

Statement of Basis

**Permit to Construct No. P-2009.0110
Project ID 62224**

**Seneca Foods Corporation – Nampa
Nampa, Idaho**

Facility ID 027-00072

Final

**June 21, 2019
Morrie Lewis
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.

ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE	3
FACILITY INFORMATION	4
Description	4
Permitting History	5
Application Scope	5
Application Chronology	5
TECHNICAL ANALYSIS	6
Emissions Units and Control Equipment	6
Emission Inventories	6
Ambient Air Quality Impact Analyses	7
REGULATORY ANALYSIS.....	7
Attainment Designation (40 CFR 81.313).....	7
Facility Classification.....	7
Permit to Construct (IDAPA 58.01.01.201).....	7
Tier II Operating Permit (IDAPA 58.01.01.401)	8
Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70).....	8
PSD Classification (40 CFR 52.21)	8
NSPS Applicability (40 CFR 60)	8
NESHAP Applicability (40 CFR 61)	8
MACT/GACT Applicability (40 CFR 63)	8
Permit Conditions Review.....	8
PUBLIC REVIEW.....	9
Public Comment Opportunity	9
APPENDIX A – PROCESSING FEE	

ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

CAA	Clean Air Act
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
EPA	U.S. Environmental Protection Agency
gr	grains (1 lb = 7,000 grains)
HAP	hazardous air pollutants
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
lb/hr	pounds per hour
MACT	Maximum Achievable Control Technology
MMBtu	million British thermal units
MMscf	million standard cubic feet
NAAQS	National Ambient Air Quality Standard
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
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>
SIP	State Implementation Plan
SO ₂	sulfur dioxide
T/yr	tons per consecutive 12 calendar month period
U.S.C.	United States Code
VOC	volatile organic compounds

FACILITY INFORMATION

Description

Seneca Foods Corporation – Nampa processes seeds from beans, peas, onions, and corn. Raw seeds are shipped to the facility via flat or hopper bottom trucks. The seeds are transferred from the trucks onto a receiving conveyor which transfers the seeds into a series of metal bins. The seeds are weighed, analyzed for moisture content and product quality, cleaned, and sorted.

At the end of the processes, the seeds are transferred to the seed storage building until product orders are received. Upon customer requests, the seeds are treated and packaged.

Corn is received on the cob. The corn is husked and dried. Then, the kernels are removed from the cob and incorporated into the cleaning and treatment process.

All corn and some other seeds are dried using nine identical drying lines composed of nine Maxon natural gas burners. Each drying line uses centrifugal fans to pull large volumes of air across a gas burner, heating the air. During the summer months, the natural gas burners are not used to heat the air. Hot ambient air is simply pulled through the tunnels and is sufficient to dry the product. Hot air is then pushed through underground tunnels, which are equipped with horizontal vent slots at and above ground level.

All fumigation is performed to eliminate infestation of boll weevils and other insects that may damage the seeds. Three types of fumigation with phosphine gas occur at the facility: new fumigation chambers, building fumigation, and pea box fumigation. A description of each type of fumigation follows.

New Fumigation Chambers

The new fumigation chambers are located west of the existing Building T. The new chambers are directly adjacent to each other and have a combined dimension of 40 feet x 30 feet x 14 feet that is divided length-wise equally into two separate chambers. Each chamber has its vertical stack from which phosphine emissions are vented to the atmosphere.

Seed product is placed in the fumigation chambers. The chambers are closed and the seed is fumigated with phosphine for three days. At the end of the fumigation, the doors to the chambers are opened and fans draw the phosphine from the chambers and exhaust it out of the stacks. The chambers are then vented for one day.

The maximum fumigations per chamber are 91 (365/4) per year. Each chamber uses nine plates of phosphine per fume. Each plate contains 33 grams of phosphine. During fumigation the phosphine emissions to the atmosphere from each chamber are equal to 297 (9x33) grams (0.655 pounds).

Building Fumigation

Fumigation of the pea harvest occurs in three buildings (L, T, and S Buildings). A fumigant gas mixture containing 2.2% phosphine is used during the fumigation. Each building is sealed and fumigated for 3 days (72 hours). A fumigation contractor monitors the phosphine level to maintain the optimum application rate. Based on the contractor's past experience, approximately 30% of the fumigant is lost during the 3 day process. The remaining 70% of the fumigant is then vented for 24 hours following the 3 day process.

Pea Box Fumigation

Pea boxes are fumigated by placing into each box 6 tablets that each liberate 1 gram of phosphine. The box is then sealed for 7 days. At the end of 7 days, the lids are taken off the boxes by hand and allowed to vent for 4 hours. The maximum number of boxes the site can handle is approximately 4700 per month. However, in order to ensure compliance with the 24-hour average phosphine acceptable ambient concentration, the facility requested a limit of removing no more than 8 box lids per hour over an 8 hour operating day (64 box lids per day).

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).

September 21, 2005	P-040023, initial PTC for existing facility. (S)
October 16, 2009	P-2009.0110 Project 0110, modification to increase annual seed throughput and chemical application rates. (S)
September 9, 2010	P-2009.0110 Project 60519, modification to increase chemical application rates. (S)
February 18, 2011	P-2009.0110 Project 60650, modification to add seed fumigation project. (S)
August 17, 2012	P-2009.0110 Project 61069, modification to replace fumigation chambers. (S)
September 9, 2016	P-2009.0110 Project 61778, facility name change. (S)
June 21, 2019	P-2009.0110 Project 62224, revision to include Baghouses #8 and #9. (A)

Application Scope

This PTC is a revision of an existing PTC. The applicant has proposed to:

- Revise permit to include Baghouse 8 and Baghouse 9, which were previously permitted but had inadvertently been removed in a prior permitting action consistent with the information received in the application.

Subsequent to issuance of PTC No. P-2009.0110 Project 61778, Seneca Foods Corporation – Nampa notified DEQ that there were errors in the Regulated Sources table (Permit Condition 1.2), and that reference to Baghouse 8 and Baghouse 9 had inadvertently been removed. Although emission calculations remained consistent with application of baghouse controls, reference to these baghouses had been removed in permitting actions issued subsequent to the initial permit PTC No. P-040023 issued 9/21/05, and also reference had been removed in the subsequent applications submitted corresponding to these permitting actions (P-2009.0110 issued 10/16/09, 9/09/10, 2/18/11, 8/17/12, and 6/21/19). Repeated references of the types of seed processed and baghouse numbering range were also found to be inconsistent and inaccurate throughout the permit.

Application Chronology

April 19, 2019	DEQ received an application and an application fee.
May 13, 2019	DEQ made available the draft permit and statement of basis for peer and regional office review.
May 17, 2019	DEQ made available the draft permit and statement of basis for applicant review.
June 18, 2019	DEQ received the permit processing fee.
June 21, 2019	DEQ issued the final permit and statement of basis.

TECHNICAL ANALYSIS

Emissions Units and Control Equipment

Table 1 EMISSIONS UNIT AND CONTROL EQUIPMENT INFORMATION

Source Descriptions	Control Equipment
<p><u>Seed Processing Operations</u> Seed (corn, beans, peas, carrots, and onions) and corn receiving, conditioning, electric sorting, treatment, shelling, husking, and packaging</p>	<p><u>Seed Processing Baghouses</u> Baghouse No. 1 for Seed Receiving Baghouse No. 2 for Conditioning Line 1 and Electric Sorting Line Baghouse No. 3 for Conditioning Line 2 Baghouse No. 4 Seed Treatment and Packaging Line 1 Baghouse No. 5 for Seed Treatment and Packaging Line 2 Baghouse No. 6 for Corn Sheller Line Baghouse No. 7 for Mini-Pack Line Baghouse No. 8 for Husker Line Baghouse No. 9 for Conditioning Line 3</p>
<p><u>Corn and Seed Drying</u> Nine identical drying lines (tunnel A to tunnel I) with nine Maxon natural gas burners Total Heat Input Rating: 47 MMBtu/hr</p>	<p>None</p>
<p><u>Fumigation Process</u> New Fumigation Chambers Building Fumigation (Building S) Building Fumigation (Building L) Building Fumigation (Building T) Pea Box Fumigation</p>	<p>None</p>

Emission Inventories

There was no emission increase associated with this permitting action; emission inventories remain unchanged from prior permitting actions (P-2009.0110 issued on 10/16/09, and revised on 9/09/10, 2/18/11, 8/17/12, and 9/09/16). Refer to the Permitting History section for a summary of these permitting actions. The facility-wide potential to emit is summarized in Table 2 for reference; please refer to the Statement of Basis for these permitting actions for additional information concerning engineering assumptions used in the emission inventory calculations.

Table 2 FACILITY-WIDE PTE OF CRITERIA POLLUTANTS

Emissions Unit	PM _{2.5} /PM ₁₀		SO ₂		NO _x		CO		VOC	
	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
Peas, corn, beans, peas, carrots, and onion processing operations ^(a)	0.216	0.190	0.0	0.0	0.0	0.0	0.0	0.0	10.2	11.14
Drying (combustion) ^(b)	1.14	1.95	0.1	0.15	15.1	25.7	12.6	21.6	0.83	1.41
Drying (process)	0.17	0.12	0.0	0.0	0.0	0.0	0.0	0.0	4.52	3.31
Pre-Project Total	1.53	2.26	0.10	0.15	15.10	25.70	12.60	21.60	15.55	15.86

- a) Emissions of volatile organic compounds (VOC) from beans, peas, corn, and onion processing stacks are volatile toxic air pollutant emissions from the chemicals used for seed treatment.
- b) The natural-fired dryers, which are used to dry corn and seed, are the source of emissions.

Ambient Air Quality Impact Analyses

Because there was no emission increase associated with this permitting action, an ambient air impact analysis was not required for this project. The applicant previously demonstrated pre-construction compliance to DEQ’s satisfaction that emissions from this facility will not cause or significantly contribute to a violation of any ambient air quality standard.

REGULATORY ANALYSIS

Attainment Designation (40 CFR 81.313)

The facility is located in Canyon 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

Because there was no emission increase associated with this permitting action, the AIRS/AFS facility classification for this facility remains unchanged from prior permitting actions (P-2009.0110 issued on 10/16/09, and revised on 9/09/10, 2/18/11, 8/17/12, and 9/09/16).

The facility classification is summarized in Table 3 for reference; please refer to the Statement of Basis for these permitting actions for additional information concerning engineering assumptions used in the emission inventory calculations.

Table 3 REGULATED AIR POLLUTANT FACILITY CLASSIFICATION

Pollutant	Permitted PTE (T/yr)	Major Source Thresholds (T/yr)	AIRS/AFS Classification
PM	2.26	100	B
PM ₁₀	2.26	100	B
PM _{2.5}	2.26	100	B
SO ₂	0.15	100	B
NO _x	25.70	100	B
CO	21.60	100	B
VOC	15.86	100	B
HAP (single)	4.91	10	B
Total HAP	7.90	25	B

Permit to Construct (IDAPA 58.01.01.201)

IDAPA 58.01.01.201 Permit to Construct Required

The permittee has requested that the PTC be revised to include Baghouse 8 and Baghouse 9. 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.

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

IDAPA 58.01.01.301 Requirement to Obtain Tier I Operating Permit

Post-project facility-wide emissions from this facility do not have a potential to emit greater than 100 tons per year for criteria pollutants (PM_{2.5}, PM₁₀, SO₂, NO_x, CO, and VOC) or 10 tons per year for any one HAP or 25 tons per year for all HAP combined, as demonstrated previously in the Emissions Inventories Section of this analysis. 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. The facility is not a designated facility as defined in 40 CFR 52.21(b)(1)(i)(a), and does not have facility-wide emissions of any criteria pollutant that exceed 250 T/yr.

NSPS Applicability (40 CFR 60)

The facility is not subject to any NSPS requirements pursuant to 40 CFR 60.

Because there was no modification to any emission units and no emission increase associated with this permitting action, NSPS applicability remains unchanged from prior permitting actions (P-2009.0110 issued on 10/16/09, and revised on 9/09/10, 2/18/11, 8/17/12, and 9/09/16).

NESHAP Applicability (40 CFR 61)

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

MACT/GACT Applicability (40 CFR 63)

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

Permit Conditions Review

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

Revised Permit Conditions 1.4, 2.2, and 2.9 through 2.11

The Regulated Sources table was updated to include reference to Baghouse 8 and Baghouse 9, which had inadvertently been removed in prior permitting actions and applications, but were accounted for in emission estimates. Baghouse requirements and process and control device descriptions were also corrected to reference all seed processing baghouses.

Revised Permit Conditions 1.4, 2.1 through 2.5, 2.12, and 3.1

The description of types of seed processed was retained only in the Regulated Sources and Seed Processing Operation Description tables, with all other incorrect and inconsistent repetitions removed in subsequent permit conditions.

PUBLIC REVIEW

Public Comment Opportunity

Because this permitting action does not authorize an increase in emissions, an opportunity for public comment period was not required or provided in accordance with IDAPA 58.01.01.209.04.

APPENDIX A – PROCESSING FEE

PTC Processing Fee Calculation Worksheet

Instructions:

Fill in the following information and answer the following questions with a Y or N. Enter the emissions increases and decreases for each pollutant in the table.

Company: Seneca Foods Corporation
Address: 1811 East Florida Avenue
City: Nampa
State: Idaho
Zip Code: 83686
Facility Contact: Dillon Hansen
Title: Plant Manager
AIRS No.: 027-00072

- 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
Total:	0.0	0	0.0
Fee Due	\$ 250.00		

Comments: No emissions increase authorized and no engineering analysis required.