

Statement of Basis

**Permit to Construct No. P-2012.0017
Project ID 61026**

**General Mills Operations, Inc.
Blackfoot, Idaho**

Facility ID 011-00028

Proposed for Public Comment

**DRAFT XX, 2012
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Permit Writer**

The purpose of this Statement of Basis is to satisfy the requirements of IDAPA 58.01.01. et seq, Rules for the Control of Air Pollution in Idaho, for issuing air permits.

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ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

AAC	acceptable ambient concentrations
AACC	acceptable ambient concentrations for carcinogens
acfm	actual cubic feet per minute
ASTM	American Society for Testing and Materials
Btu	British thermal units
CFR	Code of Federal Regulations
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EL	screening emission levels
EPA	U.S. Environmental Protection Agency
hr/yr	hours per consecutive 12 calendar month period
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
MACT	Maximum Achievable Control Technology
mg/dscm	milligrams per dry standard cubic meter
NAAQS	National Ambient Air Quality Standard
NESHAP	National Emission Standards for Hazardous Air Pollutants
NSPS	New Source Performance Standards
O&M	operation and maintenance
PM	particulate matter
PM _{2.5}	particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers
PM ₁₀	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
PSD	Prevention of Significant Deterioration
PTC	permit to construct
PTE	potential to emit
<i>Rules</i>	<i>Rules for the Control of Air Pollution in Idaho</i>
scf	standard cubic feet
SCL	significant contribution limits
SIP	State Implementation Plan
SM	synthetic minor
T/day	tons per calendar day
T/hr	tons per hour
T/yr	tons per consecutive 12 calendar month period
TAP	toxic air pollutants
U.S.C.	United States Code
µg/m ³	micrograms per cubic meter

FACILITY INFORMATION

Description

This revised Permit to Construct (PTC) is for an existing grain storage and grain conditioning facility. As noted in the original Statement of Basis, the grain conditioning facility will process (clean) wheat stored in the adjacent grain elevator. The equipment installed includes: aspirators; screens; storage bins; elevators; conveying systems; and receiving, storage, and loadout equipment. A ventilation system with filters is used to control particulate emissions from the process equipment.

Permitting History

The following information was derived from a review of the permit files available to DEQ. Permit status is noted as active and in effect (A) or superseded (S).

Date	PTC No. P-2012-0017 PROJ 61026, Permit revised to allow an increased daily production rate for the grain conditioning facility consistent with the analyses performed for the initial permit. Permit status (will be A upon issuance of this permit)
February 23, 2001	PTC No. 011-00028 (P-010301), Permit issued to integrate a single permit for the grain elevator and the grain conditioning facility. Permit status (A, but will become S upon issuance of this permit)
January 28, 2000	PTC No. 011-00028 (P-990131), Permit issued to transfer ownership of the facility (not including the flour mill) to General Mills Operations Incorporated. Permit status (S)
November 20, 1997	PTC No. 011-00028 (P-970105 and P-970106), Permit issued to add two new facilities at the existing grain elevator storage site. The new facilities were a grain conditioning plant and a new large flour mill. (this permit was issued to the former owner, Koch Agriculture Company). Permit status (S)

Application Scope

This PTC is a revision of an existing PTC. The applicant has requested that the daily operating limit for the grain conditioning plant be increased from 335 tons per day (T/day) to 500 T/day and that the annual processing limit be decreased from 367,920 T/12-month period to 180,000 T/12-month period (refer to Permit Condition 2.2 in the existing permit). This change will not result in an exceedance of the existing 42.23 lb/day PM₁₀ emission limit; no increase in the currently allowed emission limits is requested.

Application Chronology

April 6, 2012	DEQ received a PTC application
April 11, 2012	The PTC application and processing fees were received
April 19, 2012 - May 4, 2012	DEQ provided an opportunity to request a public comment period on the application and proposed permitting action
May 3, 2012	DEQ determined that the application was complete
June 12, 2012	DEQ made available the draft permit and statement of basis for peer and regional office review
June 13, 2012	DEQ made available the draft permit and statement of basis for applicant review
July Day – August Day , 2012	DEQ provided a public comment period on the proposed action

TECHNICAL ANALYSIS

Emissions Units and Control Equipment

Listed below are major process equipment and emissions sources for the facility as presented in the November 20, 1997 Statement of Basis for the initial permit.

Location:	Grain Conditioning Facility
Emission Unit	Ventilation System
Maximum Design Capacity:	1,400 bushels/hour
Fuel Type:	N/A
Maximum Heat Input:	N/A
Control Device:	Baghouse Filter
Stack Height	5.0 ft
Stack Diameter:	2.92 ft
Exit Volume:	23,438 acfm
Exit Gas Temp:	Ambient

Location:	Grain Conditioning Facility
Emission Unit	Grain Unloading Equipment
Maximum Design Capacity:	367,920 T/yr
Fuel Type:	N/A
Maximum Heat Input:	N/A
Control Device:	None (fugitive dust source)
Stack Height	N/A
Stack Diameter:	N/A
Exit Volume:	N/A
Exit Gas Temp:	N/A

Location:	Grain Conditioning Facility
Emission Unit	Grain and Millfeed Loading Equipment
Maximum Design Capacity:	331,128 T/yr grain 18,396 T/yr millfeed
Fuel Type:	N/A
Maximum Heat Input:	N/A
Control Device:	None (fugitive dust source)
Stack Height	N/A
Stack Diameter:	N/A
Exit Volume:	N/A
Exit Gas Temp:	N/A

Emissions Inventories

A detailed emissions inventory was prepared by the applicant and evaluated by DEQ for the previous permits issued to this facility. The facility has requested no increase in the amount of emissions that it is currently allowed to emit. The emission limits in the permit are not increased as a result of issuance of this permit, and the "Potential to Emit" for this facility does not increase or decrease as a result of issuance of this permit. IDAPA 58.01.01 defines Potential to Emit as the maximum capacity of a facility or stationary source to emit an air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is state or federally enforceable. Secondary emissions do not count in determining the potential to emit of a facility or stationary source. For details regarding the emissions estimates for this facility, please refer to the technical memorandum for PTC no. 001.00028 issued on November 20, 1997, as reviewed and verified by DEQ staff at that time.

Ambient Air Quality Impact Analyses

This is a permit revision that will result in no increase in allowable emissions from the facility. Therefore, no increase in emissions will occur that exceeds the applicable screening emission levels (EL) and published DEQ modeling thresholds established in IDAPA 58.01.01.585-586 and in the State of Idaho Air Quality Modeling Guideline¹. Therefore modeling is not required for this project. Refer to the Statement of Basis for PTC No. 011-00028 issued on November 20, 1997 for details on the modeling analysis performed for this facility.

REGULATORY ANALYSIS

Attainment Designation (40 CFR 81.313)

The facility is located in Bingham County, which is designated as attainment or unclassifiable for PM_{2.5}, PM₁₀, SO₂, NO₂, CO, and Ozone. Refer to 40 CFR 81.313 for additional information.

Facility Classification

This facility is currently classified as a synthetic minor facility. Potential emissions will not increase as a result of the requested change, and the facility classification is not changed. “Synthetic Minor” classification for criteria pollutants is defined as the uncontrolled Potential to Emit for criteria pollutants are above the applicable major source thresholds and the Potential to Emit for criteria pollutants fall below the applicable major source thresholds.

Permit to Construct (IDAPA 58.01.01.201)

IDAPA 58.01.01.201 Permit to Construct Required

The permittee has requested that a PTC be issued to the facility to revise the existing PTC. Therefore, a permit to construct is required to be issued in accordance with IDAPA 58.01.01.220. This permitting action was processed in accordance with the procedures of IDAPA 58.01.01.200-228.

Tier II Operating Permit (IDAPA 58.01.01.401)

IDAPA 58.01.01.401 Tier II Operating Permit

The application was submitted for a permit to construct (refer to the Permit to Construct section), and an optional Tier II operating permit has not been requested. Therefore, the procedures of IDAPA 58.01.01.400–410 were not applicable to this permitting action.

Visible Emissions (IDAPA 58.01.01.625)

IDAPA 58.01.01.625 Visible Emissions

The sources of PM₁₀ emissions at this facility are subject to the State of Idaho visible emissions standard of 20% opacity. This requirement is included in the permit.

NSPS- Standards of Performance for Grain Elevators (40 CFR Part 60 Subpart DD)

40 CFR Part 60 Subpart DD Standards of Performance for Grain Elevators

In a previous permit, it was determined that the requirements of Subpart DD apply to the grain elevator, therefore these requirements are included in the PTC. The NSPS requirements that apply to this facility are not changed by this permit revision.

¹ Criteria pollutant thresholds in Table 1, State of Idaho Air Quality Modeling Guideline, Doc ID AQ-011, rev. 1, December 31, 2002.

Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70)

IDAPA 58.01.01.301 Requirement to Obtain Tier I Operating Permit

The title V classification is unchanged by this permit revision. Post project facility-wide PM₁₀ emissions from this facility do not have a potential to emit greater than 100 tons per year or 10 tons per year for any one hazardous air pollutant (HAP) or 25 tons per year for all HAP combined as demonstrated previously in the Emissions Inventories conducted for this facility. Therefore, the facility is not a Tier I source in accordance with IDAPA 58.01.01.006 and the requirements of IDAPA 58.01.01.301 do not apply.

PSD Classification (40 CFR 52.21)

40 CFR 52.21 Prevention of Significant Deterioration of Air Quality

The facility is not a major stationary source as defined in 40 CFR 52.21(b)(1), nor is it undergoing any physical change at a stationary source not otherwise qualifying under paragraph 40 CFR 52.21(b)(1) as a major stationary source, that would constitute a major stationary source by itself as defined in 40 CFR 52. Therefore in accordance with 40 CFR 52.21(a)(2), PSD requirements are not applicable to this permitting action.

NESHAP Applicability (40 CFR 61)

The facility is not subject to any NESHAP requirements in 40 CFR 61.

MACT Applicability (40 CFR 63)

The facility is not subject to any MACT standards in 40 CFR Part 63.

Permit Conditions Review

This section describes only those permit conditions that have been added, revised, modified or deleted as a result of this permitting action.

Revised Permit Conditions 2.2 and 2.3

The emission limits in these two permit conditions were not changed. The permit conditions were changed to make it clear that a “year” for purposes of applying an annual limit is “any consecutive 12-month period”.

Revised Permit Condition 2.6

This permit condition has been revised to increase the daily processing limit of the grain conditioning facility from 335 T/day to 500 T/day, and to decrease the corresponding annual processing limit from 367,920 T/12-month period to 180,000 T/12-month period. For the increased daily production rate, as shown below, this change will not result in an exceedance of the existing 42.23 lb/day PM₁₀ emission limit. This is because a conservative approach was used in the analyses for the existing permit. Compliance with applicable requirements at this emission rate was demonstrated as part of issuance of the existing permit. For details refer to the Statement of Basis for PTC No. P-011-00028 issued November 20, 1997. The existing emission limit was determined based on operations of 24 hours per day, as follows:

The PM₁₀ grain loading emission factor used for the grain conditioning facility baghouse was 0.01 grains/scf. Then, based on a baghouse flow rate of 22,996 scfm, the baghouse emissions would be:

$$PM_{10} = (0.01 \text{ grains/scf}) * (22,966 \text{ scf/min}) * (1\text{b}/7000 \text{ grains}) * (60 \text{ min/hr}) = 1.969 \text{ lb/hr}$$

The existing hourly emission rate limit in existing Permit Condition 1.2 for the grain conditioning baghouse is based on daily operations of 24-hours:

$$PM_{10} \text{ Limit} = (1.969 \text{ lb/hr}) * (24 \text{ hr/day}) = 47.23 \text{ lb/day}$$

After the permit was issued in 1997, the baghouse exhaust was re-routed to vent inside the building structure (not directly to the atmosphere), therefore, actual emissions to the atmosphere today from this process will be less than originally estimated. The current operating limit (production limit) in Permit Condition 2.2 was created for purposes of demonstrating compliance with the daily emission rate limit (i.e., 47.23 lb/day) and it is a

conservative limit. The operating limit is conservative for two reasons: first, it is because the grain conditioning mill exhaust has been rerouted into the mill (instead of directly to the atmosphere) resulting in lower emissions than originally evaluated; second, it is because the limit based on daily operations of 8 hours per day even though compliance with applicable requirements was demonstrated for operations of 24 hours/day:

Existing Operating Limit = (1400 bushels/hr)(60 lb/bushel)(8 hr/day)(ton/2000 lb) = 336 tons/day

Revised Operating Limit = (1400 bushels/hr)(60 lb/bushel)(12 hr/day)(ton/2000 lb) = 504 tons/day

As shown above, the revised operating limit is based on operations of 12-hours per day which is still a conservative limit since compliance for the existing permit was demonstrated based operations of 24 hours/day.

Revised Permit Condition 2.9

This permit condition has been revised to remove the requirements for developing an O&M Manual “prior to startup” because that action has been finished. Since the initial development of the manual has been completed, the permit condition was changed to require the permittee to “maintain” the Manual on an on-going basis.

Revised Permit Conditions 2.10 - 2.13

The interval for retaining records was changed from two years to five years to be consistent with the General Provisions currently included in all PTCs. It is recognized that a transition period will be necessary and it is unreasonable for the facility to be expected to have 5 years’ worth of records on hand immediately after this change takes effect. The facility will not be expected to have 5 years’ worth of records until 5 years after this permit is issued. During the interim period, the facility must maintain all necessary records and not discard any until the five year point is reached. After that time, only records for the past 5 years must be maintained per the General Provisions of this permit.

Permit Conditions 3.5 and 4.2 in the Existing Permit

These permit conditions addressed performance testing in the existing permit. Permit Condition 3.5 required an initial performance test. Since this testing requirement has been completed the initial test requirement is now obsolete and is removed from the permit. If future testing is required for this facility, the standard permit conditions for performing performance tests, as included in the General Provisions section, would apply.

Existing Permit Condition 4.1

The startup notification was completed at the time the grain elevator facility was put into service. Since this requirement has been completed it was removed from the permit.

Permit Condition 4.3 in the Existing Permit

The permit condition for the certification of documents is now in the PTC General Provisions.

Permit to Construct General Provisions

The most current version of the PTC General Provisions is included in the revised permit.

PUBLIC REVIEW

Public Comment Opportunity

An opportunity for public comment period on the application was provided in accordance with IDAPA 58.01.01.209.01.c or IDAPA 58.01.01.404.01.c. During this time, there was a request for a 30-day comment period on DEQ’s proposed action. Refer to the chronology for public comment opportunity dates.

Public Comment Period

An opportunity for public comment was issued to the public in accordance with IDAPA 58.01.01.209.01.c. During this time, requests for a 30-day public comment period on DEQ’s proposed action were received. Therefore, a 30-day public comment period was made available to the public in accordance with IDAPA 58.01.01.209.01.c. During this time, comments **were/were not** submitted in response to DEQ’s proposed

action. Refer to the chronology for public comment period dates. A response to public comments document has been crafted by DEQ based on comments submitted during the public comment period. That document is part of the final permit package.

APPENDIX A – PUBLIC COMMENTS

The following comments were received during the 30-day Public Comment Period for the Proposed Revised Permit to Construct:

Comment: [XXX](#).

DEQ Response: [XXX](#).

Comment: [XXX](#).

DEQ Response: [XXX](#).

APPENDIX B – PROCESSING FEE

PTC Fee Calculation

Company: General Mills Operations, Inc.
Address: P-2012.0017; PROJ 61026
City: Blackfoot
State:
Zip Code:
Facility Contact: Mr. Rudy DeWit
Title: General Manager
AIRS No.: 011-00028

- N Does this facility qualify for a general permit (i.e. concrete batch plant, hot-mix asphalt plant)? Y/N
- N Did this permit require engineering analysis? Y/N
- N Is this a PSD permit Y/N (IDAPA 58.01.01.205.04)

Emissions Inventory			
Pollutant	Annual Emissions Increase (T/yr)	Annual Emissions Reduction (T/yr)	Annual Emissions Change (T/yr)
NO _x	0.0	0	0.0
SO ₂	0.0	0	0.0
CO	0.0	0	0.0
PM10	0.0	0	0.0
VOC	0.0	0	0.0
TAPS/HAPS	0.0	0	0.0
Total:	0.0	0	0.0
Fee Due	\$ 250.00		

Comments: This permit revision results in no change in allowable emissions from the facility. The requested production rate increase is less than the production rate that was used in the PTC analyses for the preceding permits.