

Statement of Basis

**Permit to Construct No. P-2012.0017
Project ID 61574**

**AgSpring Idaho
Blackfoot, Idaho**

Facility ID 011-00028

Final

**January 4, 2016
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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 modified 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 processes (cleans) 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).

June 10, 2014	PTC No. P-2012-0017 PROJ 61385, Permit revised to change the name from General Mills Operations, LLC to AgSpring Idaho LLC – Blackfoot. No other changes were made under this revision. Permit status (A, but will become S upon issuance of this permit)
August 17, 2012	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 (S)
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 (S)
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 modification of an existing PTC. The permittee has requested that the maximum daily production rate limit for the grain conditioning facility be increased from 500 tons per day (T/day) to 1,000 T/day and that the maximum annual production rate limit be increased from 180,000 T/12-month period to 365,000 T/12-month period. This change will not result in an exceedance of the existing 47.23 lb/day PM₁₀ emission limit or 8.62 T/12-month PM₁₀ emission limit; no increase in the currently allowed emission limits has been requested.

This application includes an emission inventory for PM_{2.5}. When previous permitting actions were undertaken for this facility there was a policy in place where it could be assumed that a PM₁₀ analysis would suffice as a PM_{2.5} NAAQS compliance demonstration. This policy is no longer in effect and PM_{2.5} is a regulated air pollutant. The proposed throughput increase from the facility modification would result in an increase in PM_{2.5} emissions which has been accounted for in the application.

Application Chronology

August 14, 2015	DEQ received a PTC application
August 14, 2015	The PTC application fee was received
September 1 - 16, 2015	DEQ provided an opportunity to request a public comment period on the application and proposed permitting action
September 4, 2015	DEQ determined that the application was incomplete

September 30, 2015	DEQ received a revised PTC application
October 30, 2015	DEQ determined that the application was incomplete
December 17, 2015	DEQ made available the draft permit and statement of basis for peer and regional office review
December 22, 2015	DEQ made available the draft permit and statement of basis for applicant review

TECHNICAL ANALYSIS

Emissions Units and Control Equipment

Source ID No.	Sources	Control Equipment	Emission Point ID No.
1	<u>Grain Elevator:</u> Max. Throughput: 720,000 Ton/12-month Period	<u>Grain Elevator Baghouse:</u> Manufacturer: unknown Model: unknown PM ₁₀ Control eff.: 99.9%	Vented to Atmosphere
2	<u>Grain Conditioning:</u> Max. Production: 1,000 Ton/Day Max. Production: 365,000 Ton/12-month Period	<u>Screeener Separation Cyclones (2)</u> Manufacturer: unknown Model: unknown Each Cyclone is Vented to One of the Grain Conditioning Baghouses	No Emission Point
		<u>Grain Conditioning Baghouse 1:</u> Manufacturer: unknown Model: unknown PM ₁₀ Control eff.: 99.9% <u>Grain Conditioning Baghouse 2:</u> Manufacturer: AIRLANCO Model: 124RLP10 PM ₁₀ Control eff.: 99.99%	Vented Inside the Grain Conditioning Building

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. 011-00028 issued on November 20, 1997, as reviewed and verified by DEQ staff at that time.

Ambient Air Quality Impact Analyses

This is a permit modification that will result in no increase in allowable emissions of PM₁₀ from the facility. The permit modification will result in an increase in emissions of PM_{2.5}, of which there was no allowable emission

limit in the previous permit. Total PM_{2.5} emissions will not exceed the 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. This project will not result in an increase in allowable emissions. "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.

The AIRS/AFS facility classification codes are as follows:

For THAPs (Total Hazardous Air Pollutants) Only:

- A = Use when any one HAP has actual or potential emissions > 10 T/yr or if the aggregate of all HAPS (Total HAPs) has actual or potential emissions > 25 T/yr.
- SM80 = Use if a synthetic minor (potential emissions fall below applicable major source thresholds if and only if the source complies with federally enforceable limitations) and the permit sets limits > 8 T/yr of a single HAP or ≥ 20 T/yr of THAP.
- SM = Use if a synthetic minor (potential emissions fall below applicable major source thresholds if and only if the source complies with federally enforceable limitations) and the potential HAP emissions are limited to < 8 T/yr of a single HAP and/or < 20 T/yr of THAP.
- B = Use when the potential to emit without permit restrictions is below the 10 and 25 T/yr major source threshold
- UNK = Class is unknown

For All Other Pollutants:

- A = Actual or potential emissions of a pollutant are > 100 T/yr.
- SM80 = Use if a synthetic minor for the applicable pollutant (potential emissions fall below 100 T/yr if and only if the source complies with federally enforceable limitations) and potential emissions of the pollutant are ≥ 80 T/yr.
- SM = Use if a synthetic minor for the applicable pollutant (potential emissions fall below 100 T/yr if and only if the source complies with federally enforceable limitations) and potential emissions of the pollutant are < 80 T/yr.
- B = Actual and potential emissions are < 100 T/yr without permit restrictions.
- UNK = Class is unknown.

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

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 modify 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 modification.

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 or PM_{2.5} 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 Table 1.1

Table 1.1 has been revised to reflect the change in maximum daily production rate from 500 T/day to 1,000 T/day and to reflect the change in maximum annual production from 180,000 T/12-months to 365,000 T/12-months. The listed control equipment for the grain conditioning facility was changed to reflect a second baghouse and to indicate that there is a cyclone on each screener separator.

Revised Permit Condition 2.3

The PM₁₀ daily and annual emission limits remain unchanged as the PM₁₀ emissions under the modification will not exceed the previously permitted PM₁₀ emission limits.

PM_{2.5} emission limits were added to Permit Condition 2.3 because PM_{2.5} was not included under previous permitting actions but must now be included. The proposed PM_{2.5} emission limits are based on the calculated PM_{2.5} emission rate and 24 hours per day for the daily emission limit and 365 days per year for the annual limit.

Revised Permit Condition 2.4.1

The language of this permit condition was revised to clarify that the opacity requirement applies to emissions emanating from the grain conditioning building since the grain conditioning baghouses are vented inside the grain conditioning building.

Revised Permit Condition 2.6

This permit condition has been revised to increase the daily processing limit of the grain conditioning facility from 500 T/day to 1,000 T/day, and to increase the corresponding annual processing limit from 180,000 T/12-month period to 365,000 T/12-month period.

For the increased daily production rate, as shown below, this change will not result in an exceedance of the existing 47.23 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:

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

The existing hourly emission rate limit in existing Permit Condition 2.3 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 (throughput limit) in Permit Condition 2.6 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 building (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.

New Permit Condition 2.15

This permit condition was included to establish weekly visible emission inspections and related recordkeeping requirements.

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 were no comments on the application and there was not a request for a 30-day comment period on DEQ's proposed action. Refer to the chronology for public comment opportunity dates.

APPENDIX A – FACILITY DRAFT COMMENTS

There were no facility draft comments.

APPENDIX B – PROCESSING FEE

Company: AgSprings Idaho LLC, Blackfoot
Address: 467 W Highway 26
City: Blackfoot
State: ID
Zip Code: 83221
Facility Contact: Rudy DeWit
Title: VP of Idaho Operations
AIRS No.:

- N** Does this facility qualify for a general permit (i.e. concrete batch plant, hot-mix asphalt plant)? Y/N

Y 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	\$ 1,000.00		