrial Classification Code (SIC)

7. If request for modification, AO# to be modified: DAQE # AN155460001-16 DATED: 1/8/16

8. Brief (50 words or less) description of process.

we are adding one more spiral oven. so there will be 4 Total
at an additional rating of 9.20 MM BTU/hr

Electronic NOI

9. A complete and accurate electronic NOI submitted to DAQ Permitting Mangers Jon Black (jblack@utah.gov) or Alan Humpherys (ahumpherys@utah.gov) can expedite review process. Please mark application type.

Hard Copy Submittal ☐

Electronic Copy Submittal ☒

Both ☐

Authorization/Signature

I hereby certify that the information and data submitted in and with this application is completely true, accurate and complete, based on reasonable inquiry made by me and to the best of my knowledge and belief.

Signature: Randy Butler

Title: Project manager

Randy Butler
Name (Type or print)

Telephone Number:
(801) 369-0705

Email:
randy.butler@mcFoods.Com

Date:
6-10-20



AIR QUALITY

Form 4
Project Information

Utah Division of Air Quality
New Source Review Section

Company Mountain Country Food
Site 195.E. 1600.N. Sp. Fork

Process Data - For Modification/Amendment ONLY

1. Permit Number DAQE-AN155460001-16

If submitting a new permit, then use Form 3

Requested Changes

2. Name of process to be modified/added:

Adding a Fourth oven

End product of this process:

3. Permit Change Type:

New

Increase*

Equipment

☐☒

Process

☐☒

Condition Change

Other

Other

Other

4. Does new emission unit affect existing permitted process limits?

Yes ☒

No ☐

5. Condition(s) Changing:

additional gas usage

6. Description of Permit/Process Change**

Adding a Fourth Spiral oven

7. New or modified materials and quantities used in process. **

Material	Quantity Annually
<u>Pet Treats</u>	<u>30,000.000 pounds</u>

8. New or modified process emitting units **

Emitting Unit(s)	Capacity(s)	Manufacture Date(s)
<u>4 units</u>	<u>9.20MM BTU/hr</u>	<u>10-2019</u>

*If the permit being modified does not include CO₂e or PM_{2.5}, the emissions need to be calculated and submitted to DAQ, which may result in an emissions increase and a public comment period.

**If additional space is required, please generate a document to accommodate and attach to form.



Company _____
Site _____

*Potential to emit to include pollution control equipment as defined by R307-401-2.

*** Use additional sheets for pollutants if needed

Randy Butler

From: Headley, Laurie <Laurie.Headley@JBTC.COM>
Sent: Monday, June 1, 2020 5:41 AM
To: Randy Butler
Cc: Harlan, Tricia
Subject: Evapco feedback

Randy

See information in the email below from Evapco. Hopefully this will be enough to assist in completing the permit. Let me know if you have any questions.

Thanks

Laurie Headley
Project Manager
JBT Corporation
1622 1st Street
Sandusky, OH 44870
laurie.headley@jbtc.com | P: 419 202 8890



Frigoscandia | Stein | DSI | Northfield | Double D | Formcook | Wolf-tec | A & B Process Systems |
XVISION | C.A.T. | TIPPER TIE | AVURE Technologies
Also Representing: TVI Meat Portioning | Schröder | BAADER LINCO | Power Food Technology | VE. MA. C.



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From: Joe Sunnarborg <joes@evapcomn.com>
Sent: Friday, May 29, 2020 2:44 PM
To: Headley, Laurie <Laurie.Headley@JBTC.COM>
Cc: Harlan, Tricia <Tricia.Harlan@JBTC.COM>
Subject: RE: JBT PO PSAN120850 Evapco order 19-865542-865545

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Laurie,

See below, this is about all the info I can provide so I hope it helps. It is directly from our burner supplier.

PM10, PM25, and SO2 – We have no way to measure particulate matter or SO2. We've always said that the production of those pollutants is negligible when burning natural gas, which is backed up by the information on naturalgas.org.

Emissions from the Combustion of Natural Gas

Natural gas is the cleanest of all the fossil fuels, as evidenced in the Environmental Protection Agency's data comparisons in the chart below, which is still current as of 2010. Composed primarily of methane, the main products of the combustion of natural gas are carbon dioxide and water vapor, the same compounds we exhale when we breathe. Coal and oil are composed of much more complex molecules, with a higher carbon ratio and higher nitrogen and sulfur contents. This means that when combusted, coal and oil release higher levels of harmful emissions, including a higher ratio of carbon emissions, nitrogen oxides (NOx), and sulfur dioxide (SO₂). Coal and fuel oil also release ash particles into the environment, substances that do not burn but instead are carried into the atmosphere and contribute to pollution. The combustion of natural gas, on the other hand, releases very small amounts of sulfur dioxide and nitrogen oxides, virtually no ash or particulate matter, and lower levels of carbon dioxide, carbon monoxide, and other reactive hydrocarbons.

Fossil Fuel Emission Levels
– Pounds per Billion Btu of Energy Input

Pollutant	Natural Gas	Oil	Coal
Carbon Dioxide	117,000	164,000	208,000
Carbon Monoxide	40	33	208
Nitrogen Oxides	92	448	457
Sulfur Dioxide	1	1,122	2,591
Particulates	7	84	2,744
Mercury	0.000	0.007	0.016

Source: EIA – Natural Gas Issues and Trends 1998

VOC and NH₃ – Much the same story, we always say that the amount of VOC and NH₃ are negligible when burning natural gas. We don't really have a way to measure either of them.

NO_x and CO – Typically what we would say is a maximum of 0.09 lbs of CO per million btu and 0.082 lbs of NO_x per million btu at high fire. However, that is for applications where the temperature rise is around 100 and the discharge temperature is between 70 and 100 degrees F. The application that you're describing is hotter than that, so that could have an effect on NO_x and CO levels. I'd expect NO_x to be a little higher and CO to be a little lower, but I can't speculate on how much without testing.

CO₂ – This is fairly straightforward. The chart above shows the amount of carbon dioxide produced from burning one billion btu of natural gas. This is virtually the same no matter the burner or application.

CH₄ – CH₄ is methane. The only reason there would be unburned natural gas is if there was something seriously wrong with the burner that would cause a major gas leak. We typically say that the amount of unburned gas is negligible.

N₂O, HFCs, PFCs, and SF₆ – N₂O is associated with burning coal. I can't find any indication that it is created in significant amounts by burning natural gas. HFCs, PFCs, and SF₆ are refrigerants and as best as I can tell are not applicable.

Joe Sunnarborg
Sales Manager
Engineered Products



EVAPCO, Inc.
P.O. Box 88
215 1st Street NE
Medford, MN 55049
507-446-8005
joes@evapcomn.com
www.evapco.com

STATE OF UTAH

Department of Environmental Quality

Division of Air Quality

APPROVAL ORDER: New Dog Treat Production Facility

Prepared By: Ms. Catherine Wyffels, Engineer

Phone: (801) 536-4232

Email: cwyffels@utah.gov

APPROVAL ORDER NUMBER

DAQE-AN155460001-16

Date: January 8, 2016

**Mountain Country Foods
Dog Treat Production Plant**

Source Contact:

Randy Butler

Phone: (801) 369-0705

Email: randy.butler@mcfoods.com

A handwritten signature in blue ink, appearing to read "Bryce C. Bird".

**Bryce C. Bird
Director**

Abstract

Mountain Country Foods (MCF) has requested an Approval Order (AO) for its dog treat production plant. The processes at the plant include meat and spice mixing, extruding or shaping, cooking, packaging, and shipping. The emission sources include one (1) 6.277 MMBtu/hr boiler; four (4) 7 MMBtu/hr tunnel bake ovens; three (3) 9.2 MMBtu/hr spiral ovens; four (4) soy grit silos controlled by one baghouse; and two (2) degreasers. This is an existing facility and the equipment listed in this AO is already in operation, with the exception of two spiral ovens. These ovens are new pieces of equipment that will be installed at the facility.

The source is located in Utah County, which is a nonattainment area for PM_{10} and $PM_{2.5}$. NSPS, NESHAP, and MACT regulations do not apply to this source. Title V of the Clean Air Act does not apply to this source.

The potential emissions, in tons per year, are as follows: PM_{10} = 3.59, $PM_{2.5}$ = 2.02, SO_2 = 0.16, NO_x = 13.29, CO = 22.32, VOC = 1.68, total HAPs = 0.50, and CO_2e = 31,951.

This air quality AO authorizes the project with the following conditions and failure to comply with any of the conditions may constitute a violation of this order. This AO is issued to, and applies to the following:

Name of Permittee:

Mountain Country Foods
195 East 1600 North
Spanish Fork, UT 84660

Permitted Location:

Mountain Country Foods - Dog Treat
Production Plant
195 East 1600 North
Spanish Fork, UT 84660

UTM coordinates: 444,462 m Easting, 4,442,432 m Northing, UTM Zone 12
SIC code: 2047 (Dog & Cat Food)

Section I: GENERAL PROVISIONS

- 1.1 The limits set forth in this AO shall not be exceeded without prior approval. [R307-401]
- 1.2 **Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved.** [R307-401-1]
- 1.3 All records referenced in this AO or in other applicable rules, which are required to be kept by the owner/operator, shall be made available to the Director or Director's representative upon request, and the records shall include the two-year period prior to the date of the request. Unless otherwise specified in this AO or in other applicable state and federal rules, records shall be kept for a minimum of two (2) years. [R307-401-8]
- 1.4 At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded. [R307-401-4]
- 1.5 The owner/operator shall comply with UAC R307-107. General Requirements: Breakdowns. [R307-107]

- I.6 The owner/operator shall comply with UAC R307-150 Series. Inventories, Testing and Monitoring. [R307-150]
- I.7 All definitions, terms, abbreviations, and references used in this AO conform to those used in the UAC R307 and 40 CFR. Unless noted otherwise, references cited in these AO conditions refer to those rules. [R307-101]

Section II: SPECIAL PROVISIONS

II.A The approved installations shall consist of the following equipment:

II.A.1 Mountain Country Foods Dog Treat Production Plant

II.A.2 One (1) Boiler Rating: 6.277 MMBtu/hr Fuel: Natural Gas

II.A.3 Four (4) Tunnel/Bake Ovens Rating: 7 MMBtu/hr Fuel: Natural Gas

II.A.4 Three (3) Spiral Ovens Rating: 9.20 MMBtu/hr Fuel: Natural Gas

increase to 4

II.A.5 Four (4) Soy Grit Silos Capacity: 60,000 pounds Control: Baghouse

II.A.6 Two (2) Degreasers Capacity: 30 gallons

II.B Requirements and Limitations

II.B.1 Source-Wide Requirements and Limitations

II.B.1.a Mountain Country Foods shall notify the Director in writing when the equipment listed in this AO has been installed and is operational. To ensure proper credit when notifying the Director, send your correspondence to the Director, attn: Compliance Section. [R307-401-8]

II.B.1.a.1 If the owner/operator has not notified the Director in writing within 18 months from the date of this AO on the status of the construction and/or installation, the Director shall require documentation of the continuous construction and/or installation of the operation. If a continuous program of construction and/or installation is not proceeding, the Director may revoke the AO. [R307-401-8]

II.B.1.b The owner/operator shall not use more than:

- A. 31,500,000 pounds of soy grit per rolling 12-month period
- B. 360 MMscf of natural gas per rolling 12-month period. [R307-401-8]

II.B.1.b.1 To determine compliance with a rolling 12-month total, the owner/operator shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months. Records of usage and consumption shall be kept for all periods when the plant is in operation. Material usage records shall be maintained using vendor receipts. Natural gas consumption shall be determined by readings from the natural gas meter, natural gas vendor receipts, or any other methods approved by the Director. [R307-401-8]

- II.B.1.c Visible emissions from any stationary point or fugitive emission source shall not exceed 10% opacity. [R307-401-8]
- II.B.1.c.1 Opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9. [R307-309]
- II.B.2 **Conditions on Boilers and Ovens**
- II.B.2.a The owner/operator shall only use natural gas as a fuel in the boiler and ovens. [R307-401-8]
- II.B.3 **Conditions on Silos**
- II.B.3.a The owner/operator shall use a baghouse to control emissions from the soy grit silos. All displaced air from the silos shall pass through the baghouse before being vented to the atmosphere. [R307-401-8]

PERMIT HISTORY

This AO is based on the following documents:

Incorporates
Incorporates

Additional Information dated October 13, 2015
NOI dated September 24, 2015

ADMINISTRATIVE CODING

The following information is for UDAQ internal classification use only:

Utah County
CDS B
Nonattainment or Maintenance Area

ACRONYMS

The following lists commonly used acronyms and associated translations as they apply to this document:

40 CFR	Title 40 of the Code of Federal Regulations
AO	Approval Order
BACT	Best Available Control Technology
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CDS	Classification Data System (used by EPA to classify sources by size/type)
CEM	Continuous emissions monitor
CEMS	Continuous emissions monitoring system
CFR	Code of Federal Regulations
CMS	Continuous monitoring system
CO	Carbon monoxide
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent - 40 CFR Part 98, Subpart A, Table A-1
COM	Continuous opacity monitor
DAQ/UDAQ	Division of Air Quality
DAQE	This is a document tracking code for internal UDAQ use
EPA	Environmental Protection Agency
FDCP	Fugitive dust control plan
GHG	Greenhouse Gas(es) - 40 CFR 52.21 (b)(49)(i)
GWP	Global Warming Potential - 40 CFR Part 86.1818-12(a)
HAP or HAPs	Hazardous air pollutant(s)
ITA	Intent to Approve
LB/HR	Pounds per hour
MACT	Maximum Achievable Control Technology
MMBTU	Million British Thermal Units
NAA	Nonattainment Area
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOI	Notice of Intent
NO _x	Oxides of nitrogen
NSPS	New Source Performance Standard
NSR	New Source Review
PM ₁₀	Particulate matter less than 10 microns in size
PM _{2.5}	Particulate matter less than 2.5 microns in size
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
R307	Rules Series 307
R307-401	Rules Series 307 - Section 401
SO ₂	Sulfur dioxide
Title IV	Title IV of the Clean Air Act
Title V	Title V of the Clean Air Act
TPY	Tons per year
UAC	Utah Administrative Code
VOC	Volatile organic compounds



State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of Environmental Quality

L. Scott Baird
Executive Director

DIVISION OF AIR QUALITY
Bryce C. Bird
Director

RN155460002

September 17, 2020

Randy Butler
Mountain Country Foods
195 East 1600 North
Spanish Fork, UT 84660

Dear Randy Butler,

Re: Engineer Review:
Minor Modification of Approval Order, DAQE-AN155460001-16 to Add One Spiral Oven.
Project Number: N155460002

The DAQ requests a company representative review and sign the attached Engineer Review (ER). This ER identifies all applicable elements of the New Source Review permitting program. Mountain Country Foods should complete this review within **10 business days** of receipt.

Mountain Country Foods should contact **Andrea Bartlett** at (801) 834-8417 if there are questions or concerns with the review of the draft permit conditions. Upon resolution of your concerns, please email abartlett@utah.gov the signed cover letter to Andrea Bartlett. Upon receipt of the signed cover letter, the DAQ will prepare an ITA for a 30-day public comment period. At the completion of the comment period, the DAQ will address any comments and will prepare an AO for signature by the DAQ Director.

If Mountain Country Foods does not respond to this letter within **10 business days**, the project will move forward without source concurrence. If Mountain Country Foods has concerns that cannot be resolved and the project becomes stagnant, the DAQ Director may issue an Order prohibiting construction.

Approval Signature _____
(Signature & Date)

UTAH DIVISION OF AIR QUALITY ENGINEER REVIEW

SOURCE INFORMATION

Project Number	N155460002
Owner Name	Mountain Country Foods
Mailing Address	195 East 1600 North Spanish Fork, UT, 84660
Source Name	Mountain Country Foods - Dog Treat Production Plant
Source Location	195 East 1600 North Spanish Fork, UT 84660
UTM Projection	444,462 m Easting, 4,442,432 m Northing
UTM Datum	NAD83
UTM Zone	UTM Zone 12
SIC Code	2047 (Dog & Cat Food)
Source Contact	Randy Butler
Phone Number	(801) 369-0705
Email	randy.butler@mcfoods.com
Project Engineer	Andrea Bartlett, Engineer
Phone Number	(801) 834-8417
Email	abartlett@utah.gov
Notice of Intent (NOI) Submitted	June 10, 2020
Date of Accepted Application	August 3, 2020

SOURCE DESCRIPTION

General Description

Mountain Country Foods operates a dog treat plant in Spanish Fork, Utah. The processes at the plant include meat and spice mixing, extruding or shaping, cooking, packaging, and shipping. The emission sources currently include one (1) boiler; four (4) tunnel bake ovens; three (3) spiral ovens; four (4) soy grit silos controlled by one baghouse; and two (2) degreasers.

NSR Classification:

Minor Modification at Minor Source

Source Classification

Located in, Southern Wasatch Front O3 NAA, Provo UT PM_{2.5} NAA,
Utah County
Airs Source Size: B

Applicable Federal Standards

None

Project Proposal

Minor Modification of Approval Order, DAQE-AN155460001-16 to Add One Spiral Oven.

Project Description

Modification to Approval Order (AO), DAQE-AN155460001-16, dated January 8, 2016, to add another 9.20 MMBtu spiral oven to the production facility. This will increase the total number of 9.20 MMBtu spiral ovens from three (3) to four (4).

EMISSION IMPACT ANALYSIS

All criteria pollutant emissions are below the modeling thresholds contained in R307-410-4. All HAP emissions are below their respective emission threshold values for vertically restricted sources. Therefore, no modeling is required at this time. [Last updated September 8, 2020]

SUMMARY OF EMISSIONS

The emissions listed below are an estimate of the total potential emissions from the source. Some rounding of emissions is possible.

Criteria Pollutant	Change (TPY)	Total (TPY)
CO ₂ Equivalent	4741	36692.00
Carbon Monoxide	3.32	25.64
Nitrogen Oxides	1.98	15.27
Particulate Matter - PM ₁₀	0.30	3.89
Particulate Matter - PM _{2.5}	0.30	2.32
Sulfur Oxides	0.02	0.18
Volatile Organic Compounds	0.22	1.90

Hazardous Air Pollutant	Change (lbs/yr)	Total (lbs/yr)
Formaldehyde (CAS #50000)	6	46
Hexane (CAS #110543)	142	1102
	Change (TPY)	Total (TPY)
Total HAPs	0.07	0.57

Note: Change in emissions indicates the difference between previous AO and proposed modification.

Review of BACT for New/Modified Emission Units

BACT review regarding Proposed Spiral Oven

NO_x Emissions

NO_x emissions are generated when combustion occurs in the presence of nitrogen. The available controls to reduce NO_x emissions include combustion control technologies and post-combustion control technologies. Combustion control technologies include low NO_x burners and flue gas recirculation. Post-combustion control technologies include selective catalytic reduction and selective non-catalytic reduction. The NO_x released by this spiral oven is 1.98 tpy, therefore, the cost of using post-combustion control would be very high. The spiral ovens at this facility use combustion control technologies to reduce NO_x emissions. The spiral ovens are equipped with low NO_x burners and use an induced flue gas recirculation system.

PM Emissions

Particulate Matter emissions are generated when solid material is released during combustion. PM emissions are more prevalent when combusting solid fuels. Available controls for PM emissions include good combustion practices and using gaseous fuel. Post combustion technology, such as, baghouse, cyclones and scrubbers, should also be considered. For boilers rate below 10 MMBtu/hr, these are not technically feasible.

SO₂

Sulfur Dioxide emissions are generated when sulfur is present fuel. The available control technologies to reduce SO₂ emissions include good combustion practices, low sulfur fuel, and post combustion control technology. Post combustion technology, such as scrubbers, is not feasible for the small amount of emissions emitted from boilers rated 10 MMBtu/hr or less. Using low sulfur fuel and good combustion practices should be considered.

CO Emissions

Carbon monoxide emissions are due to incomplete combustion of hydrocarbons in fuel. The available control technologies to reduce CO emissions include good combustion practices and post combustion control technology, such as, use of an oxidation catalyst. Oxidation catalysts are an exhaust treatment that increase oxidation of CO to CO₂. Due to the presence of oxygen in the exhaust stream, the reaction to CO₂ proceeds with just a catalyst. Installation of an oxidation catalyst is not common in a boiler this size. Flue recirculation has also been shown to reduce CO emissions.

VOC Emissions

VOC emissions occur due to incomplete combustion of hydrocarbon fuel. They occur when there is insufficient time at high temperatures for the hydrocarbon oxidation to complete. Post-combustion technologies include carbon adsorption, thermal oxidizers, and oxidizing catalysts. For the low amount of VOC emitted from boilers rated 10 MMBtu/hr or less, these post-combustion technologies are not technically feasible. Good combustion practices should be used.

Spiral Oven BACT

BACT for this spiral oven is maintaining the equipment according to the manufacturer's

recommendations, using good combustion practices, only using natural gas as fuel, using low NO_x burners, maintaining and using induced flue gas recirculation system, and maintaining a 10% opacity limit.

[Last updated September 8, 2020]

SECTION I: GENERAL PROVISIONS

The intent is to issue an air quality AO authorizing the project with the following recommended conditions and that failure to comply with any of the conditions may constitute a violation of the AO. **(New or Modified conditions are indicated as “New” in the Outline Label):**

I.1	All definitions, terms, abbreviations, and references used in this AO conform to those used in the UAC R307 and 40 CFR. Unless noted otherwise, references cited in these AO conditions refer to those rules. [R307-101]
I.2	The limits set forth in this AO shall not be exceeded without prior approval. [R307-401]
I.3	Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved. [R307-401-1]
I.4	All records referenced in this AO or in other applicable rules, which are required to be kept by the owner/operator, shall be made available to the Director or Director's representative upon request, and the records shall include the two-year period prior to the date of the request. Unless otherwise specified in this AO or in other applicable state and federal rules, records shall be kept for a minimum of two (2) years. [R307-401-8]
I.5	At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded. [R307-401-4]
I.6	The owner/operator shall comply with UAC R307-107. General Requirements: Breakdowns. [R307-107]
I.7	The owner/operator shall comply with UAC R307-150 Series. Emission Inventories. [R307-150]

I.8	The owner/operator shall submit documentation of the status of construction or modification to the Director within 18 months from the date of this AO. This AO may become invalid if construction is not commenced within 18 months from the date of this AO or if construction is discontinued for 18 months or more. To ensure proper credit when notifying the Director, send the documentation to the Director, attn.: NSR Section. [R307-401-18]
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SECTION II: PERMITTED EQUIPMENT

The intent is to issue an air quality AO authorizing the project with the following recommended conditions and that failure to comply with any of the conditions may constitute a violation of the AO. (New or Modified conditions are indicated as “New” in the Outline Label):

II.A THE APPROVED EQUIPMENT

II.A.1	Mountain Country Foods Dog Treat Production Plant
II.A.2	One (1) Boiler Rating: 6.277 MMBtu/hr Fuel: Natural Gas Control: Low NO _x Burner
II.A.3	Four (4) Tunnel/Bake Ovens Rating: 7 MMBtu/hr Fuel: Natural Gas Control: Low NO _x Burner with Flue Gas Recirculation
II.A.4	Four (4) Spiral Ovens Rating: 9.20 MMBtu/hr (includes 1 new) Fuel: Natural Gas Control: Low NO _x Burner with Flue Gas Recirculation
II.A.5	Four (4) Soy Grit Silos Capacity: 60,000 pounds Control: Baghouse
II.A.6	Two (2) Degreasers Capacity: 30 gallons

SECTION II: SPECIAL PROVISIONS

The intent is to issue an air quality AO authorizing the project with the following recommended conditions and that failure to comply with any of the conditions may constitute a violation of the AO. (New or Modified conditions are indicated as “New” in the Outline Label):

II.B REQUIREMENTS AND LIMITATIONS

II.B.1	Source-Wide Requirements and Limitations
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II.B.1.a NEW	The owner/operator shall not use more than: A. 31,500,000 pounds of soy grit per rolling 12-month period. [R307-401-8]
II.B.1.a.1 NEW	To determine compliance with a rolling 12-month total, the owner/operator shall calculate a new 12-month total by the 20th day of each month using data from the previous 12 months. Records of usage and consumption shall be kept for all periods when the plant is in operation. Material usage records shall be maintained using vendor receipts. Natural gas consumption shall be determined by readings from the natural gas meter, natural gas vendor receipts, or any other methods approved by the Director. [R307-401-8]
II.B.1.b	Visible emissions from any stationary point or fugitive emission source shall not exceed 10% opacity. [R307-401-8]
II.B.1.b.1	Opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9. [R307-309]
II.B.2	Conditions on Boilers and Ovens
II.B.2.a	The owner/operator shall only use natural gas as a fuel in the boiler and ovens. [R307-401-8]
II.B.3	Conditions on Silos
II.B.3.a	The owner/operator shall use a baghouse to control emissions from the soy grit silos. All displaced air from the silos shall pass through the baghouse before being vented to the atmosphere. [R307-401-8]
II.B.4 NEW	Conditions on Degreasers
II.B.4.a NEW	The owner/operator shall comply with all applicable requirements of R307-335, Degreasing. [R307-335]

PERMIT HISTORY

When issued, the approval order shall supersede (if a modification) or will be based on the following documents:

Supersedes	DAQE-AN155460001-16 dated January 8, 2016
Is Derived From	NOI dated June 10, 2020
Incorporates	Additional information dated July 27, 2020
Incorporates	Additional Information dated July 29, 2020
Incorporates	Additional Information dated August 10, 2020

REVIEWER COMMENTS

- Comment regarding Emission Estimates:**
Emissions for the natural gas spiral oven were estimated using EPA's AP-42, Section 1.4, Table 1.4-1; emission factor for a small, low-NO_x burner. Emissions were based on 8,760 hours of operation per year and a natural gas heating value of 1,020 BTU/scf. The source uses flue-gas recirculation technology on the spiral ovens; therefore, actual emissions are most likely lower than estimated.

[Last updated September 8, 2020]
- Comment regarding Removal of Natural Gas Limit:**
The 3.6 MMscf of natural gas use per rolling 12-month period has been removed from the AO. The potential to emit was calculated at 8760 hours; therefore, the limit on amount is not needed and natural gas usage is limited by time. [Last updated September 8, 2020]
- Comment regarding Degreasers:**
The source uses degreasers that use solvent and is located in a PM 2.5 Non-Attainment Area. Therefore, a condition has been added to require the source comply with R307-335, Degreasers.
[Last updated September 8, 2020]
- Comment regarding Spiral Ovens:**
The source updated BACT information to include low NO_x burners and flue-gas recirculation to reduce emissions of NO_x. Therefore, the equipment list has been updated to reflect this information.
[Last updated September 8, 2020]
- Comment regarding Tunnel Ovens:**
The source discussed and confirmed the tunnel bake ovens uses low NO_x burners and flue-gas recirculation to reduce NO_x emissions. Therefore, this information was noted in the AO. [Last updated September 8, 2020]
- Comment regarding NSPS and MACT Applicability:**
40 CFR 60 NSPS Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units) applies to steam generating units with a maximum heat input capacity of 100 MMBtu/hr or less, but greater than or equal to 10 MMBtu/hr. The applicability date for NSPS Subpart Dc is June 9, 1989. The boiler at this facility is rated less than 10 MMBTU/hr and is, therefore, not subject to this subpart.

40 CFR 63 MACT Subpart JJJJJ (National Emission Standards for Hazardous Air Pollutants for

Industrial, Commercial, and Institutional Boilers Area Sources) applies to industrial, commercial, or institutional boilers located in an area source for HAPs. This subpart only applies to boilers that burn coal, biomass, oil or other liquid fuel, and non-waste material. Gas-fired boilers are not subject to by this rule. The boiler at this facility only burns natural gas and is, therefore, not subject to this subpart. [Last updated September 8, 2020]

ACRONYMS

The following lists commonly used acronyms and associated translations as they apply to this document:

40 CFR	Title 40 of the Code of Federal Regulations
AO	Approval Order
BACT	Best Available Control Technology
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CDS	Classification Data System (used by EPA to classify sources by size/type)
CEM	Continuous emissions monitor
CEMS	Continuous emissions monitoring system
CFR	Code of Federal Regulations
CMS	Continuous monitoring system
CO	Carbon monoxide
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent - 40 CFR Part 98, Subpart A, Table A-1
COM	Continuous opacity monitor
DAQ/UDAQ	Division of Air Quality
DAQE	This is a document tracking code for internal UDAQ use
EPA	Environmental Protection Agency
FDCP	Fugitive dust control plan
GHG	Greenhouse Gas(es) - 40 CFR 52.21 (b)(49)(i)
GWP	Global Warming Potential - 40 CFR Part 86.1818-12(a)
HAP or HAPs	Hazardous air pollutant(s)
ITA	Intent to Approve
LB/HR	Pounds per hour
LB/YR	Pounds per year
MACT	Maximum Achievable Control Technology
MMBTU	Million British Thermal Units
NAA	Nonattainment Area
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOI	Notice of Intent
NO _x	Oxides of nitrogen
NSPS	New Source Performance Standard
NSR	New Source Review
PM ₁₀	Particulate matter less than 10 microns in size
PM _{2.5}	Particulate matter less than 2.5 microns in size
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
R307	Rules Series 307
R307-401	Rules Series 307 - Section 401
SO ₂	Sulfur dioxide
Title IV	Title IV of the Clean Air Act
Title V	Title V of the Clean Air Act
TPY	Tons per year
UAC	Utah Administrative Code
VOC	Volatile organic compounds



Andrea Bartlett <abartlett@utah.gov>

FW: Evapco feedback

4 messages

Randy Butler <randy.butler@mcfoods.com>
To: Andrea Bartlett <abartlett@utah.gov>

Wed, Jul 29, 2020 at 8:17 AM

Andrea, this is what I got back from the manufacturer. If this does not answer your questions please let me know. Thank you.

Randy Butler

Mountain Country Foods

randy.butler@mcfoods.com

From: Headley, Laurie <Laurie.Headley@JBTC.COM>
Sent: Wednesday, July 22, 2020 9:30 AM
To: Randy Butler <randy.butler@mcfoods.com>
Subject: FW: Evapco feedback

Randy

See the email below for a response to the last request on permitting.

Let me know if you need more.

*Laurie Headley**Project Manager*

JBT Corporation

1622 1st Street

Sandusky, OH 44870

laurie.headley@jbtc.com | P: 419 202 8890

Frigoscandia | Stein | DSI | Northfield | Double D | Formcook | Wolf-tec | A & B Process Systems |

XVISION | C.A.T. | TIPPER TIE | AVURE Technologies

Also Representing: TVI Meat Portioning | Schröder | BAADER LINCO | Power Food Technology | VE. MA. C.



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From: Joe Sunnarborg <joes@evapcomn.com>
Sent: Wednesday, July 22, 2020 11:29 AM
To: Headley, Laurie <Laurie.Headley@JBTC.COM>
Subject: RE: Evapco feedback

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Laurie,

Here is what I got back:

"I'm not exactly sure what they mean by emission factors. If they mean factors in a mathematical sense, the rates that I gave were of 0.09 lbs of CO per million btu and 0.082 lbs of NOx per million btu at high fire. Those figures would be multiplied by the gas input (in btu/hr) to get an emission rate (in lbs per hour). You could also take it another step to estimate the amount of gas burned in a month or a year to get lbs per month or lbs per year respectively.

If they mean factors in terms of what factors affect those emission rates, that is a little different. The numbers above are the worst case based on empirical data. Typically that worst case is at high fire, with low pressure drops and rich combustion. Realistically, the burners will produce less emissions than that (in terms of lbs per million btu) since they will not be running at high fire all the time and they will not be running with low pressure drops all of the time. However, from my position I cannot guarantee what the rate will be, other than saying that it will not be worse than the worst empirical data that I have."

Not sure if this is what you need or not. Let me know.

Thanks,

Joe Sunnarborg
Senior Sales Manager
Engineered Products



EVAPCO, Inc.

P.O. Box 88

215 1st Street NE

Medford, MN 55049

507-446-8005 (office)

218-591-2696 (mobile)

joes@evapcomn.com

www.evapco.com

From: Headley, Laurie [<mailto:Laurie.Headley@JBTC.COM>]

Sent: Thursday, July 16, 2020 10:36 AM

To: Joe Sunnarborg

Subject: FW: Evapco feedback

Hi Joe

We have one more question for the permitting on Mountain Country. What are the emission factors used in the calculations?

Thanks

Laurie Headley

Project Manager

JBT Corporation

1622 1st Street

Sandusky, OH 44870

laurie.headley@jbt.com | P: 419 202 8890



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From: Randy Butler <randy.butler@mcfoods.com>
Sent: Thursday, July 16, 2020 11:19 AM
To: Headley, Laurie <Laurie.Headley@JBTC.COM>
Cc: Doug Ford <dford@mcfoods.com>
Subject: RE: Evapco feedback

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Laurie, the state is asking for the emission factors used in the calculations. Could you get that information for us? Sorry for the time this is taking. Thank you for your help.

Randy Butler

Mountain Country Foods

randy.butler@mcfoods.com

From: Headley, Laurie <Laurie.Headley@JBTC.COM>
Sent: Thursday, June 4, 2020 10:49 AM
To: Randy Butler <randy.butler@mcfoods.com>
Cc: Harlan, Tricia <Tricia.Harlan@JBTC.COM>
Subject: RE: Evapco feedback

Hi Randy

Just checking in. Was the information provided in the email below, enough to get the forms completed?

Laurie Headley

Project Manager

JBT Corporation

1622 1st Street

Sandusky, OH 44870

laurie.headley@jbtc.com | P: 419 202 8890



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From: Headley, Laurie
Sent: Monday, June 01, 2020 7:41 AM
To: Randy Butler <randy.butler@mcfoods.com>
Cc: Harlan, Tricia <Tricia.Harlan@JBTC.COM>
Subject: Evapco feedback

Randy

See information in the email below from Evapco. Hopefully this will be enough to assist in completing the permit. Let me know if you have any questions.

Thanks

Laurie Headley

Project Manager

JBT Corporation

1622 1st Street

Sandusky, OH 44870

laurie.headley@jbtc.com | P: 419 202 8890



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From: Joe Sunnarborg <joes@evapcomn.com>
Sent: Friday, May 29, 2020 2:44 PM
To: Headley, Laurie <Laurie.Headley@JBTC.COM>
Cc: Harlan, Tricia <Tricia.Harlan@JBTC.COM>
Subject: RE: JBT PO PSAN120850 Evapco order 19-865542-865545

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Laurie,

See below, this is about all the info I can provide so I hope it helps. It is directly from our burner supplier.

PM10, PM25, and SO2 – We have no way to measure particulate matter or SO2. We've always said that the production of those pollutants is negligible when burning natural gas, which is backed up by the information on naturalgas.org.

Emissions from the Combustion of Natural Gas

Natural gas is the cleanest of all the fossil fuels, as evidenced in the Environmental Protection Agency's data comparisons in the chart below, which is still current as of 2010. Composed primarily of methane, the main products of the [combustion](#) of natural gas are carbon dioxide and water vapor, the same compounds we exhale when we breathe. Coal and oil are composed of much more complex molecules, with a higher carbon ratio and higher nitrogen and sulfur contents. This means that when combusted, coal and oil release higher levels of harmful emissions, including a higher ratio of carbon emissions, nitrogen oxides (NOx), and sulfur dioxide (SO2). Coal and fuel oil also release ash particles into the environment, substances that do not burn but instead are carried into the atmosphere and contribute to pollution. The combustion of natural gas, on the other hand, releases very small amounts of sulfur dioxide and nitrogen oxides, virtually no ash or particulate matter, and lower levels of carbon dioxide, carbon monoxide, and other reactive hydrocarbons.

Fossil Fuel Emission Levels – Pounds per Billion Btu of Energy Input			
Pollutant	Natural Gas	Oil	Coal
Carbon Dioxide	117,000	164,000	208,000
Carbon Monoxide	40	33	208
Nitrogen Oxides	92	448	457
Sulfur Dioxide	1	1,122	2,591
Particulates	7	84	2,744
Mercury	0.000	0.007	0.016

Source: EIA – Natural Gas Issues and Trends 1998

VOC and NH3 – Much the same story, we always say that the amount of VOC and NH3 are negligible when burning natural gas. We don't really have a way to measure either of them.

NOx and CO – Typically what we would say is a maximum of 0.09 lbs of CO per million btu and 0.082 lbs of NOx per million btu at high fire. However, that is for applications where the temperature rise is around 100 and the discharge temperature is between 70 and 100 degrees F. The application that you're describing is hotter than that, so that could have an effect on NOx and CO levels. I'd expect NOx to be a little higher and CO to be a little lower, but I can't speculate on how much without testing.

CO2 – This is fairly straightforward. The chart above shows the amount of carbon dioxide produced from burning one billion btu of natural gas. This is virtually the same no matter the burner or application.

CH4 – CH4 is methane. The only reason there would be unburned natural gas is if there was something seriously wrong with the burner that would cause a major gas leak. We typically say that the amount of unburned gas is negligible.

N20, HFCs, PFCs, and SF6 – N20 is associated with burning coal. I can't find any indication that it is created in significant amounts by burning natural gas. HFCs, PFCs, and SF6 are refrigerants and as best as I can tell are not applicable.

Joe Sunnarborg

Sales Manager

Engineered Products



EVAPCO, Inc.

P.O. Box 88

215 1st Street NE

Medford, MN 55049

507-446-8005

joes@evapcomn.com

www.evapco.com

From: Headley, Laurie [<mailto:Laurie.Headley@JBTC.COM>]
Sent: Wednesday, May 27, 2020 6:02 PM
To: Joe Sunnarborg
Cc: Harlan, Tricia
Subject: FW: JBT PO PSAN120850 Evapco order 19-865542-865545

Joe

Have you had a chance to look at this form? Our customer needs assistance in completing this to obtain their final permit. Please let me know.

Thanks

Laurie Headley

Project Manager

JBT Corporation

State of Utah Mail - FW: Evapco feedback

laurie.headley@jbtc.com | P: 419 202 8890



Also Representing: TVI Meat Portioning | Schröder | BAADER LINCO | Power Food Technology | VE. MA. C.



From: Headley, Laurie
Sent: Thursday, April 23, 2020 1:24 PM
To: 'Joe Sunnarborg' <joes@evapcomn.com>
Subject: FW: JBT PO PSAN120850 Evapco order 19-865542-865545

laurie.headley@jbtc.com | P: 419 202 8890



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From: Headley, Laurie
Sent: Wednesday, April 08, 2020 5:49 PM
To: Joe Sunnarborg <joes@evapcomn.com>; 'Laurie Kagan' <lkagan@evapcomn.com>
Cc: 'Craig Quinlivan' <craigq@evapcomn.com>
Subject: RE: JBT PO PSAN120850 Evapco order 19-865542-865545

Joe

Can you assist in completing the attached with any information applicable to EVAPCO's scope on the Mountain Country project? If you have any questions, please contact me.

Thanks

Laurie Headley

Project Manager

JBT Corporation

1622 1st Street

Sandusky, OH 44870

laurie.headley@jbt.com | P: 419 202 8890



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From: Joe Sunnarborg <joes@evapcomn.com>
Sent: Monday, March 30, 2020 10:22 AM
To: Headley, Laurie <Laurie.Headley@JBTC.COM>; 'Laurie Kagan' <lkagan@evapcomn.com>
Cc: 'Craig Quinlivan' <craigq@evapcomn.com>
Subject: RE: JBT PO PSAN120850 Evapco order 19-865542-865545

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Laurie,

Did you receive the attached? I thought this went over to you last week.

Let me know if this helps.

Thanks,

Joe Sunnarborg
Sales Manager
Engineered Products



EVAPCO, Inc.
P.O. Box 88
215 1st Street NE
Medford, MN 55049
507-446-8005
joes@evapcomn.com
www.evapco.com

From: Headley, Laurie [<mailto:Laurie.Headley@JBTC.COM>]
Sent: Monday, March 30, 2020 9:11 AM

To: Joe Sunnarborg; Laurie Kagan
Subject: RE: JBT PO PSAN120850 Evapco order 19-865542-865545

Joe / Laurie

Do you have someone that can help me with the questions below? I looked through the O&M manual. There is some information in the burner information. However, I am not sure how it translates into the questions below.

Thanks

Laurie Headley

Project Manager

JBT Corporation

1622 1st Street

Sandusky, OH 44870

laurie.headley@jbt.com | P: 419 627 4356 Cell: 419 202 8890



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From: Headley, Laurie

Sent: Thursday, March 26, 2020 2:38 PM

To: Joe Sunnarborg <joes@evapcomn.com>; Laurie Kagan <lkagan@evapcomn.com>

Subject: JBT PO PSAN120850 Evapco order 19-865542-865545

Joe , Laurie

The Mountain Country project has not been installed yet. The customer is currently working on permits and must provide emissions type information on the permit application. Can you give me any guidance on the following as it pertains to the air units that were provided by Evapco?

PM10, PM 2.5 NOx, SO2, CO,CO2,N2O,CH4, HFCs, PFCs, & SF6.

I appreciate any help you can give.

Thanks

Laurie Headley

Project Manager

JBT Corporation

1622 1st Street

Sandusky, OH 44870

laurie.headley@jbt.com | P: 419 627 4356 Cell: 419 202 8890



Frigoscandia | Stein | DSI | Northfield | Double D | Formcook | Wolf-tec | A & B Process Systems |

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Andrea Bartlett <abartlett@utah.gov>
To: Randy Butler <randy.butler@mcfoods.com>

Wed, Jul 29, 2020 at 8:23 AM

Randy,

That will work. Let me know if you have any questions about BACT or natural gas usage.

Thanks!

Andrea Bartlett
Environmental Engineer 1
Department of Air Quality

P 801-536-0021
Email: abartlett@utah.gov

[Quoted text hidden]

Randy Butler <randy.butler@mcfoods.com>
To: Andrea Bartlett <abartlett@utah.gov>

Wed, Jul 29, 2020 at 1:33 PM

Andrea, on the natural gas usage. I took an average on 2 of the spiral ovens we are currently operating. Over a 3 month period each oven uses 2199 cubic feet per month. That number would apply to this new oven as well. On the BACT. The units on this oven have low-NOx technology. They also have controls that recirculate the air that has been heated back thru the combustion chamber 3 or 4 times depending upon the moisture content that we need to achieve for any given product. Most of the time when the product gets into the top 2 zones it is just a matter of maintaining a given temperature in order for the product to cook correctly and requires much less gas to do so. I hope this answers your questions. Thank you for your patience and if anything else is needed please let me know.

Randy Butler

Mountain Country Foods

randy.butler@mcfoods.com

From: Andrea Bartlett <abartlett@utah.gov>
Sent: Wednesday, July 29, 2020 8:23 AM
To: Randy Butler <randy.butler@mcfoods.com>
Subject: Re: FW: Evapco feedback

Randy,

That will work. Let me know if you have any questions about BACT or natural gas usage.

Thanks!

Andrea Bartlett

Environmental Engineer 1

Department of Air Quality

P 801-536-0021

Email: abartlett@utah.gov

On Wed, Jul 29, 2020 at 8:17 AM Randy Butler <randy.butler@mcfoods.com> wrote:

Andrea, this is what I got back from the manufacturer. If this does not answer your questions please let me know. Thank you.

Randy Butler

Mountain Country Foods

randy.butler@mcfoods.com

From: Headley, Laurie <Laurie.Headley@JBTC.COM>**Sent:** Wednesday, July 22, 2020 9:30 AM**To:** Randy Butler <randy.butler@mcfoods.com>**Subject:** FW: Evapco feedback

Randy

See the email below for a response to the last request on permitting.

Let me know if you need more.

*Laurie Headley**Project Manager*

JBT Corporation

1622 1st Street

Sandusky, OH 44870

laurie.headley@jbtc.com | P: 419 202 8890



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From: Joe Sunnarborg <joes@evapcomn.com>
Sent: Wednesday, July 22, 2020 11:29 AM
To: Headley, Laurie <Laurie.Headley@JBTC.COM>
Subject: RE: Evapco feedback

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Laurie,

Here is what I got back:

"I'm not exactly sure what they mean by emission factors. If they mean factors in a mathematical sense, the rates that I gave were of 0.09 lbs of CO per million btu and 0.082 lbs of NOx per million btu at high fire. Those figures would be multiplied by the gas input (in btu/hr) to get an emission rate (in lbs per hour). You could also take it another step to estimate the amount of gas burned in a month or a year to get lbs per month or lbs per year respectively.

If they mean factors in terms of what factors affect those emission rates, that is a little different. The numbers above are the worst case based on empirical data. Typically that worst case is at high fire, with low pressure drops and rich combustion. Realistically, the burners will produce less emissions than that (in terms of lbs per million btu) since they will not be running at high fire all the time and they will not be running with low pressure drops all of the time. However, from my position I cannot guarantee what the rate will be, other than saying that it will not be worse than the worst empirical data that I have."

Not sure if this is what you need or not. Let me know.

Thanks,

Joe Sunnarborg

Senior Sales Manager

Engineered Products



EVAPCO, Inc.

P.O. Box 88

215 1st Street NE

Medford, MN 55049

507-446-8005 (office)

218-591-2696 (mobile)

joes@evapcomn.com

www.evapco.com

From: Headley, Laurie [<mailto:Laurie.Headley@JBTC.COM>]

Sent: Thursday, July 16, 2020 10:36 AM

To: Joe Sunnarborg

Subject: FW: Evapco feedback

Hi Joe

We have one more question for the permitting on Mountain Country. What are the emission factors used in the calculations?

Thanks

Laurie Headley

Project Manager

JBT Corporation

1622 1st Street

Sandusky, OH 44870

laurie.headley@jbtc.com | P: 419 202 8890



Frigoscandia | Stein | DSI | Northfield | Double D | Formcook | Wolf-tec | A & B Process Systems |

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From: Randy Butler <randy.butler@mcfoods.com>
Sent: Thursday, July 16, 2020 11:19 AM
To: Headley, Laurie <Laurie.Headley@JBTC.COM>
Cc: Doug Ford <dford@mcfoods.com>
Subject: RE: Evapco feedback

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Laurie, the state is asking for the emission factors used in the calculations. Could you get that information for us? Sorry for the time this is taking. Thank you for your help.

Randy Butler

Mountain Country Foods

randy.butler@mcfoods.com

From: Headley, Laurie <Laurie.Headley@JBTC.COM>
Sent: Thursday, June 4, 2020 10:49 AM
To: Randy Butler <randy.butler@mcfoods.com>
Cc: Harlan, Tricia <Tricia.Harlan@JBTC.COM>
Subject: RE: Evapco feedback

Hi Randy

Just checking in. Was the information provided in the email below, enough to get the forms completed?

Laurie Headley

Project Manager

JBT Corporation

1622 1st Street

Sandusky, OH 44870

laurie.headley@jbt.com | P: 419 202 8890



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From: Headley, Laurie

Sent: Monday, June 01, 2020 7:41 AM

To: Randy Butler <randy.butler@mcfoods.com>

Cc: Harlan, Tricia <Tricia.Harlan@JBTC.COM>

Subject: Evapco feedback

Randy

See information in the email below from Evapco. Hopefully this will be enough to assist in completing the permit. Let me know if you have any questions.

Thanks

Laurie Headley

Project Manager

JBT Corporation

1622 1st Street

Sandusky, OH 44870

laurie.headley@jbt.com | P: 419 202 8890



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From: Joe Sunnarborg <joes@evapcomn.com>
Sent: Friday, May 29, 2020 2:44 PM
To: Headley, Laurie <Laurie.Headley@JBTC.COM>
Cc: Harlan, Tricia <Tricia.Harlan@JBTC.COM>
Subject: RE: JBT PO PSAN120850 Evapco order 19-865542-865545

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Laurie,

See below, this is about all the info I can provide so I hope it helps. It is directly from our burner supplier.

PM10, PM25, and SO2 – We have no way to measure particulate matter or SO2. We've always said that the production of those pollutants is negligible when burning natural gas, which is backed up by the information on naturalgas.org.

Emissions from the Combustion of Natural Gas

Natural gas is the cleanest of all the fossil fuels, as evidenced in the Environmental Protection Agency's data comparisons in the chart below, which is still current as of 2010. Composed primarily of methane, the main products of the combustion of natural gas are carbon dioxide and water vapor, the same compounds we exhale when we breathe. Coal and oil are composed of much more complex molecules, with a higher carbon ratio and higher nitrogen and sulfur contents. This means that when combusted, coal and oil release higher levels of harmful emissions, including a higher ratio of carbon emissions, nitrogen oxides (NOx), and sulfur dioxide (SO₂). Coal and fuel oil also release ash particles into the environment, substances that do not burn but instead are carried into the atmosphere and contribute to pollution. The combustion of natural gas, on the other hand, releases very small amounts of sulfur dioxide and nitrogen oxides, virtually no ash or particulate matter, and lower levels of carbon dioxide, carbon monoxide, and other reactive hydrocarbons.

Fossil Fuel Emission Levels
– Pounds per Billion Btu of Energy Input

Pollutant	Natural Gas	Oil	Coal
Carbon Dioxide	117,000	164,000	208,000
Carbon Monoxide	40	33	208
Nitrogen Oxides	92	448	457
Sulfur Dioxide	1	1,122	2,591
Particulates	7	84	2,744
Mercury	0.000	0.007	0.016

Source: EIA – Natural Gas Issues and Trends 1998

VOC and NH₃ – Much the same story, we always say that the amount of VOC and NH₃ are negligible when burning natural gas. We don't really have a way to measure either of them.

NO_x and CO – Typically what we would say is a maximum of 0.09 lbs of CO per million btu and 0.082 lbs of NO_x per million btu at high fire. However, that is for applications where the temperature rise is around 100 and the discharge temperature is between 70 and 100 degrees F. The application that you're describing is hotter than that, so that could have an effect on NO_x and CO levels. I'd expect NO_x to be a little higher and CO to be a little lower, but I can't speculate on how much without testing.

CO₂ – This is fairly straightforward. The chart above shows the amount of carbon dioxide produced from burning one billion btu of natural gas. This is virtually the same no matter the burner or application.

CH₄ – CH₄ is methane. The only reason there would be unburned natural gas is if there was something seriously wrong with the burner that would cause a major gas leak. We typically say that the amount of unburned gas is negligible.

N₂O, HFCs, PFCs, and SF₆ – N₂O is associated with burning coal. I can't find any indication that it is created in significant amounts by burning natural gas. HFCs, PFCs, and SF₆ are refrigerants and as best as I can tell are not applicable.

Joe Sunnarborg

Sales Manager

Engineered Products



EVAPCO, Inc.

P.O. Box 88

215 1st Street NE

Medford, MN 55049

507-446-8005

joes@evapcomn.com

www.evapco.com

From: Headley, Laurie [<mailto:Laurie.Headley@JBTC.COM>]
Sent: Wednesday, May 27, 2020 6:02 PM
To: Joe Sunnarborg
Cc: Harlan, Tricia
Subject: FW: JBT PO PSAN120850 Evapco order 19-865542-865545

Joe

Have you had a chance to look at this form? Our customer needs assistance in completing this to obtain their final permit. Please let me know.

Thanks

Laurie Headley

Project Manager

JBT Corporation

1622 1st Street

Sandusky, OH 44870

laurie.headley@jbtc.com | P: 419 202 8890



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From: Headley, Laurie
Sent: Thursday, April 23, 2020 1:24 PM

To: 'Joe Sunnarborg' <joes@evapcomn.com>
Subject: FW: JBT PO PSAN120850 Evapco order 19-865542-865545

Joe

Are you able to assist with this?

Laurie Headley

Project Manager

JBT Corporation

1622 1st Street

Sandusky, OH 44870

laurie.headley@jbt.com | P: 419 202 8890



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From: Headley, Laurie

Sent: Wednesday, April 08, 2020 5:49 PM

To: Joe Sunnarborg <joes@evapcomn.com>; 'Laurie Kagan' <lkagan@evapcomn.com>

Cc: 'Craig Quinlivan' <craigq@evapcomn.com>

Subject: RE: JBT PO PSAN120850 Evapco order 19-865542-865545

Joe

Can you assist in completing the attached with any information applicable to EVAPCO's scope on the Mountain Country project?
If you have any questions, please contact me.

Thanks

Laurie Headley

Project Manager

JBT Corporation

1622 1st Street

Sandusky, OH 44870

laurie.headley@jbtc.com | P: 419 202 8890



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From: Joe Sunnarborg <joes@evapcomn.com>

Sent: Monday, March 30, 2020 10:22 AM

To: Headley, Laurie <Laurie.Headley@JBTC.COM>; 'Laurie Kagan' <lkagan@evapcomn.com>

Cc: 'Craig Quinlivan' <craigq@evapcomn.com>

Subject: RE: JBT PO PSAN120850 Evapco order 19-865542-865545

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Laurie,

Did you receive the attached? I thought this went over to you last week.

Let me know if this helps.

Thanks,

Joe Sunnarborg

Sales Manager



www.evapco.com



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From: Headley, Laurie

Sent: Thursday, March 26, 2020 2:38 PM

To: Joe Sunnarborg <joes@evapcomn.com>; Laurie Kagan <lkagan@evapcomn.com>

Subject: JBT PO PSAN120850 Evapco order 19-865542-865545

Joe , Laurie

The Mountain Country project has not been installed yet. The customer is currently working on permits and must provide emissions type information on the permit application. Can you give me any guidance on the following as it pertains to the air units that were provided by Evapco?

PM10, PM 2.5 NOx, SO2, CO,CO2,N2O,CH4, HFCs, PFCs, & SF6.

I appreciate any help you can give.

Thanks

Laurie Headley

Project Manager

JBT Corporation

1622 1st Street

Sandusky, OH 44870

laurie.headley@jbt.com | P: 419 627 4356 Cell: 419 202 8890



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image018.png
33K

Andrea Bartlett <abartlett@utah.gov>
To: Randy Butler <randy.butler@mcfoods.com>

Wed, Jul 29, 2020 at 3:11 PM

Randy,

I believe that is all the information I need for now. If something else comes up as I am working on your permit, I will reach out to you. Thank you for getting back to me so quickly.

Best Regards,

Andrea Bartlett
Environmental Engineer 1
Department of Air Quality

P 801-536-0021
Email: abartlett@utah.gov

[Quoted text hidden]

[Quoted text hidden]

[Quoted text hidden]

[Quoted text hidden]

[Quoted text hidden]

[Quoted text hidden]

[Quoted text hidden]

[Quoted text hidden]

[Quoted text hidden]

Subject: JBT PO PSAN120850 Evapco order 19-865542-865545

Joe , Laurie

The Mountain Country project has not been installed yet. The customer is currently working on permits and must provide emissions type information on the permit application. Can you give me any guidance on the following as it pertains to the air units that were provided by Evapco?

PM10, PM 2.5 NOx, SO2, CO,CO2,N2O,CH4, HFCs, PFCs, & SF6.

I appreciate any help you can give.

Thanks

Laurie Headley

Project Manager

JBT Corporation

1622 1st Street

Sandusky, OH 44870

laurie.headley@jbt.com | P: 419 627 4356 Cell: 419 202 8890

 email-signature

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[Quoted text hidden]



image018.png
33K



Andrea Bartlett <abartlett@utah.gov>

Mountain Country Foods NOI Forms

1 message

Heather Thompson <heather.thompson@mcfoods.com>

Thu, Jul 23, 2020 at 1:10 PM

To: "abartlett@utah.gov" <abartlett@utah.gov>

Cc: Randy Butler <randy.butler@mcfoods.com>

Good Afternoon Andrea,

I am sending this email on behalf of Randy Butler with Mountain Country Foods.

He has filled out the attached forms to the best of his ability. If you have further questions please contact Randy

at either randy.butler@mcfoods.com or 801-369-0705.

Thank you,

Heather

**Heather Thompson**

Mountain Country Foods

Accounts Payable

Office: (801) 894-1145

**Utah Division of Air Quality NOI Forms.pdf**

227K



Andrea Bartlett <abartlett@utah.gov>

Checking- In

6 messages

Andrea Bartlett <abartlett@utah.gov>
To: randy.butler@mcfoods.com

Thu, Jul 9, 2020 at 3:50 PM

Dear Mr. Butler,

I wanted to check in and see if you had any questions regarding the request for more information I sent you. Please reach out if you have any questions or concerns.

Best Regards,

Andrea Bartlett
Environmental Engineer 1
Department of Air Quality

P 801-536-0021
Email: abartlett@utah.gov

Randy Butler <randy.butler@mcfoods.com>
To: Andrea Bartlett <abartlett@utah.gov>

Mon, Jul 13, 2020 at 1:09 PM

Andrea, I don't know how to get the information that is needed. Do you have any suggestions on who may be able to do this for us?
Thank you.

Randy Butler

Mountain Country Foods

randy.butler@mcfoods.com

[Quoted text hidden]

Andrea Bartlett <abartlett@utah.gov>
To: Randy Butler <randy.butler@mcfoods.com>

Tue, Jul 14, 2020 at 12:47 PM

Randy,

For this modification, I can walk you through what needs to be done. I pulled up your original application and this oven is the same as the other three ovens so we should be okay. I cannot personally recommend anyone to help you with paperwork in the future, but you can google environmental or air quality consultants or speak to your competitors, etc. about who they may use to complete these kinds of projects. I am fairly busy tomorrow, but I have time Thursday or Friday to go over things via videochat or phone call. Or we could shoot for next Monday or Tuesday. Let me know what works for you.

Best Regards,

Andrea Bartlett
Environmental Engineer 1
Department of Air Quality

P 801-536-0021
Email: abartlett@utah.gov

[Quoted text hidden]

Randy Butler <randy.butler@mcfoods.com>
To: Andrea Bartlett <abartlett@utah.gov>

Wed, Jul 15, 2020 at 2:04 PM

8/27/2020

State of Utah Mail - Checking- In

Andrea, thank you for getting back with me. Could we talk Thursday at around 9:00 AM?

[Quoted text hidden]

Andrea Bartlett <abartlett@utah.gov>
To: Randy Butler <randy.butler@mcfoods.com>

Wed, Jul 15, 2020 at 2:18 PM

Randy,

Tomorrow at 9am works for me. Would you like to call me or I could set up a Google meets video call. Let me know what works best for you.

Andrea Bartlett
Environmental Engineer 1
Department of Air Quality

P 801-536-0021
Email: abartlett@utah.gov

[Quoted text hidden]

Randy Butler <randy.butler@mcfoods.com>
To: Andrea Bartlett <abartlett@utah.gov>

Wed, Jul 15, 2020 at 2:26 PM

I will give you a call. thanks

[Quoted text hidden]

Rating	9	MMBtu/hour
Operational Hour	8,760	hours/year
Firing	Normal	

Criteria Pollutant	Concentration (ppm)	Emission Factor (lb/10 ⁶ scf)	Emission Rate (lbs/hr)	Emission Total (tons/year)	Reference
NO _x		50	0.45	1.98	Manufacturer Data or AP-42
CO		84	0.76	3.32	
PM ₁₀		7.6	0.07	0.30	AP-42 Table 1.4-2
PM _{2.5}		7.6	0.07	0.30	
SO ₂		0.6	0.01	0.02	
VOC		5.5	0.05	0.22	
Lead		0.0005	0.00	0.00	

Heating Value of Natural 1020 BTU/scf or MMBtu/MMscf

2199 scf of natural gas per spiral oven per month
26388 scf of natural gas per spiral oven per year

+

360000000 scf
26388 scf
360026388
3.6 MMscf

Natural Gas-Fired Boilers & Heaters

Equipment Details		
Rating	9	MMBtu/hour
Operational Hours	8,760	hours/year
Firing	Normal	

Criteria Pollutant	Concentration (ppm)	Emission Factor (lb/10 ⁶ scf)	Emission Rate (lbs/hr)	Emission Total (tons/year)	Reference
NO _x		100	0.90	3.95	Manufacturer Data or AP-42 Table 1.4-1
CO		84	0.76	3.32	
PM ₁₀		7.6	0.07	0.30	AP-42 Table 1.4-2
PM _{2.5}		7.6	0.07	0.30	
SO ₂		0.6	0.01	0.02	
VOC		5.5	0.05	0.22	
Lead		0.0005	0.00	0.00	
HAP			0.02	0.07	See Below

Green House Gas Pollutant	Global Warming Potential	Emission Factor (lb/10 ⁶ scf)	Emission Rate (lbs/hr)	Emission Total (tons/year)	Reference
CO ₂ (mass basis)	1	120,000	1,082	4,741	AP-42 Table 1.4-2 & Table A-1 to Subpart A of Part 98
Methane (mass basis)	25	2.3	0.02	0.09	
N ₂ O (mass basis)	298	2.2	0.02	0.09	
CO ₂ e				4,769	

Hazardous Air Pollutant	Emission Factor (lb/10 ⁶ scf)	Emission Rate (lbs/hr)	Emission Total (tons/year)	Reference
2-Methylnaphthalene	2.40E-05	2.16E-07	9.48E-07	AP-42 Table 1.4-3
3-Methylchloranthrene	1.80E-06	1.62E-08	7.11E-08	
7,12-Dimethylbenz(a)anthracene	1.60E-05	1.44E-07	6.32E-07	
Acenaphthene	1.80E-06	1.62E-08	7.11E-08	
Acenaphthylene	1.80E-06	1.62E-08	7.11E-08	
Anthracene	2.40E-06	2.16E-08	9.48E-08	
Benz(a)anthracene	1.80E-06	1.62E-08	7.11E-08	
Benzene	2.10E-03	1.89E-05	8.30E-05	
Benzo(a)pyrene	1.20E-06	1.08E-08	4.74E-08	
Benzo(b)fluoranthene	1.80E-06	1.62E-08	7.11E-08	
Benzo(g,h,i)perylene	1.20E-06	1.08E-08	4.74E-08	
Benzo(k)fluoranthene	1.80E-06	1.62E-08	7.11E-08	
Chrysene	1.80E-06	1.62E-08	7.11E-08	
Dibenzo(a,h)anthracene	1.20E-06	1.08E-08	4.74E-08	
Dichlorobenzene	1.20E-03	1.08E-05	4.74E-05	
Fluoranthene	3.00E-06	2.71E-08	1.19E-07	
Fluorene	2.80E-06	2.53E-08	1.11E-07	
Formaldehyde	7.50E-02	6.76E-04	2.96E-03	
Hexane	1.80E+00	1.62E-02	7.11E-02	
Indeno(1,2,3-cd)pyrene	1.80E-06	1.62E-08	7.11E-08	
Naphthalene	6.10E-04	5.50E-06	2.41E-05	
Phenanthrene	1.70E-05	1.53E-07	6.72E-07	AP-42 Table 1.4-4
Pyrene	5.00E-06	4.51E-08	1.98E-07	
Toluene	3.40E-03	3.07E-05	1.34E-04	
Arsenic	2.00E-04	1.80E-06	7.90E-06	
Beryllium	1.20E-05	1.08E-07	4.74E-07	
Cadmium	1.10E-03	9.92E-06	4.35E-05	
Chromium	1.40E-03	1.26E-05	5.53E-05	
Cobalt	8.40E-05	7.58E-07	3.32E-06	
Manganese	3.80E-04	3.43E-06	1.50E-05	
Mercury	2.60E-04	2.35E-06	1.03E-05	
Nickel	2.10E-03	1.89E-05	8.30E-05	
Selenium	2.40E-05	2.16E-07	9.48E-07	

**Andrea Bartlett** <abartlett@utah.gov>

FGR

2 messages

Andrea Bartlett <abartlett@utah.gov>
To: Randy Butler <randy.butler@mcfoods.com>

Mon, Aug 10, 2020 at 1:49 PM

Randy,

I am finishing up your permit with my peer. I wanted to double-check that all four spiral ovens use flue-gas recirculation. Also, if I recall correctly you mentioned that the tunnel ovens also use FGR? Do they also use low NOx technology? I just want to make sure your permit is up to date.

Best Regards,

Andrea Bartlett
Environmental Engineer 1
Department of Air QualityP 801-536-0021
Email: abartlett@utah.gov

Randy Butler <randy.butler@mcfoods.com>
To: Andrea Bartlett <abartlett@utah.gov>

Mon, Aug 10, 2020 at 4:32 PM

Yes, all of the ovens are low nox and they all recirculate.

Sent via the Samsung Galaxy S7 active, an AT&T 4G LTE smartphone
[Quoted text hidden]



Form 1
Notice of Intent (NOI) Application Checklist

Date 7-23-20

Company Mt. Country Foods

Utah Division of Air Quality
New Source Review Section

AIR QUALITY

Source Identification Information [R307-401-5]

- | | |
|--|-------------------------------------|
| 1. Company name, mailing address, physical address and telephone number | <input checked="" type="checkbox"/> |
| 2. Company contact (Name, mailing address, and telephone number) | <input checked="" type="checkbox"/> |
| 3. Name and contact of person submitting NOI application (if different than 2) | <input checked="" type="checkbox"/> |
| 4. Source Universal Transverse Mercator (UTM) coordinates | <input checked="" type="checkbox"/> |
| 5. Source Standard Industrial Classification (SIC) code | <input type="checkbox"/> |
| 6. Area designation (attainment, maintenance, or nonattainment) | <input type="checkbox"/> |
| 7. Federal/State requirement applicability (NAAQS, NSPS, MACT, SIP, etc.) | <input type="checkbox"/> |
| 8. Source size determination (Major, Minor, PSD) | <input checked="" type="checkbox"/> |
| 9. Current Approval Order(s) and/or Title V Permit numbers | <input checked="" type="checkbox"/> |

NOI Application Information: [R307-401]

- | | | |
|--|-------------------------------------|---|
| 1. Detailed description of the project and source process | <input checked="" type="checkbox"/> | |
| 2. Discussion of fuels, raw materials, and products consumed/produced | <input checked="" type="checkbox"/> | |
| 3. Description of equipment used in the process and operating schedule | <input checked="" type="checkbox"/> | |
| 4. Description of changes to the process, production rates, etc. | <input checked="" type="checkbox"/> | |
| 5. Site plan of source with building dimensions, stack parameters, etc. | <input type="checkbox"/> | |
| 6. Best Available Control Technology (BACT) Analysis [R307-401-8] | | |
| A. BACT analysis for all new and modified equipment | <input type="checkbox"/> | |
| 7. Emissions Related Information: [R307-401-2(b)] | | |
| A. Emission calculations for each new/modified unit and site-wide
(Include PM ₁₀ , PM _{2.5} , NO _x , SO ₂ , CO, VOCs, HAPs, and GHGs) | <input type="checkbox"/> | |
| B. References/assumptions, SDS, for each calculation and pollutant | <input type="checkbox"/> | |
| C. All speciated HAP emissions (list in lbs/hr) | <input type="checkbox"/> | |
| 8. Emissions Impact Analysis – Approved Modeling Protocol [R307-410] | | |
| A. Composition and physical characteristics of effluent
(emission rates, temperature, volume, pollutant types and concentrations) | <input type="checkbox"/> | |
| 9. Nonattainment/Maintenance Areas – Major NSR/Minor (offsetting only) [R307-403] | | |
| A. NAAQS demonstration, Lowest Achievable Emission Rate, Offset requirements | <input type="checkbox"/> | N/A <input checked="" type="checkbox"/> |
| B. Alternative site analysis, Major source ownership compliance certification | <input type="checkbox"/> | N/A <input checked="" type="checkbox"/> |
| 10. Major Sources in Attainment or Unclassified Areas (PSD) [R307-405, R307-406] | | |
| A. Air quality analysis (air model, met data, background data, source impact analysis) | <input type="checkbox"/> | N/A <input checked="" type="checkbox"/> |
| B. Visibility impact analysis, Class I area impact | <input type="checkbox"/> | N/A <input checked="" type="checkbox"/> |
| 11. Signature on Application | <input type="checkbox"/> | |

Note: The Division of Air Quality will not accept documents containing confidential information or data. Documents containing confidential information will be returned to the Source submitting the application.



AIR QUALITY

Form 2

Company Information/Notice of Intent (NOI)

Date 6-10-20Utah Division of Air Quality
New Source Review SectionApplication for: ☐ Initial Approval Order ☒ Approval Order Modification

General Owner and Source Information

1. Company name and mailing address:

Mountain Country Foods195. E. 1600-NSpanish ForkPhone No.: (801) 998-8634Fax No.: ()

2. Company** contact for environmental matters:

Randy ButlerPhone no.: (801) 369-0705Email: randy.butler@mcFoods.Com** Company contact only; consultant or independent contractor contact information can be provided in a cover letter

3. Source name and physical address (if different from above):

SamePhone no.: ()Fax no.: ()

4. Source Property Universal Transverse Mercator coordinates (UTM), including System and Datum:

UTM: Zone 11 Longitude-120X: Central meridian - 117Y:5. The Source is located in: Utah County6. Standard Industrial Classification Code (SIC)7. If request for modification, AO# to be modified: DAQE # AN155460001-16 DATED: 1 / 8 / 16

8. Brief (50 words or less) description of process.

we are adding one more spiral oven. so there will be 4 Total
at an additional rating of 9.20 MM BTU/hr

Electronic NOI

9. A complete and accurate electronic NOI submitted to DAQ Permitting Mangers Jon Black (jblack@utah.gov) or Alan Humpherys (ahumpherys@utah.gov) can expedite review process. Please mark application type.Hard Copy Submittal ☐Electronic Copy Submittal ☒Both ☐

Authorization/Signature

I hereby certify that the information and data submitted in and with this application is completely true, accurate and complete, based on reasonable inquiry made by me and to the best of my knowledge and belief.

Signature: Randy ButlerTitle: Project managerRandy Butler
Name (Type or print)Telephone Number:
(801) 369-0705Email:
randy.butler@mcFoods.ComDate:
6-10-20



AIR QUALITY

Form 4
Project Information

Utah Division of Air Quality
New Source Review Section

Company Mountain Country Food
Site 195.E. 1600.N. Sp.Fork

Process Data - For Modification/Amendment ONLY

1. Permit Number DAQE-AN155460001-16

If submitting a new permit, then use Form 3

Requested Changes

2. Name of process to be modified/added:

Adding a fourth oven

End product of this process:

3. Permit Change Type: New Increase*

Equipment

☐☒

Process

☐☒

Condition Change

Other

Other

Other

4. Does new emission unit affect existing permitted process limits?

Yes ☒

No ☐

5. Condition(s) Changing:

additional gas usage

6. Description of Permit/Process Change**

Adding a Fourth Spiral oven

7. New or modified materials and quantities used in process. **

Material

Quantity Annually

Pet Treats

30,000,000 pounds

8. New or modified process emitting units **

Emitting Unit(s)

Capacity(s)

Manufacture Date(s)

4 units

9.20MMBTU/hr

10-2019

*If the permit being modified does not include CO₂e or PM_{2.5}, the emissions need to be calculated and submitted to DAQ, which may result in an emissions increase and a public comment period.

**If additional space is required, please generate a document to accommodate and attach to form.

