STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706 • (208) 373-0502

C.L. "Butch" Otter, Governor
Toni Hardesty, Director

January 20, 2011

Ed Conn, Plant Manager
Basic American Foods - Blackfoot
415 W. Collins Rd.
Blackfoot, ID 83221

RE: Facility ID No. 011-00012, Basic American Foods, Blackfoot
Final Permit Letter

Dear Mr. Conn:

The Department of Environmental Quality (DEQ) is issuing Permit to Construct (PTC) No. P-2009.0043 Project 0043 to Basic American Foods located at Blackfoot for a Facility Emissions Cap (FEC) Permit to Construct (PTC). This PTC is issued in accordance with IDAPA 58.01.01.200 through 228 (Rules for the Control of Air Pollution in Idaho) and is based on the certified information provided in your PTC application received March 31, 2009.

This permit is effective immediately and replaces PTC No. P-2009.0042, issued on August 29, 2009. This permit does not release Basic American Foods from compliance with all other applicable federal, state, or local laws, regulations, permits, or ordinances.

This permit is issued in accordance with the procedures and requirements for permits establishing a Facility Emissions Cap (FEC). This permit expires five (5) years from the issuance date. Your renewal application shall be submitted in accordance with IDAPA 58.01.01.179.02.

This PTC was processed in accordance with IDAPA 58.01.01.209.05.a. The permittee may construct the source after the PTC is issued or in accordance with IDAPA 58.01.01.213.02.c; or may operate the source after the PTC is issued so long as it does not violate any terms or conditions of the existing Tier I operating permit and complies with Tier I permit revisions procedures set forth at IDAPA 58.01.01.380.02; or the applicable requirements contained in the PTC will be incorporated into the existing Tier I permit upon renewal.

This PTC was processed in accordance with IDAPA 58.01.01.209.05.c. In accordance with IDAPA 58.01.01.381.03.b, so long as the change does not violate any terms or conditions of the existing Tier I permit, you may operate the source described in the PTC immediately upon submittal of your request for a Tier I administrative amendment.

Pursuant to the Construction and Operation Notification General Provision of your permit, it is required that construction and operation notification be provided. Please provide this information as listed to DEQ's Pocatello Regional Office, 444 Hospital Way, #300, Pocatello, ID 83201, Fax (208) 236-6168.

In order to fully understand the compliance requirements of this permit, DEQ highly recommends that you schedule a meeting with Rick Elkins, Air Quality Analyst, at (208) 236-6160 to review and discuss the terms and conditions of this permit. Should you choose to schedule this meeting, DEQ recommends that the following representatives attend the meeting: your facility's plant manager, responsible official, environmental contact, and any other staff responsible for day-to-day compliance with permit conditions.

Pursuant to IDAPA 58.01.23, you, as well as any other entity, may have the right to appeal this final agency action within 35 days of the date of this decision. However, prior to filing a petition for a contested case, I encourage you to contact Darrin Pampaian at (208) 373-0502 or **darrin.pampaian**@deq.idaho.gov to address any questions or concerns you may have with the enclosed permit.

Sincerely,

Mike Simon
Stationary Source Program Manager
Air Quality Division

MS\dp

Permit No. P-2009.0043 PROJ 0043

Enclosures

Air Quality
PERMIT TO CONSTRUCT

State of Idaho
Department of Environmental Quality

PERMIT No.: P-2009.0043
FACILITY ID No.: 011-00012
AQCR: 61 **CLASS:** A **ZONE:** 12
SIC: 2034 **NAICS:** 311423
UTM COORDINATE (km): 387.7, 4784.0

1. **PERMITTEE**
Blackfoot Facility of Basic American Foods, a Division of Basic American, Inc.

2. **PROJECT**
Project No. 0043 - PTC FEC permit

3. **MAILING ADDRESS**	**CITY**	**STATE**	**ZIP**
415 W. Collins Rd.	Blackfoot	ID	83221
4. **FACILITY CONTACT** John Kirkpatrick	**TITLE** Environmental Manager	**TELEPHONE** (208) 785-8572	
5. **RESPONSIBLE OFFICIAL** Brent Higginson	**TITLE** Plant Manager	**TELEPHONE** (208) 785-8320	
6. **EXACT PLANT LOCATION** 415 W. Collins Rd., Blackfoot ID		**COUNTY** Bingham	

7. **GENERAL NATURE OF BUSINESS & KINDS OF PRODUCTS**
Dehydrated food products and animal feed

8. **PERMIT AUTHORITY**

This permit is issued according to the Rules for the Control of Air Pollution in Idaho, IDAPA 58.01.01.200 through 228, and pertains only to emissions of air contaminants regulated by the state of Idaho and to the sources specifically allowed to be constructed or modified by this permit.

This permit (a) does not affect the title of the premises upon which the equipment is to be located; (b) does not release the permittee from any liability for any loss due to damage to person or property caused by, resulting from, or arising out of the design, installation, maintenance, or operation of the proposed equipment; (c) does not release the permittee from compliance with other applicable federal, state, tribal, or local laws, regulations, or ordinances; (d) in no manner implies or suggests that the Department of Environmental Quality (DEQ) or its officers, agents, or employees, assume any liability, directly or indirectly, for any loss due to damage to person or property caused by, resulting from, or arising out of design, installation, maintenance, or operation of the proposed equipment.

DARRIN PAMPAIAN, P.E., PERMIT WRITER
DEPARTMENT OF ENVIRONMENTAL QUALITY

MIKE SIMON, STATIONARY SOURCE PROGRAM MANAGER
DEPARTMENT OF ENVIRONMENTAL QUALITY

Date Issued:	January 20, 2011
Date Modified/Revised:	
Date Facility Emissions Cap Permit Expires:	January 20, 2016

Table of Contents

Acronyms, Units, and Chemical Nomenclature

acfm	actual cubic feet per minute
AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
Btu	British thermal units
CAA	Clean Air Act
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EPA	U.S. Environmental Protection Agency
gpm	gallons per minute
gr	grain (1 lb = 7,000 grains)
HAP	hazardous air pollutants
hp	horsepower
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
km	kilometers
lb/hr	pounds per hour
m	meters
MACT	Maximum Achievable Control Technology
MMBtu	million British thermal units
NAICS	North American Industry Classification System
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
NSPS	New Source Performance Standards
PM	particulate matter
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
ppm	parts per million
PSD	Prevention of Significant Deterioration
PTC	permit to construct
PTE	potential to emit
scf	standard cubic feet
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SM	synthetic minor
SO_2	sulfur dioxide
SO_X	sulfur oxides
T/yr	tons per year
TAP	toxic air pollutants
UTM	Universal Transverse Mercator
VOC	volatile organic compounds
$\mu g/m^3$	micrograms per cubic meter

PERMIT TO CONSTRUCT SCOPE

Purpose

1.1 This is an original Permit to Construct for the Blackfoot facility of Basic American Foods (BAF). The scope of this permit includes the specific issues described as follows:

- Satisfying PTC requirements for new or modified sources that potentially required a PTC but for which a PTC was not obtained prior to construction. Issuance of this Permit to Construct meets the requirement to obtain a PTC for these modifications. Those sources include:
  - The installation of the 13 MMBtu/hr Reyco Slice space heater in 1982,
  - The installation of dryer exhaust stacks designated as CTQ, CTR, CTS, and CTT in 1973,
  - The "debottlenecking" of the dryers served by the exhaust stack designated CIR over various dates,
  - Installation of the dryer served by the exhaust stack designated as CBB in the early 1980's,
  - Replacement of the process burners for the dryer exhausted to stacks designated as CHX, CHY, and CHZ in 1995,
  - Installation of the dryer served by the exhaust stack designated as CNV in 2001,
  - Installation of the dryer served by the exhaust stack designated as CNW in 2001,
  - Upgrade of the dryer served by exhaust stacks designated as CXX and CYY in 1999.
- Establishing a facility emissions cap (FEC) for the facility.
- Creating additional facility operating requirements needed to demonstrate compliance with ambient air quality standards.
- Provisions of this permit that are FEC provisions are identified as such.

This permit is being issued as required by permit condition 7.2 in Tier 1 permit T1-060315 issued November 20, 2007.

1.2 The following PTCs are in effect at the facility and will remain active:

- PTC No. P-050301, issued September 16, 2005
- PTC No. 011-000012, issued April 27, 1995
- PTC Letter issued November 12, 1982
- PTC Letter issued December 27, 1975

1.3 This PTC replaces Permit to Construct No. P-2009.0042, issued on August 29, 2009.

Regulated Sources

1.4 Table 1.1 lists all sources of regulated emissions in this permit. The sources listed are those emissions units for which emissions of any criteria air pollutant exceeds 10 per cent (10%) of the levels contained in the definition of "significant" in IDAPA 58.01.01.006.

Table 1.1 REGULATED SOURCES

Permit Section	Source ID	Source Description	Emissions Control(s)
Boilers			
4	Boiler 1	Manufacturer: Murray Model: D-style S/N: 9925 Heat input rating: 57 MMBtu/hr Maximum steam production rate: 45,500 lb/hr Fuels: Natural gas, #2 fuel oil, and #6 fuel oil Date installed: 1982	Wet scrubber: Manufacturer: Carbo-Tech Environmental Group, Inc. Model: 48x48-96HE Type: Venturi Note: Venturi wet scrubber system is used whenever Boilers 1 and/or 2 are combusting fuel oil
	Boiler 2	Manufacturer: Johnston Model: 509 Series Heat input rating: 75.4 MMBtu/hr Maximum steam production rate: 62,100 lb/hr Fuels: Natural gas, #2 fuel oil, and #6 fuel oil Date installed: 1994	
	Boiler 3	Manufacturer: Springfield Model: 52 Heat input rating: 39 MMBtu/hr Maximum steam production rate: 30,000 lb/hr Date installed: 1975 Fuel: Natural gas and #2 fuel oil	None
Process A			
5	DHQ	Cooler	None
	DHT	Dryer - 7 MMBtu/hr, natural gas-fired	None
	DHU	Dryer - 7 MMBtu/hr, natural gas-fired	None
	DHZ	Dryer - 6 MMBtu/hr, steam heated and natural gas-fired	None

Table 1.1 REGULATED SOURCES (continued)

Permit Section	Source ID	Source Description	Emissions Control(s)
Process B			
6	DUQ	Dryer - 7 MMBtu/hr, natural gas-fired	None
	DUT	Dryer - 7 MMBtu/hr, natural gas-fired	None
	DUV	Dryers – Two, each rated at 6 MMBtu/hr, steam heated and natural gas-fired	None
	DQA	Dryer - 7 MMBtu/hr, natural gas-fired	None
	DQB	Dryer - 7 MMBtu/hr, natural gas-fired	None
Process C			
7	CIR	Dryer – Steam heated	None
	CXX/CYY	Dryer – 6.05 MMBtu/hr pre-heater, 4.4 MMBtu/hr front dryer, 6.6 MMBtu/hr rear dryer, all natural gas-fired	None
	CHX	Dryer – 10.3 MMBtu/hr, steam heated and natural gas-fired, with a 2.9 MMBtu/hr pre-heater, natural gas-fired	None
	HEB	Dryer - 6 MMBtu/hr, natural gas-fired	None
	CBB	Dryer – 1.5 MMBtu/hr, natural gas-fired	None
	CNV	Dryer - 12 MMBtu/hr, natural gas-fired	None
	CNW	Dryer - 12 MMBtu/hr, natural gas-fired	None
	CTU	Dryer – Steam heated	None
	CTZ	Dryer – 5.75 MMBtu/hr, natural gas-fired	Low-NO_X/CO burner
8		Space Heaters	None

[January 20, 2011]

FACILITY-WIDE CONDITIONS

2.1 Facility Wide Requirements

Reserved (The Tier I operating permit contains facility-wide conditions that apply to this facility.)

FACILITY EMISSIONS CAP REQUIREMENTS

3.1 Process Description

This permit authorizes changes to the facility that increase emissions of criteria pollutants for those changes that comply with the terms and conditions of this permit and that meet the requirements of IDAPA 58.01.01.181. The exemption criteria in IDAPA 58.01.01.220-222 are not applicable to changes in design or equipment at the facility that result in any change in the nature or amount of emissions, provided that the permittee complies with the conditions of Sections 3 through 8 of this permit and meets the requirements of IDAPA 58.01.01.181.

[January 20, 2011]

3.2 Emission Control Description

Table 3.1 FACILITY EMISSIONS DESCRIPTION

Emissions Unit(s)/Processes[1]	Emissions Control Device	Emissions Pont
Boiler 1 Boiler 2 Boiler 3	Scrubber[2] Scrubber[2] None	Boiler Stacks
Process A	None	Multiple Stacks from Process A
Process B	None	Multiple Stacks from Process B
Process C	None (except source CTZ has low-NO_X burners)	Multiple Stacks from Process C
Reyco Slice - space heater	None	Fugitive emissions

[1] For a detailed list of equipment see Table 1.1.
[2] Either boiler must use the scrubber whenever it combusts fuel oil.

[January 20, 2011]

Emissions Limits

3.3 Criteria Pollutant Facility Emissions Cap

The PM_{10}, SO_2, NO_X, CO, and VOC emissions from this facility shall not exceed any corresponding facility emissions cap (FEC) limits listed in Table 3.2.

Table 3.2 FEC EMISSIONS LIMITS

Source Description	PM_{10}	SO_2	NO_X	CO	VOC
	T/yr[1]	T/yr[1]	T/yr[1]	T/yr[1]	T/yr[1]
Total Facility Emissions Cap	128	161	235	235	5.1

[1] Tons per rolling 12-month period.

[January 20, 2011]

Monitoring and Recordkeeping Requirements

3.4 Criteria Pollutant Facility Emissions Cap Compliance

3.4.1 The permittee shall calculate and record estimated total PM_{10}, SO_2, NO_X, CO, VOC, and Pb emissions for all combustion sources each calendar month, based on fuel consumption, steam production, or heat input rating for natural gas, #2 fuel oil, and #6 fuel oil combustion sources, using the emission factors provided in Appendices A-F of this permit, or other DEQ approved method. Emission factors included in Appendices A-F of this Permit may be updated, with concurrence of DEQ. To update an emission factor, the permittee shall submit to DEQ the proposed revised emission factor and the basis for the revisions. Upon approval by DEQ, the updated emission factor shall replace the corresponding emissions factor in Appendices A-F. Records shall be maintained on site for a period of at least five years and shall be made available to DEQ representatives upon request.

[January 20, 2011]

3.4.2 The permittee shall calculate and record estimated total PM_{10} and SO_2 emissions for all production-related sources each calendar month, based on pounds of unit process throughput for production processes and using the emission factors provided in Appendices A-F of this permit, or other DEQ approved method. Emission factors included in Appendices A-F of this Permit may be updated, with concurrence of DEQ. To update an emission factor, the permittee shall submit to DEQ the proposed revised emission factor and the basis for the revisions. Upon approval by DEQ, the updated emission factor shall replace the corresponding emissions factor in Appendices A-F. Records shall be maintained on site for a period of at least five years and shall be made available to DEQ representatives upon request.

[January 20, 2011]

3.4.3 The permittee shall calculate rolling 12-month total estimated emissions of PM_{10}, SO_2, NO_X, CO, VOC, and Pb for each calendar month. Emissions totals shall be available within 30 days of the end of a month. The permittee shall total PM_{10}, SO_2, NO_X, CO, VOC, and Pb emissions as calculated for the combustion sources and the production sources to determine compliance with the criteria pollutant FEC. Records shall be maintained on site for a period of at least five years and shall be made available to DEQ representatives upon request.

[January 20, 2011]

3.5 Demonstration of Preconstruction Compliance with Toxic Standards

3.5.1 The permittee shall maintain documentation of compliance with the requirements of IDAPA 58.01.01.210 for any modifications made to the facility after the issuance date of this permit that may increase toxic air pollutants.

[January 20, 2011]

Reporting Requirements

3.6 Reporting Requirement

3.6.1 Once per year, the permittee shall report to DEQ the 12-month total facility-wide criteria pollutant emissions recorded under the Criteria Pollutant Emissions Calculation (permit condition 3.4.3) used to determine compliance with the Criteria Pollutant FEC (permit condition 3.3). The report shall include, but is not limited to, all methods, equations, emissions factors, and sources for emissions factors not previously identified used to determine the 12-month total facility-wide criteria pollutant emissions. Records of the quantity of fuel consumption, steam production, and process throughput used for determining the 12-month total facility-wide criteria pollutant emissions shall be submitted with the annual report. In addition, the permittee shall provide DEQ with the 12-month rolling emissions totals generated under the Criteria Pollutant Emissions Calculation (permit condition 3.4.3) for the reporting period.

Any changes in the List of Emissions Units (permit condition 3.9) not identified in the previous annual report shall be identified and explained. The report shall be for the period January 1st through December 31st and shall be due on or before January 30th of each calendar year. All reports must be certified in accordance with IDAPA 58.01.01.123. The report shall be sent to DEQ at the following address:

Air Quality Stationary Source Division
Department of Environmental Quality
1410 N. Hilton
Boise, ID 83706
Telephone: (208) 373-0502
Fax: (208) 373-0340

[January 20, 2011]

General FEC Conditions

3.7 Notice and Recordkeeping of Ambient Concentration Estimates

3.7.1 For facility changes that comply with the terms and conditions establishing the FEC but are not included in the estimate of ambient concentration analysis approved for the permit establishing the FEC, the permittee shall review the estimate of ambient concentration analysis. In the event the facility change would result in a significant contribution (as defined in IDAPA 58.01.01.006) above the design concentration determined by the estimate of ambient concentration analysis approved for the permit establishing the FEC, but does not cause or significantly contribute to a violation of any ambient air quality standard, the permittee shall provide notice to DEQ in accordance with IDAPA 58.01.01.181.01.b. This notice shall also identify new or modified emission factors used to estimate emissions for purposes of this review of the estimate of ambient concentration analysis and for determining compliance with the Criteria Pollutant Facility Emissions Cap Compliance (permit condition 3.4).

The permittee shall record and maintain documentation of the review of the ambient concentration analysis on site.

[January 20, 2011]

3.7.2 In accordance with IDAPA 58.01.01.181.03, the permittee shall use the most current EPA-approved regulatory guideline model to estimate ambient concentrations where required by the Demonstration of Preconstruction Compliance with Toxic Standards (permit condition 3.5.1), except where DEQ approves the permittee's use of an alternative model. The permittee is strongly encouraged to submit a modeling protocol to DEQ for review and approval prior to conducting a modeling analysis using a model that differs from that used in the permit application.

[January 20, 2011]

3.8 Renewal

3.8.1 In accordance with IDAPA 58.01.01.179.02, the permittee shall submit a complete application for a renewal of the terms and conditions establishing the FEC at least six months before, but no earlier than 18 months before, the expiration date of this permit.

3.8.2 In accordance with IDAPA 58.01.01.177, the permittee's renewal application for this permit must include the information required under Sections 176 through 181 and Subsections 177.01 through 177.03.

3.8.3 In accordance with IDAPA 58.01.01.177.02.d, regarding Estimates of Ambient Concentrations, for a renewal of terms and conditions establishing a FEC, it is presumed that the previous permitting analysis is satisfactory, unless the Department determines otherwise.

[January 20, 2011]

3.9 Non-Renewal

3.9.1 If the permittee elects to not renew the terms and conditions establishing the FEC, the permittee shall notify the Department of this decision at least six months before, but not earlier than 18 months before, the expiration date of the FEC provisions of this permit.

3.9.2 If the permittee has made any changes or modifications in accordance with the FEC terms and conditions for which a PTC would have been needed absent the FEC, the permittee's notice shall identify the changes or modifications and request issuance of one or more PTCs to cover them.

3.9.3 Upon expiration of the FEC terms and conditions, all other provisions of this permit shall remain in effect as a Permit to Construct.

[January 20, 2011]

3.10 List of Emissions Units

3.9.1 A list of boilers, dryers, coolers, and space heaters (except for space heaters with emissions which are "Below Regulatory Concern") installed at the facility, which are subject to permitting requirements, shall be maintained by the permittee and provided to DEQ personnel upon request. The list shall include:

- Identification if equipment was included in the permit application;
- Identification if in service at time of permit issuance;
- Equipment location;
- Installation date, if installed after permit issuance;
- De-installation date if removed after permit issuance; and
- Identification if equipment is subject to NSPS requirements (40 CFR 60).

[January 20, 2011]

BOILER 1, BOILER 2, AND BOILER 3

4.1 Boiler 1, Boiler 2, and Boiler 3 Requirements

Reserved (Section 3 of the Tier I operating permit contains the conditions that apply to Boiler 1, Boiler 2, and Boiler 3 located at this facility.)

PROCESS A

5.1 Process A Requirements

Reserved (Section 4 of the Tier I operating permit contains the conditions that apply to Process A located at this facility.)

PROCESS B

6.1 Process B Requirements

Reserved (Section 5 of the Tier I operating permit contains the conditions that apply to Process B located at this facility.)

PROCESS C

7.1 Process Description

The following is a narrative description of Process C regulated in this Permit to Construct. This description is for informational purposes only.

Process C produces dehydrated food products. The raw materials put into the process include raw and cooked foods, previously dehydrated foods, and food additives, including sulfites. Process C can operate up to 8,760 hr/yr. There are no alternate operating scenarios.

Emissions units included in Process C include process vents from process equipment. All emissions units associated with this process are potential sources of particulate matter. The process equipment can potentially emit SO_2 from the decomposition of sulfites. Drying heat is provided by steam produced by the plant's boilers and natural gas-fired heaters.

Modifications and changes to Process C that are subject to PTC requirements but for which a PTC has not previously been issued are listed below:

- 1982, Installation of Reyco Slice 13 MMBtu/hr space heater
- 1973, Installation of dryer and stacks CTQ, CTR, CTS, and CTT
- Various dates, "Debottlenecking" of Dryer served by stack CIR
- Early 1980s, Installation of dryer served by stack CBB
- 1995, Replacement of process burners for the dryer serving stacks CHX, CHY, and CHZ
- 2001, Installation of dryer served by stack CNV
- 2001, Installation of dryer served by stack CNW
- 1999, Upgrade of dryer served by stacks CXX and CYY

Issuance of this Permit to Construct meets the requirement to obtain a PTC for these modifications.
[January 20, 2011]

7.2 Emission Control Description

The following table includes emissions units that are not regulated sources as identified and enumerated in Table 1.1. The additional units are included here because their emissions are included in the determinations of process weight limitations.

Table 7.1 EMISSIONS UNITS AND EMISSIONS CONTROL DEVICES

Emissions Unit(s)/Processes	Emission Control Device
Process C: ALT/ALQ/ALB: Dryer – steam heated ALX/ALW/ALV/ALY: Dryer – steam heated AGQ/AEV/AEW: Dryer – steam heated CHV/CIR: Dryer- steam heated CXX/CYY: Dryer - 6.05 MMBtu/hr pre-heater, 4.4 MMBtu/hr front dryer, 6.6 MMBtu/hr rear dryer, and a 1.2 MMBtu/hr final heater, natural gas-fired CHX: Pre-dryer – 12.2 MMBtu/hr, natural gas-fired CHY/CHZ: Dryer – 2.5 MMBtu/hr, natural gas-fired CIS: Dryer – steam heated CIT: Dryer – steam heated HEB/HNL: Dryer – steam heated with optional 14 MMBtu/hr pre-heater, natural gas-fired CNV: Dryer - 12 MMBtu/hr, natural gas-fired CNW: Dryer - 12 MMBtu/hr, natural gas-fired CTU: Dryer - steam heated CTZ: Finish dryer - 5.75 MMBtu/hr, natural gas-fired CBB: Dryer – 1.5 MMBtu/hr, natural gas-fired CTQ/CTR/CTS/CTT: Dryer – 10.8 MMBtu/hr, natural gas-fired and steam heated TCD/TCO: Dryer – 2 MMBtu/hr, natural gas-fired and steam heated TAC/TAH: Pre-dryer – 2.5 MMBtu/hr, natural gas-fired EGS/EGT/CHI/CHK/ENV/DSX/ENR/EDO: Materials transport systems IBE/EUW/FIF: Animal feed materials recovery units	None Except the burners associated with source CTZ are Low-NO_X/CO burner

This Permit to Construct authorizes the above-listed modifications and changes as being covered by PTCs.

[January 20, 2011]

Emissions Limits

7.3 Particulate Matter – New Equipment Process Weight Limitations

The permittee shall not discharge to the atmosphere from any source operating on or after October 1, 1979, PM in excess of the amount shown by the following equations, where E is the allowable emission from the entire source in pounds per hour, and PW is the process weight in pounds per hour.

- If PW is less than 9,250 lb/hr,

  $E = 0.045 (PW)^{0.60}$

- If PW is equal to or greater than 9,250 lb/hr,

  $E = 1.10 (PW)^{0.25}$

[IDAPA 58.01.01.701, 4/5/00]

7.3.1 The process weight PM limitation applies to the collection of emissions units/processes identified in Table 7.1. Demonstrating compliance with the visible emissions requirement contained in the Visible Emissions Monitoring requirement (permit condition 7.9) inherently demonstrates compliance with the process weight PM emissions limitations.

[IDAPA 58.01.01.322.01, 3/19/99]

7.4 Visible Emissions

The permittee shall not discharge any air pollutant to the atmosphere from any point of emission for a period or periods aggregating more than three minutes in any 60-minute period which is greater than 20% opacity as determined by procedures contained in IDAPA 58.01.01.625. These provisions shall not apply when the presence of uncombined water, nitrogen oxides, and/or chlorine gas are the only reason(s) for the failure of the emission to comply with the requirements of this section.

[IDAPA 58.01.01.625, 4/5/00]

7.5 Emissions Limits

The PM_{10}, SO_2, NO_X, CO, and VOC emissions from the stack of finish dryer CTZ shall not exceed any corresponding emissions rate limits listed in the following Table.

Table 7.2 NATURAL GAS-FIRED FINISH DRYER CTZ EMISSIONS LIMITS[1]

Source Description	PM_{10}		SO_2		NO_X		CO		VOC	
	lb/hr	T/yr[2]	lb/hr	T/yr[2]	lb/hr	T/yr[2]	lb/hr	T/yr[2]	lb/hr	T/yr[2]
Finish Dryer CTZ	0.58	1.63	0.12	0.36	0.20	0.88	1.43	6.24	0.06	0.26

1. In absence of any other credible evidence, compliance is assured by complying with this permit's operating, monitoring and record keeping requirements.
2. Tons per consecutive 12-calendar month period.

[PTC No. P-2009.0042, 8/26/09]

OperatingRequirements

7.6 Allowable Fuel Types

The CTZ finish dryer shall combust only natural gas as fuel.

[PTC No. P-2009.0042, 8/26/09]

7.7 Dehydrated Food Products Hourly Production Weight Rate Limit

The dehydrated food products production rate for the CTZ finish dryer shall not exceed 2,800 lb/hr.

[PTC No. P-2009.0042, 8/26/09]

7.8 Dehydrated Food Products Annual Production Weight Rate Limit

The dehydrated food products production rate for the CTZ finish dryer shall not exceed 15,698,000 lb/yr in any consecutive 12-calendar months.

[PTC No. P-2009.0042, 8/26/09]

Monitoring and Recordkeeping Requirements

7.9 Visible Emissions Monitoring

To demonstrate compliance with the Particulate Matter – New Equipment Process Weight Limitations (permit condition 7.3), the permittee shall conduct a monthly one-minute observation of each affected emissions point, or source, using EPA Method 22 (in 40 CFR 60, Appendix A). If visible emissions in excess of 10% opacity are observed from any emissions point, or source, a six-minute observation, using EPA Method 9, shall be conducted. The visible emissions evaluations shall be performed during daylight hours under normal operating conditions. The results of each evaluation shall be recorded and shall be maintained in accordance with the Recordkeeping General Requirements permit condition.

[IDAPA 58.01.01.322.01, 3/19/99, IDAPA 58.01.01.322.06, 07, 5/1/94]

7.10 Dehydrated Food Products Hourly Production Weight Monitoring

To demonstrate compliance with the dehydrated food products hourly production limit the permittee shall monitor and record dehydrated food products production for the CTZ finish dryer daily. Hourly production shall be determined by dividing total daily dehydrated food products production by the actual hours of operation for the day.

[PTC No. P-2009.0042, 8/26/09]

7.11 Dehydrated Food Products Annual Production Weight Monitoring

To demonstrate compliance with the dehydrated food products annual production limit the permittee shall monitor and record dehydrated food products production for the CTZ finish dryer monthly and annually. Annual throughput shall be determined by summing total monthly dehydrated food products production over each previous consecutive 12-month period.

[PTC No. P-2009.0042, 8/26/09]

7.12 Recordkeeping

The permittee shall comply with the recordkeeping requirements of General Provision 7.

[PTC No. P-2009.0042, 8/26/09]

PLANT SPACE HEATERS

8.1 Process Description

The BAF Blackfoot Facility has natural gas-fired space heaters ranging in size from less than 200,000 Btu/hr to 7.5 MMBtu/hr. At the time of permit issuance total space heater combustion capacity is 59.5 MMBtu/hr. Most of the units provide direct heating; i.e., the combustion air from the unit is discharged directly into the room to provide heating. The only space heater installed at the facility that required a PTC, but for which a PTC has not previously been issued, is the Reyco Slice space heater. This Permit to Construct authorizes the Reyco space heater as being covered by a PTC. The aggregate of all other space heaters at the facility qualifies for a single Category I exemption from PTC permitting under IDAPA 58.01.01.223.05.

[January 20, 2011]

8.2 Emission Control Description

Table 8.1 EMISSIONS UNITS AND EMISSIONS CONTROL DEVICES

Emissions Unit(s)/Processes	Emission Control Device
Reyco Slice: Space heater - 13.0 MMBtu/hr, natural gas-fired	None

[January 20, 2011]

Emissions Limits

8.3 Emissions Limits

There are no emission limits specifically applicable to the plant space heaters. Emissions from plant space heaters are regulated as part of the facility emissions cap in Permit Section 3.

[January 20, 2011]

8.4 Visible Emissions

The permittee shall not discharge any air pollutant to the atmosphere from any point of emission for a period or periods aggregating more than three minutes in any 60-minute period which is greater than 20% opacity as determined by procedures contained in IDAPA 58.01.01.625. These provisions shall not apply when the presence of uncombined water, nitrogen oxides, and/or chlorine gas are the only reason(s) for the failure of the emission to comply with the requirements of this section.

[January 20, 2011]

Monitoring and Recordkeeping Requirements

8.5 Process Description

BAF shall determine the total natural gas usage of plant space heaters on a monthly basis. Natural gas combusted in the plant space heaters will be calculated as the difference between total facility natural gas usage less natural gas combusted in the boilers and process dryers. Emissions shall be calculated using the emission factors in the appendices of the permit.

[January 20, 2011]

COMPLIANCE SCHEDULE

9.1 PM_{10} Compliance

To ensure compliance with applicable requirements in the Rules for the Control of Air Pollution in Idaho, IDAPA 58.01.01, the permittee shall implement the compliance requirements presented in the Exhaust Stacks Proposed For Removal and the Exhaust Stacks Proposed For Increased Stack Heights permit conditions. The Exhaust Stacks Proposed For Removal and the Exhaust Stacks Proposed For Increased Stack Heights permit conditions are necessary to ensure that PM_{10} emissions from the facility do not cause or significantly contribute to a violation of the NAAQS. Any changes in the methods proposed or timeframes specified in this compliance schedule must be approved by DEQ prior to implementation. Upon issuance of this PTC, the Permittee has three years to comply with the following permit requirements.

[January 20, 2011]

9.2 Exhaust Stacks Proposed For Removal

Unless an alternative compliance method has been demonstrated by Permittee and approved by DEQ the Permittee shall remove and render inoperable the following exhaust stacks at this facility:

Table 9.1 EXHAUST STACKS PROPOSED FOR REMOVAL

Exhaust Stack
CHI
CHK
DKV
DRY
DSK
DSO
DUU

[January 20, 2011]

9.3 Exhaust Stacks Proposed For Increased Height

Unless an alternative compliance method has been demonstrated by Permittee and approved by DEQ the Permittee shall increase the following exhaust stacks height at this facility to 90 feet or remove the stack from operation:

Table 9.2 EXHAUST STACKS PROPOSED FOR INCREASED HEIGHT

Exhaust Stack
CHX
CXX
DHT
DHU
DHZ
DQA
DQB
DUQ
DUT
DUV

[January 20, 2011]

9.4 Exhaust Stacks Identification

The exhaust stacks presented in both the Exhaust Stacks Proposed For Removal and the Exhaust Stacks Proposed For Increased Stack Heights permit conditions shall be identified in a manner that will allow a DEQ representative to positively identify each individual stack.

[January 20, 2011]

Reporting Requirements

9.5 Reporting

After the exhaust stacks have been modified or removed and the PM_{10} modeling analyses have been completed, the permittee shall submit a final report to DEQ detailing the modifications made or the removals of the exhaust stacks and the dates that these actions occurred. If the permittee has submitted an alternate compliance demonstration program that has been approved by DEQ, in accordance with the PM_{10} Compliance requirement (permit condition 9.1), the permittee's final report shall detail compliance with the provisions of that alternate compliance plan.

The report shall be sent to DEQ at the following address:

Air Quality Stationary Source Division
Department of Environmental Quality
1410 N. Hilton
Boise, ID 83706
Telephone: (208) 373-0502
Fax: (208) 373-0340

[January 20, 2011]

PERMIT TO CONSTRUCT GENERAL PROVISIONS

General Compliance

1. The permittee has a continuing duty to comply with all terms and conditions of this permit. All emissions authorized herein shall be consistent with the terms and conditions of this permit and the Rules for the Control of Air Pollution in Idaho. The emissions of any pollutant in excess of the limitations specified herein, or noncompliance with any other condition or limitation contained in this permit, shall constitute a violation of this permit and the Rules for the Control of Air Pollution in Idaho, and the Environmental Protection and Health Act, Idaho Code §39-101, et seq.

[Idaho Code §39-101, et seq.]

2. The permittee shall at all times (except as provided in the Rules for the Control of Air Pollution in Idaho) maintain in good working order and operate as efficiently as practicable, all treatment or control facilities or systems installed or used to achieve compliance with the terms and conditions of this permit and other applicable Idaho laws for the control of air pollution.

[IDAPA 58.01.01.211, 5/1/94]

3. Nothing in this permit is intended to relieve or exempt the permittee from the responsibility to comply with all applicable local, state, or federal statutes, rules and regulations.

[IDAPA 58.01.01.212.01, 5/1/94]

Inspection and Entry

4. Upon presentation of credentials, the permittee shall allow DEQ or an authorized representative of DEQ to do the following:

   - Enter upon the permittee's premises where an emissions source is located or emissions related activity is conducted, or where records are kept under conditions of this permit;
   - Have access to and copy, at reasonable times, any records that are kept under the conditions of this permit;
   - Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
   - As authorized by the Idaho Environmental Protection and Health Act, sample or monitor, at reasonable times, substances or parameters for the purpose of determining or ensuring compliance with this permit or applicable requirements.

[Idaho Code §39-108]

Construction and Operation Notification

5. The permittee shall furnish DEQ written notifications as follows in accordance with IDAPA 58.01.01.211:

   - A notification of the date of initiation of construction, within five working days after occurrence; except in the case where pre-permit construction approval has been granted then notification shall be made within five working days after occurrence or within five working days after permit issuance whichever is later;
   - A notification of the date of any suspension of construction, if such suspension lasts for one year or more;
   - A notification of the anticipated date of initial start-up of the stationary source or facility not more than sixty days or less than thirty days prior to such date; and
   - A notification of the actual date of initial start-up of the stationary source or facility within fifteen days after such date.

[IDAPA 58.01.01.211, 5/1/94]

Performance Testing

6. If performance testing (air emissions source test) is required by this permit, the permittee shall provide notice of intent to test to DEQ at least 15 days prior to the scheduled test date or shorter time period as approved by DEQ. DEQ may, at its option, have an observer present at any emissions tests conducted on a source. DEQ requests that such testing not be performed on weekends or state holidays.

   All performance testing shall be conducted in accordance with the procedures in IDAPA 58.01.01.157. Without prior DEQ approval, any alternative testing is conducted solely at the permittee's risk. If the permittee fails to obtain prior written approval by DEQ for any testing deviations, DEQ may determine that the testing does not satisfy the testing requirements. Therefore, at least 30 days prior to conducting any performance test, the permittee is encouraged to submit a performance test protocol to DEQ for approval. The written protocol shall include a description of the test method(s) to be used, an explanation of any or unusual circumstances regarding the proposed test, and the proposed test schedule for conducting and reporting the test.

   Within 30 days following the date in which a performance test required by this permit is concluded, the permittee shall submit to DEQ a performance test report. The written report shall include a description of the process, identification of the test method(s) used, equipment used, all process operating data collected during the test period, and test results, as well as raw test data and associated documentation, including any approved test protocol.

[IDAPA 58.01.01.157, 4/5/00]

Monitoring and Recordkeeping

7. The permittee shall maintain sufficient records to ensure compliance with all of the terms and conditions of this permit. Records of monitoring information shall include, but not be limited to the following: (a) the date, place, and times of sampling or measurements; (b) the date analyses were performed; (c) the company or entity that performed the analyses; (d) the analytical techniques or methods used; (e) the results of such analyses; and (f) the operating conditions existing at the time of sampling or measurement. All monitoring records and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes, but is not limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation and copies of all reports required by this permit. All records required to be maintained by this permit shall be made available in either hard copy or electronic format to DEQ representatives upon request.

[IDAPA 58.01.01.211, 5/1/94]

Excess Emissions

8. The permittee shall comply with the procedures and requirements of IDAPA 58.01.01.130-136 for excess emissions due to startup, shutdown, scheduled maintenance, safety measures, upsets and breakdowns.

[IDAPA 58.01.01.130-136, 4/5/00]

Certification

9. All documents submitted to DEQ, including, but not limited to, records, monitoring data, supporting information, requests for confidential treatment, testing reports, or compliance certification shall contain a certification by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete.

[IDAPA 58.01.01.123, 5/1/94]

False Statements

10. No person shall knowingly make any false statement, representation, or certification in any form, notice, or report required under this permit, or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.125, 3/23/98]

Tampering

11. No person shall knowingly render inaccurate any monitoring device or method required under this permit or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.126, 3/23/98]

Transferability

12. This permit is transferable in accordance with procedures listed in IDAPA 58.01.01.209.06.

[IDAPA 58.01.01.209.06, 4/11/06]

Severability

13. The provisions of this permit are severable, and if any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

[IDAPA 58.01.01.211, 5/1/94]

APPENDIX A – PM_{10} EMISSIONS FACTORS

Production Process	Stack Identification Code	Emissions Factor	
		Emissions Factor	Units
Boilers	Boiler 1 – natural gas	0.009	lb-PM_{10}/1,000 lbs steam
Boilers	Boiler 1 – #6 oil	0.071	lb-PM_{10}/1,000 lbs steam
Boilers	Boiler 2 – natural gas	0.009	lb-PM_{10}/1,000 lbs steam
Boilers	Boiler 2 – #6 oil	0.072	lb-PM_{10}/1,000 lbs steam
Boilers	Boiler 3 – natural gas	0.010	lb-PM_{10}/1,000 lbs steam
A	DHQ	0.015	lb-PM_{10}/1,000 lbs of unit process throughput
A	DHT	0.110	lb-PM_{10}/1,000 lbs of unit process throughput
A	DHU	0.110	lb-PM_{10}/1,000 lbs of unit process throughput
A	DHZ	0.083	lb-PM_{10}/1,000 lbs of unit process throughput
A	DKV	0.094	lb-PM_{10}/1,000 lbs of unit process throughput
A	DKW	0.003	lb-TSP/1,000 lbs of unit process throughput (including mix back)
B	DXS	0.008	lb-PM_{10}/1,000 lbs of unit process throughput
B	DUO	0.008	lb-PM_{10}/1,000 lbs of unit process throughput
B	DPY	0.008	lb-PM_{10}/1,000 lbs of unit process throughput
B	DPZ	0.008	lb-PM_{10}/1,000 lbs of unit process throughput
B	DUQ	0.110	lb-PM_{10}/1,000 lbs of unit process throughput
B	DUT	0.110	lb-PM_{10}/1,000 lbs of unit process throughput
B	DQA	0.110	lb-PM_{10}/1,000 lbs of unit process throughput
B	DQB	0.110	lb-PM_{10}/1,000 lbs of unit process throughput
B	DUV	0.083	lb-PM_{10}/1,000 lbs of unit process throughput
B	DSO	0.046	lb-PM_{10}/1,000 lbs of unit process throughput
B	DSK	0.008	lb-PM_{10}/1,000 lbs of unit process throughput
B	DUY	0.003	lb-PM_{10}/1,000 lbs of unit process throughput
B	DUZ	0.003	lb-PM_{10}/1,000 lbs of unit process throughput
B	DUU	0.004	lb-TSP/1,000 lbs of unit process throughput (including mixback)
B	DRY	0.004	lb-PM_{10}/1,000 lbs of unit process throughput
C	ALB	0.055	lb-PM_{10}/1,000 lbs of unit process throughput
C	ALQ	0.035	lb-PM_{10}/1,000 lbs of unit process throughput
C	ALT	0.004	lb-PM_{10}/1,000 lbs of unit process throughput
C	ALY	0.001	lb-PM_{10}/1,000 lbs of unit process throughput
C	ALV	0.055	lb-PM_{10}/1,000 lbs of unit process throughput
C	ALW	0.035	lb-PM_{10}/1,000 lbs of unit process throughput
C	ALX	0.0004	lb-PM_{10}/1,000 lbs of unit process throughput
C	AEV	0.055	lb-PM_{10}/1,000 lbs of unit process throughput
C	AEW	0.039	lb-PM_{10}/1,000 lbs of unit process throughput
C	AGQ	0.001	lb-PM_{10}/1,000 lbs of unit process throughput
C	CIR	0.076	lb-PM_{10}/1,000 lbs of unit process throughput
C	CHV	0.001	lb-PM_{10}/1,000 lbs of unit process throughput
C	IBE	0.007	lb-PM_{10}/1,000 lbs of unit process throughput
C	CXX	0.343	lb-PM_{10}/1,000 lbs of unit process throughput
C	CYY	0.327	lb-PM_{10}/1,000 lbs of unit process throughput
C	CHX	0.507	lb-PM_{10}/1,000 lbs of unit process throughput
C	CHY	0.190	lb-PM_{10}/1,000 lbs of unit process throughput
C	CHZ	0.093	lb-PM_{10}/1,000 lbs of unit process throughput
C	HEB	0.640	lb-PM_{10}/1,000 lbs of unit process throughput
C	HNL	0.142	lb-PM_{10}/1,000 lbs of unit process throughput
C	CBB	0.639	lb-PM_{10}/1,000 lbs of unit process throughput
C	CNV	0.096	lb-PM_{10}/1,000 lbs of unit process throughput
C	CNW	0.096	lb-PM_{10}/1,000 lbs of unit process throughput
C	CTU	0.448	lb-PM_{10}/1,000 lbs of unit process throughput

Production Process	Stack Identification Code	Emissions Factor	
		Emissions Factor	Units
C	CTQ	0.054	lb-PM_{10}/1,000 lbs of unit process throughput
C	CTR	0.046	lb-PM_{10}/1,000 lbs of unit process throughput
C	CTS	0.019	lb-PM_{10}/1,000 lbs of unit process throughput
C	CTT	0.023	lb-PM_{10}/1,000 lbs of unit process throughput
C	TCD	0.395	lb-PM_{10}/1,000 lbs of unit process throughput
C	TCO	0.395	lb-PM_{10}/1,000 lbs of unit process throughput
C	TAC	0.137	lb-PM_{10}/1,000 lbs of unit process throughput
C	TAH	0.137	lb-PM_{10}/1,000 lbs of unit process throughput
C	TEM	0.274	lb-PM_{10}/1,000 lbs of unit process throughput
C	TEE	0.234	lb-PM_{10}/1,000 lbs of unit process throughput
C	ENV	0.000	lb-PM_{10}/1,000 lbs of unit process throughput
C	EUW	0.000	lb-PM_{10}/1,000 lbs of unit process throughput
C	DSX	0.009	lb-PM_{10}/1,000 lbs of unit process throughput
C	CHI	0.009	lb-PM_{10}/1,000 lbs of unit process throughput
C	CHK	0.009	lb-PM_{10}/1,000 lbs of unit process throughput
C	EGS	0.002	lb-PM_{10}/1,000 lbs of unit process throughput
C	EGT	0.002	lb-PM_{10}/1,000 lbs of unit process throughput
C	ENR	0.002	lb-PM_{10}/1,000 lbs of unit process throughput
C	EDO	0.002	lb-PM_{10}/1,000 lbs of unit process throughput
C	FIF	0.002	lb-PM_{10}/1,000 lbs of unit process throughput
Plant	Heaters	0.007	lb-PM_{10}/MMBtu
Plant	Fugitive dust	3.220	lb-PM_{10}/hr

APPENDIX B – SO_2 EMISSIONS FACTORS

Production Process	Stack Identification Code	Process Related Emissions Factor		Combustion Related Emissions Factor	
		Emissions Factor	Units	Emissions Factor	Units
Boilers	Boiler 1 – natural gas	N/A	N/A	0.003	lb-SO_2/1,000 lbs of steam
Boilers	Boiler 1 – #6 oil	N/A	N/A	0.563	lb-SO_2/1,000 lbs of steam
Boilers	Boiler 2 – natural gas	N/A	N/A	0.003	lb-SO_2/1,000 lbs of steam
Boilers	Boiler 2 – #6 oil	N/A	N/A	0.569	lb-SO_2/1,000 lbs of steam
Boilers	Boiler 3 – natural gas	N/A	N/A	0.003	lb-SO_2/1,000 lbs of steam
A	DHQ	N/A	N/A	N/A	N/A
A	DHT	0.005	lb-SO_2/ 1,000 lbs of unit process throughput	0.0024	lb-SO_2/ MMBtu
A	DHU	0.005	lb-SO_2/ 1,000 lbs of unit process throughput	0.0024	lb-SO_2/ MMBtu
A	DHZ	0.005	lb-SO_2/ 1,000 lbs of unit process throughput	0.0024	lb-SO_2/ MMBtu
B	DUQ	0.005	lb-SO_2/ 1,000 lbs of unit process throughput	0.0024	lb-SO_2/ MMBtu
B	DUT	0.005	lb-SO_2/ 1,000 lbs of unit process throughput	0.0024	lb-SO_2/ MMBtu
B	DQA	0.005	lb-SO_2/ 1,000 lbs of unit process throughput	0.0024	lb-SO_2/ MMBtu
B	DQB	0.005	lb-SO_2/ 1,000 lbs of unit process throughput	0.0024	lb-SO_2/ MMBtu
B	DUV	0.005	lb-SO_2/ 1,000 lbs of unit process throughput	0.0024	lb-SO_2/ MMBtu
B	DSO	0.005	lb-SO_2/ 1,000 lbs of unit process throughput	N/A	N/A
C	ALB	0.011	lb-SO_2/ 1,000 lbs of product	N/A	N/A
C	ALQ	0.011	lb-SO_2/ 1,000 lbs of product	N/A	N/A
C	ALV	0.011	lb-SO_2/ 1,000 lbs of product	N/A	N/A
C	ALW	0.011	lb-SO_2/ 1,000 lbs of product	N/A	N/A
C	AEV	0.011	lb-SO_2/ 1,000 lbs of product	0.0024	lb-SO_2/ MMBtu
C	AEW	0.011	lb-SO_2/ 1,000 lbs of product	N/A	N/A
C	AEW	0.011	lb-SO_2/ 1,000 lbs of product	N/A	N/A
C	CIR	0.11	lb-SO_2/ 1,000 lbs of product	N/A	N/A
C	CXX	0.058	lb-SO_2/ 1,000 lbs of product	0.0024	lb-SO_2/ MMBtu
C	CYY	0.061	lb-SO_2/ 1,000 lbs of product	0.0024	lb-SO_2/ MMBtu
C	CHX	0.019	lb-SO_2/ 1,000 lbs of product	0.0024	lb-SO_2/ MMBtu
C	CHY	0.007	lb-SO_2/ 1,000 lbs of product	0.0024	lb-SO_2/ MMBtu
C	CHZ	0.003	lb-SO_2/ 1,000 lbs of product	0.0024	lb-SO_2/ MMBtu
C	CTT	0.031	lb-SO_2/ 1,000 lbs of product	0.0024	lb-SO_2/ MMBtu
C	CTZ	0.032	lb-SO_2/ 1,000 lbs of product	0.0024	lb-SO_2/ MMBtu
C	TCD	0.080	lb-SO_2/ 1,000 lbs of product	0.0024	lb-SO_2/ MMBtu
C	TAC	0.020	lb-SO_2/ 1,000 lbs of product	0.0024	lb-SO_2/ MMBtu
C	TAH	0.020	lb-SO_2/ 1,000 lbs of product	0.0024	lb-SO_2/ MMBtu
C	TEM	0.020	lb-SO_2/ 1,000 lbs of product	N/A	N/A
C	TEE	0.020	lb-SO_2/ 1,000 lbs of product	N/A	N/A
Plant	Heaters	N/A	N/A	0.0024	lb-SO_2/ MMBtu
C	HEB	0.102	lb-SO_2/ 1,000 lbs of product	0.0024	lb-SO_2/ MMBtu
C	HNL	0.017	lb-SO_2/ 1,000 lbs of product	0.0024	lb-SO_2/ MMBtu
C	CBB	0.099	lb-SO_2/ 1,000 lbs of product	0.0024	lb-SO_2/ MMBtu
C	CNV	0.036	lb-SO_2/ 1,000 lbs of product	0.0024	lb-SO_2/ MMBtu
C	CNW	0.036	lb-SO_2/ 1,000 lbs of product	0.0024	lb-SO_2/ MMBtu

Production Process	Stack Identification Code	Process Related Emissions Factor		Combustion Related Emissions Factor	
		Emissions Factor	Units	Emissions Factor	Units
C	CTU	0.166	lb-SO_2/ 1,000 lbs of product	N/A	N/A
C	CTQ	0.072	lb-SO_2/ 1,000 lbs of product	0.0024	lb-SO_2/ MMBtu
C	CTR	0.062	lb-SO_2/ 1,000 lbs of product	0.0024	lb-SO_2/ MMBtu
C	CTS	0.026	lb-SO_2/ 1,000 lbs of product	0.0024	lb-SO_2/ MMBtu

APPENDIX C – NO_X EMISSIONS FACTORS

Production Process	Stack Identification Code	Emissions Factor	
		Annual Emissions Factor	Units
Boilers	Boiler 1 – natural gas	0.119	lb-NO_X/1,000 lbs of steam
Boilers	Boiler 1 – #6 oil	0.769	lb-NO_X/1,000 lbs of steam
Boilers	Boiler 2 – natural gas	0.120	lb-NO_X/1,000 lbs of steam
Boilers	Boiler 2 – #6 oil	0.777	lb-NO_X/1,000 lbs of steam
Boilers	Boiler 3 – natural gas	0.128	lb-NO_X/1,000 lbs of steam
A	DHQ	N/A	N/A
A	DHT	0.077	lb-NO_X/MMBtu
A	DHU	0.077	lb-NO_X/MMBtu
A	DHZ	0.051	lb-NO_X/MMBtu
B	DUQ	0.077	lb-NO_X/MMBtu
B	DUT	0.077	lb-NO_X/MMBtu
B	DQA	0.077	lb-NO_X/MMBtu
B	DQB	0.077	lb-NO_X/MMBtu
B	DUV	0.051	lb-NO_X/MMBtu
C	AEV	0.051	lb-NO_X/MMBtu
C	CXX	0.054	lb-NO_X/MMBtu
C	CYY	0.047	lb-NO_X/MMBtu
C	CHX	0.051	lb-NO_X/MMBtu
C	CHY	0.051	lb-NO_X/MMBtu
C	CHZ	0.051	lb-NO_X/MMBtu
C	HEB	0.027	lb-NO_X/MMBtu
C	HNL	0.027	lb-NO_X/MMBtu
C	CBB	0.051	lb-NO_X/MMBtu
C	CNV	0.051	lb-NO_X/MMBtu
C	CNW	0.051	lb-NO_X/MMBtu
C	CTQ	0.051	lb-NO_X/MMBtu
C	CTR	0.051	lb-NO_X/MMBtu
C	CTS	0.051	lb-NO_X/MMBtu
C	CTT	0.051	lb-NO_X/MMBtu
C	CTZ	0.051	lb-NO_X/MMBtu
C	TCD	0.051	lb-NO_X/MMBtu
C	TAC	1.051	lb-NO_X/MMBtu
C	TAH	2.051	lb-NO_X/MMBtu
Plant	Heaters	0.098	lb-NO_X/MMBtu

APPENDIX D – CO EMISSIONS FACTORS

Production Process	Stack Identification Code	Emissions Factor	
		Emissions Factor	Units
Boilers	Boiler 1 – natural gas	0.100	lb-CO/1,000 lbs steam
Boilers	Boiler 1 – #6 oil	0.105	lb-CO/1,000 lbs steam
Boilers	Boiler 2 – natural gas	0.101	lb-CO/1,000 lbs steam
Boilers	Boiler 2 – #6 oil	0.106	lb-CO/1,000 lbs steam
Boilers	Boiler 3 – natural gas	0.107	lb-CO/1,000 lbs steam
A	DHT	0.400	lbs-CO/MMBtu
A	DHU	0.400	lbs-CO/MMBtu
A	DHZ	0.260	lbs-CO/MMBtu
B	DUQ	0.400	lbs-CO/MMBtu
B	DUT	0.400	lbs-CO/MMBtu
B	DQA	0.400	lbs-CO/MMBtu
B	DQB	0.400	lbs-CO/MMBtu
B	DUV	0.260	lbs-CO/MMBtu
C	AEV	0.260	lbs-CO/MMBtu
C	DHZ	0.260	lbs-CO/MMBtu
C	CXX	0.254	lbs-CO/MMBtu
C	CYY	0.313	lbs-CO/MMBtu
C	CHX	0.260	lbs-CO/MMBtu
C	CHY	0.260	lbs-CO/MMBtu
C	CHZ	0.260	lbs-CO/MMBtu
C	HEB	0.043	lbs-CO/MMBtu
C	HNL	0.043	lbs-CO/MMBtu
C	CBB	0.260	lbs-CO/MMBtu
C	CNV	0.260	lbs-CO/MMBtu
C	CNW	0.260	lbs-CO/MMBtu
C	CTQ	0.260	lbs-CO/MMBtu
C	CTR	0.260	lbs-CO/MMBtu
C	CTS	0.260	lbs-CO/MMBtu
C	CTT	0.260	lbs-CO/MMBtu
C	TCD	0.260	lbs-CO/MMBtu
C	TAC	0.260	lbs-CO/MMBtu
C	TAH	0.260	lbs-CO/MMBtu
Plant	Heaters	0.082	lbs-CO/MMBtu

APPENDIX E – VOC EMISSIONS FACTORS

Production Process	Stack Identification Code	Emissions Factor	
		Emissions Factor	Units
Boilers	Boiler 1 – natural gas	0.007	lb-VOC/1,000 lbs steam
Boilers	Boiler 1 – #6 oil	0.002	lb-VOC/1,000 lbs steam
Boilers	Boiler 2 – natural gas	0.007	lb-VOC/1,000 lbs steam
Boilers	Boiler 2 – #6 oil	0.002	lb-VOC/1,000 lbs steam
Boilers	Boiler 3 – natural gas	0.007	lb-VOC/1,000 lbs steam
A	DHT	0.0054	lb-VOC/MMBtu
A	DHU	0.0054	lb-VOC/MMBtu
A	DHZ	0.0054	lb-VOC/MMBtu
B	DUQ	0.0054	lb-VOC/MMBtu
B	DUT	0.0054	lb-VOC/MMBtu
B	DQA	0.0054	lb-VOC/MMBtu
B	DQB	0.0054	lb-VOC/MMBtu
B	DUV	0.0054	lb-VOC/MMBtu
C	AEV	0.0054	lb-VOC/MMBtu
C	CXX	0.0054	lb-VOC/MMBtu
C	CYY	0.0054	lb-VOC/MMBtu
C	CHX	0.0054	lb-VOC/MMBtu
C	CHY	0.0054	lb-VOC/MMBtu
C	CHZ	0.0054	lb-VOC/MMBtu
C	HEB	0.0054	lb-VOC/MMBtu
C	HNL	0.0054	lb-VOC/MMBtu
C	CBB	0.0054	lb-VOC/MMBtu
C	CNV	0.0054	lb-VOC/MMBtu
C	CNW	0.0054	lb-VOC/MMBtu
C	CTQ	0.0054	lb-VOC/MMBtu
C	CTR	0.0054	lb-VOC/MMBtu
C	CTS	0.0054	lb-VOC/MMBtu
C	CTT	0.0054	lb-VOC/MMBtu
C	TCD	0.0054	lb-VOC/MMBtu
C	TAC	0.0054	lb-VOC/MMBtu
C	TAH	0.0054	lb-VOC/MMBtu
Plant	Heaters	0.0054	lb-VOC/MMBtu

APPENDIX F – LEAD EMISSIONS FACTORS

Production Process	Stack Identification Code	Emissions Factor	
		Emissions Factor	Units
Boiler 1	Boiler 1	4.50E-06	lb-Pb/MMBtu
Boiler 2	Boiler 2	4.50E-06	lb-Pb/MMBtu
Boiler 3	Boiler 3	9.0E-06 (hourly), 6.2E-06 (quarterly), 1.9E-06 (annually),	lb-Pb/MMBtu
A	DHT	4.9E-07	lb-Pb/MMBtu
A	DHU	4.9E-07	lb-Pb/MMBtu
A	DHZ	4.9E-07	lb-Pb/MMBtu
B	DUQ	4.9E-07	lb-Pb/MMBtu
B	DUT	4.9E-07	lb-Pb/MMBtu
B	DQA	4.9E-07	lb-Pb/MMBtu
B	DQB	4.9E-07	lb-Pb/MMBtu
B	DUV	4.9E-07	lb-Pb/MMBtu
C	AEV	4.9E-07	lb-Pb/MMBtu
C	CXX	4.9E-07	lb-Pb/MMBtu
C	CYY	4.9E-07	lb-Pb/MMBtu
C	CHX	3.2E-07	lb-Pb/MMBtu
C	CHY	1.2E-07	lb-Pb/MMBtu
C	CHZ	5.5E-07	lb-Pb/MMBtu
C	HEB	3.8E-07	lb-Pb/MMBtu
C	HNL	1.1E-07	lb-Pb/MMBtu
C	CBB	4.9E-07	lb-Pb/MMBtu
C	CNV	4.9E-07	lb-Pb/MMBtu
C	CNW	4.9E-07	lb-Pb/MMBtu
C	CTQ	4.9E-07	lb-Pb/MMBtu
C	CTR	4.9E-07	lb-Pb/MMBtu
C	CTS	4.9E-07	lb-Pb/MMBtu
C	CTT	4.9E-07	lb-Pb/MMBtu
C	TCD	4.9E-07	lb-Pb/MMBtu
C	TAC	2.5E-07	lb-Pb/MMBtu
C	TAH	2.5E-07	lb-Pb/MMBtu
Plant	Heaters	0.0E+00	lb-Pb/MMBtu

APPENDIX G – EPA APPROVAL OF NSPS SUBPART DC ALTERNATIVE TO COMS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

Reply To
Attn Of: AWT - 107

29 SEP 2005

Mr. Bruce Wright
Sr. Project Manager, Environmental
Basic American Foods
415 W Collins Road
Blackfoot, Idaho 83221-5668

Re: NSPS Subpart Dc Alternative to COMS for Boiler Re-firing Project at Blackfoot, Idaho

Dear Mr. Wright:

This alternative monitoring determination is in response to a request sent to the Environmental Protection Agency (EPA) by Basic American Foods (BAF) submitted on August 8, 2005, and followed up with more information submitted by the Idaho Department of Environmental Quality (IDEQ) dated September 16, 2005. BAF and IDEQ are requesting approval of an alternative plan for monitoring opacity in lieu of a Continuous Opacity Monitoring System (COMS). A COMS will not provide accurate measurements due to water vapor from a proposed wet scrubber. EPA approves the alternative monitoring plan as described in the September 16, 2005, letter from IDEQ and as detailed below.

Background

The proposed project at the BAF Blackfoot facility involves two boilers (Boilers 1 and 2) neither of which are currently subject to New Source Performance Standards (NSPS). The status for boilers 1 and 2 before the proposed change is as follows:

- Boiler 1 has a heat input of 57 MM Btu/hr when firing natural gas.
  - Currently Boiler 1 is also permitted to combust up to 5,450 gallons/day of No. 6 residual fuel oil or No. 2 diesel fuel oil, uncontrolled.
  - This results in annual sulfur dioxide (SO_2) emissions of 210 tons per year (TPY).

- Boiler 2 has a heat input of 73.5 MM Btu/hr when firing natural gas.
  - Currently Boiler 2 is also permitted to combust low sulfur (0.05 weight percentage sulfur) No. 2 diesel fuel oil at full fire for up to 60 day/yr, uncontrolled.
  - This results in annual SO_2 emissions of 2.8 TPY.

BAF plans to modify Boiler 2 in order to enable it to combust No. 6 residual fuel oil. This modification will make Boiler 2 subject to 40 CFR Part 60, Subpart Dc the Standards of

Performance for Small Industrial-Commercial-Institutional Steam Generating Units (Subpart Dc) and the NSPS General provisions in 40 CFR Part 60 Subpart A (General Provisions).

In order to avoid applicability to the Prevention of Significant Deterioration (PSD) permitting process, BAF has proposed the following:

- BAF will limit the amount of residual oil combusted and the quantity of steam produced per hour as prescribed in a federally enforceable permit issued by IDEQ, and
- BAF will install controls in the form of a venturi-type wet scrubber that will control the emissions from both boilers.

The control of emissions will be accomplished by merging the exhausts from Boiler 1 and Boiler 2, scrubbing the merged exhaust stream with a single venturi-type wet scrubber, and venting the scrubbed steam through the existing stack for Boiler 1. BAF estimates that the combined controlled SO2 emissions from both boilers are not expected to exceed 145 TPY. This would represent a reduction of 65 TPY compared to the uncontrolled SO2 emissions currently allowed for Boiler 1 alone. The wet scrubber will also reduce particulate matter emissions with a capture efficiency of at least 50 percent.

Determination

Because Boiler 2 will be modified and become subject to NSPS Subpart Dc and the General provisions, the COMS requirement in 40 CFR §60.47c(a) of Subpart Dc is now applicable to Boiler 2. This requirement specifies that a COMS must be installed to measure and record the opacity when Boiler 2 fires fuel oil. In lieu of the COMS, BAF has requested to implement alternative opacity monitoring requirements according to the provisions of 40 CFR 60.13(h)(i)(1). This section allows the applicant to submit a written application for alternative opacity monitoring requirements when "installation of a continuous emission monitoring system or monitoring device specified by this part would not provide accurate measurement due to liquid water or other interferences caused by substances with the effluent gasses." EPA has previously approved similar requests, which are posted on the EPA's applicability determination index (see EPA Determination Control No. 0000010 and Control No. 0300073). In previous requests EPA has determined that the continuous monitoring of the scrubbing liquid flow rate and the pressure drop of the gas stream across the scrubber is acceptable as alternative monitoring to the COMS.

In lieu of operating a COMS as is required by 40 CFR §60.47c(a), IDEQ has recommended and BAF has agreed to the following alternative monitoring requirements for Boiler 2.

1. BAF's permit to construct (PTC) No. P-050301 will require all of the following: The wet scrubbing system shall be operated during all times that residual oil is fired in Boiler 2. Basic American Foods shall install, calibrate, operate, and maintain equipment to measure each of the following operating parameters for the wet scrubbing system. Each of the following operating parameters shall be maintained within the specifications established in the permit or specifications established through source testing under worse case normal conditions:

a) Pressure drop across the scrubber
b) Scrubbing solution pH
c) Scrubbing solution flow rate
d) Fuel consumption
e) Steam production (calculated)

2. Basic American Foods shall calibrate each instrument in accordance with the manufacturer's recommendation; nevertheless, Basic American Foods shall calibrate each piece of equipment at least every six months. Each calibration for each piece of equipment shall be recorded and available for inspection in accordance with the terms of the permit. The facility noted that the equipment might be self-calibrating. In this case, manufacturer's documentation of the self-calibration will be required to be kept on site and available for inspection.

3. Section 4.5 of the PTC will reference this alternative monitoring plan. This section of the plan references the permit. If a change to the permit will affect this plan, Basic American Foods shall request a change to this monitoring plan and a change to the permit. If a change to this plan will not affect the permit, only a change to this plan is required to be requested. When a permit change is requested that will not affect this plan, only the permit change is required to be requested. This requirement is to ensure the monitoring plan and the permit remain consistent as future changes are made to either the permit or this monitoring plan.

4. Basic American Foods shall continuously monitor the scrubbing liquid flow rate and the pressure drop of the gas stream across the scrubber serving Boiler 2 whenever Boiler 2 combusts fuel oil. Once per hour, Basic American Foods shall record the hourly average scrubbing liquid flow rate and pressure drop of the gas stream. Note that Boiler 1 is not subject to the NSPS; therefore, this requirement does not apply to Boiler 1, except when Boiler 1 operates simultaneously when Boiler 2 combusts fuel oil.

5. Basic American Foods shall conduct a 6-minute opacity observation every day for days 1-14 of operation when Boiler 2 combusts fuel oil to monitor directly the opacity of emissions from the stack. Thereafter, Basic American Foods shall conduct a 6-minute opacity observation once every 14 days for days 15-45 of operation when Boiler 2 combusts fuel oil to directly monitor the opacity of emissions from the stack. Thereafter, Basic American Foods shall conduct a 6-minute opacity observation once every 30 days for days of operation from day 46 when Boiler 2 combusts fuel oil to directly monitor the opacity of emissions from the stack. Opacity observations shall be conducted utilizing Method 9. Note that Boiler 1 is not subject to the NSPS; therefore, this requirement does not apply to Boiler 1, except when Boiler 1 operates simultaneously when Boiler 2 combusts fuel oil. To clarify, there will be fourteen (14) data points according to the first requirement, two (2) data points in accordance with the second requirement, and one (1) data point every 30 days thereafter when Boiler 2 combusts fuel oil.

6. If any 6-minute opacity observation results in any single observation greater than 20%, Basic American Foods shall conduct a 60-minute Method 9 opacity observation. If the 60 minute opacity observation results in opacity greater than 20% for any 6-minute period, except for

one 6-minute period (average) of not more than 27% opacity, then Basic American Foods shall revert back to the start of the schedule outlined above in item number 5 (i.e., collecting fourteen (14) data points according to the first requirement, two (2) data points in accordance with the second requirement, and one (1) data point every 30 days thereafter when Boiler 2 combusts fuel oil.)

7. Basic American Foods shall maintain records of the scrubbing liquid flow rate, the pressure drop of the gas stream across the scrubber, fuel usage, steam generation, and opacity observations in accordance with the terms of the permit. If the opacity exceeds 20%, Basic American Foods shall take immediate corrective action to reduce the opacity. Opacity observations and corrective actions shall be documented hourly when opacity is greater than 20%.

8. In accordance with 40 CFR 70.6(a)(3)(iii), BAF shall submit reports of excess emissions semiannually to IDEQ. All reports shall be postmarked within 30 days following the end of the reporting period. These are the initial start-up parameters to be confirmed by the initial source test[1,2]:

   a) any period when the 1-hour average scrubbing liquid flow rate is less than 323 gallons per minute;
   b) any period when the 1-hour average pressure drop of the gas stream across the scrubber is less than 10 inches of water column or more than 15 inches of water column; and
   c) any period when the Method 9 opacity exceeds 20% (6-minute average), except for one six-minute average per hour of not more than 27% opacity.

   BAF shall conduct Method 9 observations to verify limits for the prescribed scrubber operating parameters. Scrubber operating parameters and Method 9 observations shall be collected over a three-hour period while the boiler is operating under normal conditions and in compliance with the 20% opacity standard.

9. Paragraph 3.7 of BAF's PTC No. P-050301 includes the following: "Within 60 days after startup of the wet scrubbing system, the permittee shall have developed an O&M manual for the wet scrubbing system which describes the procedures that will be followed to comply with the PTC General Provisions and manufacturers specifications for the air pollution control device. At a minimum, the following items shall be addressed in the manual:

   - Inspection checklists for items that will be periodically inspected while the treatment system is operating, including frequency of inspection.
   - Inspection checklist for items that will be inspected when the device is taken out of operation and physically opened for inspection (e.g., internal components), including frequency of these internal inspections.

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1 Operating outside these initial start-up limits, except during performance testing, shall be considered excess emissions until the performance tests confirm the different operating limits.

2 Operating parameters may be modified upon completion of testing that demonstrates compliance with emissions limits.

- Periodic planned maintenance for the control devices, including the burner itself.

EPA has found that the above proposed alternative monitoring is at least as protective as previously approved requests in similar circumstances, where the operation of a wet scrubbing control device necessitates alternative monitoring in lieu of COMS. Therefore, EPA determines that the proposed alternative monitoring described above is acceptable in lieu of COMS for Boiler 2. If there are any changes in operation from what is described here, this determination is no longer valid. If you have any further questions or concerns, please contact Heather Valdez of the Region 10 Office of Air, Waste, and Toxics at (206) 553-6220.

Sincerely,

Jeff KenKnight, Manager
Federal and Delegated Air Programs Unit
Office of Air, Waste, and Toxics

cc: Pete Wagner, IDEQ PRO
Dan Pitman, IDEQ, State Office
Ken Hamm, IDEQ, State Office