



Air Quality Permitting Statement of Basis

April 11, 2006

Permit to Construct No. P-050313

**J. R. Simplot Company, Food Group
Aberdeen, ID**

Facility ID No. 011-00029

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FINAL PERMIT

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Acronyms, Units, and Chemical Nomenclatures

AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
EPA	U.S. Environmental Protection Agency
H ₂ S	hydrogen sulfide
HAPs	Hazardous Air Pollutants
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
lb/hr	pound per hour
MACT	Maximum Achievable Control Technology
MMBtu/hr	million British thermal units per hour
NESHAP	National Emission Standards for Hazardous Air Pollutants
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
PSD	Prevention of Significant Deterioration
PTC	permit to construct
Rules	Rules for the Control of Air Pollution in Idaho
SIP	State Implementation Plan
SM	Synthetic Minor
SM80	Synthetic Minor with emissions greater than 80% of the major source threshold value
SO ₂	sulfur dioxide
T/yr	tons per year
VOC	volatile organic compound
WESP	wet electrostatic precipitator

1. PURPOSE

The purpose for this memorandum is to satisfy the requirements of IDAPA 58.01.01.200, Rules for the Control of Air Pollution in Idaho, for issuing permits to construct.

2. FACILITY DESCRIPTION

The Aberdeen facility produces a variety of potato products, including pre-formed par fried potatoes, French-fried par fried potatoes, as well as fried corn products. Raw potatoes are delivered to the facility by trucks and unloaded into the enclosed storage and receiving buildings. Inside the receiving area, potatoes are pushed from storage piles into a water flume system that is used to wash and transport the potatoes. The potatoes are sorted by size, then transported by flume to one of the facility's two production lines. Steam peelers remove the peels, then the potatoes are transported by flume to the cutting decks. The cutting decks slice the potatoes into various shapes and lengths.

After the potatoes are cut and sorted into different lengths, they are dipped into hot water blancher tanks to remove the excess sugars. The potato products for Line 1 are then conveyed to the dryer to remove surface moisture. The Line 1 dryer is one large unit that is divided into four zones using internal baffles. Each zone is heated with a five MMBtu/hr natural gas-fired burner. Once the surface moisture is removed, the potatoes are conveyed to the Line 1 fryer system. Potatoes from the Line 2 blancher are either sent directly to the Line 2 fryer or formed into preformed potato products before being conveyed to the Line 2 fryer. Each of the two fryer lines includes a fryer system, and oil mizer (for oil recovery back to the process), and an oil filter. Both of the fryer systems vent to the facility's wet electrostatic precipitator (WESP). Following the frying process, the final potato products are frozen and packed for shipping.

There are two processing lines, designated Lines 1 and 2. Line 1, which primarily processes French fries, consists of a blancher, a dryer, and a two-stage fryer system. Line 2, which primarily processes preformed fried products and corn fries, consists of only a blancher and fryer. The Line 2 fryer receives corn meal products from the corn meal extruder.

The facility also operates nine natural gas-fired air make-up units for space heating and an anaerobic digester for wastewater treatment, which includes a biogas flare and a biogas/natural gas-fired boiler.

3. FACILITY / AREA CLASSIFICATION

JR Simplot Food Group is not a designated facility as defined in IDAPA 58.01.01.006.27 and not a major facility as defined in IDAPA 58.01.01.006.55 and IDAPA 58.01.01.008.10. The AIRS classification is "B" because the potential emissions of NO_x, SO₂, CO, and VOC are less than major source levels and the potential emissions of PM₁₀ are unknown. The facility's Standard Industrial Classification Code (SIC) is 2037, which refers to an establishment that is primarily engaged in manufacturing frozen fruits, fruit juices, and vegetables.

The JR Simplot Food Group facility is located within AQCR 61 and UTM Zone 12. The facility is located in Bingham County which is designated as unclassifiable for all criteria pollutants in accordance with 40 CFR 81.313.

The AIRS information provided in Appendix A defines the classification for each regulated air pollutant at JR Simplot Food Group at Aberdeen. This required information is entered into the EPA AIRS database.

4. APPLICATION SCOPE

The J. R. Simplot Company has submitted a permit to construct application to permit the following:

- Permit the installation of the Line 2 fryer that was installed in 1991
- Require the emissions from the Line 1 and Line 2 fryers be vented through the wet electrostatic precipitator (WESP)
- Increase the annual PM₁₀ emission limit from the WESP to 44 tons
- Increase the Line 1 production limit from 100,000 tons per year to 125,000 tons per year to match the Line 1 dryer permitted capacity
- Establish a 15,000 ton per year production limit for the Line 2 fryer
- Clarify that the production is measured as finished product output rather than raw potatoes input
- Delete the VOC emission limit for the Line 1 fryer

4.1 Application Chronology

5/9/05	PTC application received by DEQ
5/20/05	Delinquent fee letter issued for application fee
5/24/05	Application fee received
6/16/05	Application declared incomplete
6/29/05	Application declared complete
7/6/05	Request for draft permit received
8/2/05	Additional information received (source test results)
9/13/05	Draft permit issued
10/3/05 and 4/10/06	Comments received from facility

5. PERMIT ANALYSIS

This section of the Statement of Basis describes the regulatory requirements for this PTC action.:

5.1 Equipment Listing

Line 2 Fryer

Manufacturer: Unknown
Model No.: Unknown
Feed material: Raw potatoes

WESP

Manufacturer: Geoenergy
Model No.: 1013-85
Water flow: In accordance with O&M Manual
Pressure drop: In accordance with O&M Manual

5.2 Emissions Inventory

Table 5.1 shows the maximum emissions including reductions due to control equipment and permit limits, for the Line 2 fryer, which is the reason for this PTC, and of the combined fryer emissions (Fryers 1 and 2 combined), because the two emissions are not emitted separately but are emitted through the same control equipment (WESP) and the same stack.

The December 14, 1998, technical memorandum states that the hourly throughput for the Line 1 fryer is 39,690 lb/hr and the Line 2 fryer maximum rated input capacity is 3.0 tons per hour. In a letter from J. R. Simplot Company dated September 29, 2005, states that the maximum throughput for the Line 1 fryer is 140,160 tons/yr and for the Line 2 fryer is 20,148 tons/yr. The total maximum production rate for both fryers combined of 160,308 tons/yr.

Table 5.1 FRYER EMISSION INVENTORY

Source	PM ^a		PM ₁₀ ^b		VOC ^c	
	(lb/hr) ^d	(T/yr) ^e	(lb/hr) ^d	(T/yr) ^e	(lb/hr) ^d	(T/yr) ^e
Line 2 fryer, including WESP control	1.12	4.89	1.12	4.89	1.95	6.54
Line 1 and Line 2 fryers, including WESP control	15.52	44	15.52	44	14.8	52.1

^aParticulate Matter

^bParticulate Matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers

^cVolatile Organic Compounds

^dPounds per hour

^eTons per year

VOC Potential to Emit

For VOC, the emissions from the WESP (which controls the fryers) were estimated at 62.0 T/yr. This number originated from the facility's December 16, 1998, permit for the Line 1 fryer and was based on an emission factor of 0.62 lb VOC/1,000 lb production. The factor was developed from source tests conducted by Simplot at the Aberdeen facility or other Simplot potato processing facilities, according to DEQ's technical memorandum supporting the permit development. The calculation of the emission limit was based on a production rate of 100,000 T/yr. The current permit application did not request an increase in the VOC limit, but instead requested that the limit be removed. The estimated VOC emissions presented in the application was 62.0 T/yr, same as the original permit limit, which was based on 100,000 T/yr of production.

In a letter from J. R. Simplot Company dated September 29, 2005, the VOC emission estimate was updated from the estimation in the Line 1 fryer PTC application in 1998. The letter states that the maximum throughput for the Line 1 fryer is 140,160 tons/yr and for the Line 2 fryer is 20,148 tons/yr, for a total of 160,308 tons/yr. The facility tested the fryers for PM₁₀, which included "back half" testing. The facility asserts that the "back half" test results are a conservative estimate of VOC emissions. The Heyburn tests done on September 21, 2000, and on October 28, 2000, are as follows:

Table 5.2 HEYBURN TEST RESULTS

Fryer	Control Equipment	VOC (PM ₁₀ back-half) (lb/hr)	Production Rate (lb/hr)	Emission Factor (lb/ton)
Line 2	Rayco air washer	2.2	21,690	0.203
Line 3	Rotoclone	1.12	3,450	0.65

As a comparison, AP-42 factors for similar processes are as follows:

Table 5.3 AP-42 FACTORS

Source	VOC Emission Factor (lb/ton)
Potato chip	0.02
Other chip	0.085

These AP-42 emission factors support Simplot's argument that the back half VOC correlation is conservative. Note the AP-42 VOC emission factor for a singular source is on the order to ten times less than the factor Simplot is using.

As a worst-case emissions estimate, the highest emission factor was selected from the source tests provided, which is the factor for the Line 3 fryer at Heyburn of 0.65 lb/ton. This was multiplied by the total maximum production rate for both fryers combined of 160,308 tons/yr. This results in an estimated VOC potential to emit of 52.1 tons per year. This value is less than 100 tons per year. Therefore, the facility is not major for VOC.

PM₁₀ Potential to Emit

Because of the variability in test data, a determination of the PM₁₀ uncontrolled potential to emit from the fryers cannot be determined.

Table 5.4 shows the uncontrolled potential to emit of all sources without reductions in emissions due to control equipment and permit limits. This table is used for source classification purposes.

Table 5.4 POTENTIAL TO EMIT (FOR SOURCE CLASSIFICATION PURPOSES)

Source	PM ^a	PM ₁₀ ^b	Nitrogen Oxides	Sulfur Dioxide	Carbon Monoxide	VOC ^c
	(T/yr) ^e	(T/yr) ^e	(T/yr) ^e	(T/yr) ^e	(T/yr) ^e	(T/yr) ^e
Nebraska boiler	2.6	2.6	33.3	0.2	28	1.9
Hot water heater	0.2	0.2	2.1	35.0	1.8	0.1
Dryer 1	8.3	8.3	5.2	0.1	8.8	0.5
Line 1 and Line 2 fryers	Undetermined	Undetermined				52.1
Air make-up units	1.0	1.0	13.4	0.1	11.3	0.7
Road dust	1.7	1.7				
Biogas flare	0.1	0.1	1.3	26.3	6.8	2.6
Gasoline storage and handling						0.9
Total:	Undetermined	Undetermined	55.2	35.3	56.7	58.8

^aParticulate Matter (assumed to be the same as PM₁₀)

^bParticulate Matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers

^cVolatile Organic Compounds

^dPounds per hour

^eTons per year

5.3 Modeling

The facility has demonstrated to the satisfaction of DEQ that the Line 2 fryer installation and operation will not cause or contribute to the exceedance of any applicable air quality standard. The technical analysis documenting the air quality dispersion analysis is included as Appendix B.

5.4 Regulatory Review

This section describes the regulatory analysis of the applicable air quality rules with respect to this PTC.

IDAPA 58.01.01.201 Permit to Construct Required

The Line 2 fryer was installed in 1991. The uncontrolled potential to emit for this fryer has not been determined at this time due to lack of approvable source testing results or other acceptable emission estimation techniques. It cannot be determined that the PM or PM₁₀ emissions are low enough to qualify for an exemption. Therefore, a PTC is required for this installation. In addition, the permit requires PM₁₀ testing of the WESP to verify that the PM₁₀ emissions that were modeled to demonstrate compliance with the NAAQS are not exceeded.

IDAPA 58.01.01.300.....Procedures and Requirements for Tier I Operating Permits

This is not a Tier I major facility because the criteria pollutant estimated emissions are less than the major source threshold. It is unknown if the uncontrolled PM₁₀ emissions are less than the major source threshold of 100 tons per year, but the PM₁₀ emissions from the fryers are controlled by a WESP and the estimated actual emissions after WESP control are less than 100 tons per year.

This facility was designated as a Tier I facility due to a gas-fired boiler with tested CO emissions that were used to calculate the potential to emit (218.6 T/yr as shown in the September 26, 2003, PTC application for pre-permit construction approval for the wastewater digester flare and hot water boiler) which exceeded the major source threshold. A Tier I operating permit application was sent to DEQ. The boiler was replaced prior to the issuance of this Tier I operating permit. It was also determined that a permit to construct was required for the Line 2 fryer to control particulate emissions. With the issuance of this PTC, a Tier I operating permit is no longer required.

5.5 Permit Conditions Review

This section describes only those permit conditions that have been revised, modified or deleted as a result of this permit action. All other permit conditions remain unchanged.

The following changes were made to PTC No. 011-00029, issued June 8, 1999:

Previous Permit Condition 1.1 (Removed)

"Volatile Organic Compound Emission Limit

VOC emissions from the Line 1 fryer scrubber stack shall not exceed 62 tons per any consecutive 12-month period."

The facility requested that the VOC emissions limit for the Line 1 fryer be removed. As shown in Section 5.4 of this statement of basis, the maximum potential VOC emissions from the fryers are estimated to be 52.1 tons per year, which is less than the Title V major source threshold. No limits are required for NAAQS compliance or to maintain the emissions below Title V applicability levels. Therefore, the limit was removed.

Previous Permit Condition 1.2:

PM₁₀ Emission Limits

PM₁₀ emissions from the Line 1 fryer scrubber stack shall not exceed 15.52 lb/hr or 39.11 tons per any consecutive 12-month period.

The facility has requested that the hourly emissions limit remain the same at 15.52 lb/hr and that the annual limit be increased from 39.11 to 44 T/yr. At 15.52 lb/hr, the maximum potential to emit is 68 T/yr, so an annual production limit is required to ensure that the annual limit is not exceeded. Permit Condition 2.4 has been reworded to include an annual limit based on the estimated emissions for the Line 2 fryer emissions for a total of 44 tons per year from the WESP.

Revised Permit Condition 1.2, Renumbered as Permit Condition 2.3:

"PM₁₀ emissions from the wet electrostatic precipitator stack shall not exceed 15.52 lb/hr or 44 tons per any consecutive 12-month period."

Previous Permit Condition 1.3:

"Visible Emissions"

Visible emissions from any stack, vent, or other functionally equivalent opening shall not exceed 20% opacity for a period or periods aggregating more than three minutes in any 60-minute period as required by IDAPA 58.01.01.625. Opacity shall be determined by the procedures contained in IDAPA 58.01.01.625."

This permit condition was reworded to specify that the opacity standard applies to the emissions from the WESP or any stack, vent, or other functionally equivalent opening associated with the fryers.

Revised Permit Condition 1.3, Renumbered as Permit Condition 2.4:

"Visible Emissions"

Visible emissions from the wet electrostatic precipitator or any stack, vent, or other functionally equivalent opening associated with the fryers shall not exceed 20% opacity for a period or periods aggregating more than three minutes in any 60-minute period as required by IDAPA 58.01.01.625. Opacity shall be determined by the procedures contained in IDAPA 58.01.01.625."

Previous Permit Condition 2.1:

"Throughput Limit"

The maximum throughput of potato product to the Line 1 fryers shall not exceed 100,000 tons per any consecutive 12-month period."

This permit condition was rewritten to specify that the throughput is of finished potato products, to include the Line 2 fryer throughput limit of 15,000 tons per year, and to increase the Line 1 fryer throughput to 125,000 tons per year. The analysis presented in the emission inventory and the modeling demonstrate that this does not cause an exceedance of the NAAQS, and by limiting the fryers to these limits, maintains VOC emissions below the major source threshold.

Revised Permit Condition 2.1, Renumbered as Permit Condition 2.5:

“Throughput Limits

The maximum throughput of finished potato product from the Line 1 fryer shall not exceed 250 million pounds per any consecutive 12-month period. The maximum throughput of finished potato product from the Line 2 fryer shall not exceed 30 million pounds per any consecutive 12-month period”

Permit Condition 2.6 requires the use of a WESP to control emissions from the Line 1 and Line 2 fryers in order to prevent the opacity and the PM₁₀ emissions from exceeding the limits specified in the permit. The control from this control device was used when estimating the emissions from the two fryers. Permit Condition 2.7 requires that the WESP be maintained to assure that the opacity and PM₁₀ emissions are controlled adequately.

New Permit Condition 2.6:

“WESP

The wet electrostatic precipitator (WESP) shall be used to control emissions from the Line 1 and the Line 2 fryers when any fryer is operating.”

New Permit Condition 2.8:

“Operations and Maintenance Manual Requirements

Within 60 days after startup, the permittee shall have developed and O & M manual for the WESP that describes the procedures that will be followed to comply with General Provision 2 and the requirements for the WESP as contained in this permit. The O & M manual shall contain at a minimum, the following information: a general discussion of the operation of the WESP, operating procedures, normal operating ranges for the secondary voltage and the quench water flow rate, corrective action steps for when operation is not consistent with normal operating ranges, cleanup and maintenance procedures, and recordkeeping. The O & M manual shall remain on site at all times and shall be made available to DEQ representatives upon request.”

Previous Permit Condition 3.1:

“Throughput

The permittee shall monitor and record both monthly and annually the throughput of potato product to Line 1 fryers to demonstrate compliance with Permit Condition 2.1 of this permit. Throughput shall be recorded as tons per month (T/mo) and tons per any consecutive 12-month period (T/yr) and kept in a log at the facility for the most recent two year period. The log shall be made available to DEQ representatives upon request.”

This permit condition was reworded to include the throughput from the Line 2 fryer and to clarify that annual monitoring and recordkeeping is on a 12-consecutive month schedule.

Revised Permit Condition 3.1, Renumbered as Permit Condition 2.9:

“Throughput Monitoring

The permittee shall monitor and record both monthly and each consecutive 12-month period the throughput of finished potato product from the Line 1 fryer and from the Line 2 fryer to demonstrate compliance with Permit Condition 2.5 of this permit. Throughput shall be recorded as million pounds per month (MMlb/mo) and million pounds per any consecutive 12-month period (MMlb/yr) and kept in a log at the facility for the most recent two year period. The log shall be made available to DEQ representatives upon request.”

New Permit Condition 2.7:

The secondary voltage and the quench water flow rate are indicators of the operating performance of the WESP. In order to ensure that these parameters are monitored and maintained, the following permit conditions were written:

Monitoring Equipment

The permittee shall install, calibrate, maintain, and operate, in accordance with manufacturer’s specifications and recommendations, equipment to monitor the secondary voltage of the WESP and the quench water flow rate.

New Permit Condition 2.10:

Operating Parameters

The permittee shall monitor and record the following operating parameters once per day while the WESP is operating. Records of this information shall remain on site for the most recent two-year period and shall be made available to DEQ representatives upon request:

- *The secondary voltage of the WESP*
- *The flow rate of the quench water system*
- *The quench water system shall be monitored and a daily record kept of whether the sprays are in operation and the corrective action taken when the sprays are not in operation*

New Permit Condition 2.11:

In order to assure compliance with the PM₁₀ and opacity limits for the fryers, because the emission estimation method is variable, source testing is required. The emissions from the stack will be wet, so it may be necessary to report all PM as PM₁₀.

“PM₁₀ Performance Test

The permittee shall conduct a performance test to measure PM₁₀ emissions from the WESP in accordance with the procedures outlined in 40 CFR 60, Appendix A, Method 5 and Method 202, or a DEQ-approved alternative method, within 180 days of issuance of this permit. The performance testing will be conducted to demonstrate compliance with the hourly emission rate limit listed in Permit Condition 2.3.

During the performance test, the Line 1 and Line 2 fryers shall be operated at worst-case normal operating conditions. Worst-case normal conditions are those conditions of process material makeup and moisture and process procedures which are changeable or which could reasonably be expected to be encountered during the operation of the facility and which would result in the highest pollutant emissions from the facility.

If the PM₁₀ emissions rate measured in the initial compliance test is less than or equal to 75% of the emissions standard in Permit Condition 2.3, the permittee shall conduct a compliance test every five years. If the particulate matter emissions rate measured during the initial compliance test is greater than 75%, but less than or equal to 90% of the emissions standard in Permit Condition 2.3, a second test shall be required every three years. If the particulate matter emissions rate measured during the initial compliance test is greater than 90% of the emissions standard in Permit Condition 2.3, the permittee shall conduct a compliance test annually.

The performance test, and any subsequent performance tests conducted to demonstrate compliance, shall be performed in accordance with IDAPA 58.01.01.157 and the following requirements:

- *Visible emissions from the WESP shall be observed during each performance test run using the methods specified in IDAPA 58.01.01.625.*
- *The throughput of finished potato products from each of the fryers shall be recorded in pounds per hour (lb/hr) during each performance test.*
- *Monitor and record secondary voltage*
- *Monitor and record quench water flow rate”*

Previous Permit Condition 3.2 (Removed):

The initial performance test requirement was removed because this was required to be done within 180 days of starting up the facility and within 60 days of startup of the new pollution equipment. The required testing was completed on September 19, 2000.

Previous Permit Condition 4.1 (Removed):

“Certification of Documents

All documents, including, but not limited to, records, monitoring data, supporting information, requests for confidential treatment, testing reports, and compliance certifications submitted to DEQ 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”

This permit condition was removed from this section and incorporated as General Provision 8 at the end of the permit.

New Permit Condition 2.14:

“General Provision No. 5 Applicability

Permit to Construct No. P-050313 is being issued for existing process and control equipment. Therefore, General Provision No. 5 of this permit is not applicable to this permitting action.”

The facility requested that General Provision No. 5, which requires notification of construction, be removed from the permit because there is no construction being permitted in this PTC action. All equipment is existing, and the permit is being issued as required by an April 8, 2005, consent order. Because there is no construction with this permit action, General Provision No. 5 does not apply in this case.

6. PERMIT FEES

In accordance with IDAPA 58.01.01.224, an application fee of \$1,000 is required and was paid on May 24, 2005. In accordance with IDAPA 58.01.01.225, the Line 2 fryer is a new source with an increase of emissions of 4.9 tons per year, which is an increase in emissions of one to less than 10 tons per year. The corresponding PTC processing fee is \$2,500, which is due prior to issuance of this PTC. The facility paid a processing fee of \$5,000 on September 23, 2005. The emission estimate has changed due to additional information received and is now \$2,500; therefore, a refund will be issued of \$2,500.

Table 6.1 PTC PROCESSING FEE TABLE

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
PM ₁₀	4.9	0	4.9
VOC	0.0	0	0.0
TAPS/HAPS	0.0	0	0.0
Total:	4.9	0	4.9
Fee Due	\$ 2,500.00		

7. PERMIT REVIEW

7.1 *Regional Review of Draft Permit*

This draft permit was sent to the DEQ Pocatello Regional Office for review on September 13, 2005. No comments were received.

7.2 *Facility Review of Draft Permit*

This draft permit was sent to the J. R. Simplot Company Food Group for review on September 13, 2005. Comments were received on October 3, 2005. The comments are summarized and addressed as follows:

Comment 1: The SIC code should be changed to 2037, Frozen Fruits, Fruit Juices, and Vegetables.

DEQ's Response: This change has been made as requested.

Comment 2: The Class on the permit should be changed from "SM" to "B."

DEQ's Response: An analysis was made based on the updated VOC emission data and it was concluded that the potential estimated VOC emissions were less than the major source threshold. Because the potential emissions of PM₁₀ are unknown, the AIRS classification for PM₁₀ is "C" for unknown. When all the classifications (for PM₁₀, NO_x, SO₂, CO, and VOC) are combined, the facility-wide

AIRS classification for PM₁₀ is "C" for unknown. When all the classifications (for PM₁₀, NO_x, SO₂, CO, and VOC) are combined, the facility-wide classification is "B." Therefore, the class on the permit was changed from "SM" to "B" as requested.

Comment 3: Add H₂S, MMBtu/hr, and Rules to the acronyms list.

DEQ's Response: This change has been made as requested, except that, because three sections were removed from the draft permit, H₂S is no longer needed. The three sections that were removed were the existing PTCs that were incorporated into this PTC to consolidate all the facility's PTCs into one document. The facility sent an e-mail requesting that these three PTCs not be incorporated but left "as is".

Comment 4: Change the term, "an ESP" to "a wet electrostatic precipitator (WESP)" under Section 1, Permit to Construct Scope, Item 1.1.

DEQ's Response: This change has been made as requested.

Comment 5: In Section 1, Permit to Construct Scope, Item 1.2, in a separate column, include the project title for each PTC that is replaced. Also note when a PTC replaces a previous PTC.

DEQ's Response: These changes have been made as requested.

Comment 6: Delete Permit Condition 2.3.2.

DEQ's Response: This permit condition limited the VOC emission factor. Because the new analysis showed that potential VOC emissions are less than major source levels, this permit condition has been removed.

Comment 7: Express the units for the throughput limits for potato products in "million pounds" instead of "tons" in Permit Condition 2.5.

DEQ's Response: This change has been made as requested.

Comment 8: Express the units for the throughput recordkeeping requirement for potato products in "million pounds" instead of "tons" in Permit Condition 2.8.

DEQ's Response: This change has been made as requested.

Comment 9: Delete Permit Condition 2.10.

DEQ's Response: This permit condition required source testing of the WESP for VOC. Because the permit limit for the VOC emission factor has been removed, the source test is no longer required and has been removed.

Comments 10 -15: These comments are on changes to three PTCs which are no longer incorporated into this PTC per an e-mail request from the facility to Dan Pitman dated November 18, 2005.

DEQ's Response: These changes are no longer needed.

- Comment 16: This comment is several pages long regarding the calculation of uncontrolled VOC emissions.
- DEQ's Response: The VOC emissions were recalculated in Section 5 of this statement of basis.
- Comment 17: Page 5, item 5.1 Equipment Listing. For the WESP, IDEQ lists the water flow as 100 gallons per minute and the pressure drop as 1384 inches of water. Neither values are specifically listed in the Simplot O & M Manual. Simplot recommends deleting these parameters from this document.
- DEQ's Response: The water flow and the pressure drop requirements were changed to "In accordance with O&M manual" and a requirement was added to the O&M manual permit condition as follows: "The manual shall include specifications for the water flow rate and the pressure drop for the WESP."
- Comment 18: Pages 7 & 8, item 5.4 Regulatory Review. For the regulatory review of PM₁₀ emissions from the fryers, IDEQ states that "there is a lack of approvable source testing results" to determine uncontrolled emissions. It appears that IDEQ's main objection is that three valid tests runs are required for review. Simplot contends that two runs per line are adequate for class designation information for the facility. This information was supplied to IDEQ in a letter and attachment on August 1, 2005, (letter to Dan Pittman). In the attached table of the letter it clearly shows that for Caldwell, a french fry line and perform line combined, for uncontrolled emissions, are significantly below 100 tons/year of PM₁₀ emissions. The French fry and perform lines for Caldwell are reasonably representative, for PM₁₀ emissions, of expected uncontrolled emissions for Aberdeen for their Line 1 and Line 2 fryers. Plus, even though only one uncontrolled source test run for each fryer at Aberdeen were performed, the results are very close to the Caldwell uncontrolled results. Source tests reports were submitted for all source tests listed in the table from the letter.
- DEQ's Response: The section of the statement of basis regarding PM₁₀ emissions has been reworded. The conclusion is that potential PM₁₀ emissions are unknown.
- Comment 19: Under Appendix A, AIRS Information, page 17, AIRS/AFS Facility-Wide Classification Data Entry Form. In the table on page 17, the last column of the table titled Area Classification, the column lists the Aberdeen facility as "N," nonattainment for PM₁₀. On the listings for Nonattainment for the state of Idaho (from the IDEQ web site), the closest nonattainment area is the Portneuf Valley. The area associated with this nonattainment area does not include any of Bingham County, where Aberdeen is located. Simplot requests that the area classification is changed to "U" unclassified.
- DEQ's Response: This change has been made as requested.

7.3 Public Comment

An opportunity for public comment period on the PTC application was provided from July 21, 2005, to August 22, 2005, in accordance with IDAPA 58.01.01.209.01.c. During this time, there were not comments on the application and no requests for a public comment period on DEQ's proposed action.

8. RECOMMENDATION

Based on review of application materials, and all applicable state and federal rules and regulations, staff recommend that J. R. Simplot Company Food Group be issued PTC No. P-050313 for the Line 2 fryer. No public comment period is recommended, no entity has requested a comment period, and the project does not involve PSD requirements.

CZ/bf Permit No. P-050313

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Appendix A

AIRS Information

P-050313

AIRS/AFS^a FACILITY-WIDE CLASSIFICATION^b DATA ENTRY FORM

Facility Name: J. R. Simplot Company, Food Group
Facility Location: Aberdeen, ID
AIRS Number: 011-00029

AIR PROGRAM								AREA CLASSIFICATION
POLLUTANT	SIP	PSD	NSPS (Part 60)	NESHAP (Part 61)	MACT (Part 63)	SM80	TITLE V	A-Attainment U-Unclassified N- Nonattainment
SO ₂	B							U
NO _x	B							U
CO	B							U
PM ₁₀	C							U
PT (Particulate)	C							U
VOC	B							U
THAP (Total HAPs)	B							
			APPLICABLE SUBPART					

^a Aerometric Information Retrieval System (AIRS) Facility Subsystem (AFS)

^b AIRS/AFS Classification Codes:

- A = Actual or potential emissions of a pollutant are above the applicable major source threshold. For HAPs only, class "A" is applied to each pollutant which is at or above the 10 T/yr threshold, or each pollutant that is below the 10 T/yr threshold, but contributes to a plant total in excess of 25 T/yr of all HAPs.
- SM = Potential emissions fall below applicable major source thresholds if and only if the source complies with federally enforceable regulations or limitations.
- B = Actual and potential emissions below all applicable major source thresholds.
- C = Class is unknown.
- ND = Major source thresholds are not defined (e.g., radionuclides).

Appendix B
Modeling Review

P-050313

MEMORANDUM

DATE: June 28, 2005
TO: Carole Zundel, Air Quality Division
THROUGH: Kevin Schilling, Stationary Source Modeling Coordinator, Air Quality Division *KS*
FROM: Dustin Holloway, Modeling Analyst, Air Quality Division *DH*
PROJECT NUMBER: P-050313
SUBJECT: Modeling Review for the J.R. Simplot Aberdeen Line 2 Fryer PTC Application

1. SUMMARY

The J.R. Simplot Co. (Simplot) submitted an ambient air quality analysis in support of a permit to construct application for the Line 2 fryer at their Aberdeen potato processing facility. The analysis included a significant impact analysis for annual PM₁₀ emissions.

Based on the results of the analyses, DEQ has determined that the modeling analysis: 1) utilized appropriate methods and models; 2) was conducted using reasonably accurate or conservative model parameters and input data; 3) appropriately adhered to established DEQ guidelines for new source review dispersion modeling; 4) showed that predicted pollutant concentrations at all receptor locations, when appropriately combined with background concentrations, were below stated air quality standards.

2. BACKGROUND INFORMATION

2.1 Applicable Air Quality Impact Limits

The Simplot facility is located in Aberdeen, in Bingham county. Bingham county is designated attainment or unclassifiable for all criteria air pollutants. Table 2.1 provides significant contribution levels (SCL) and national ambient air quality standards (NAAQS) that apply to this project. Project-specific emissions above the SCL necessitate facility-wide modeling to demonstrate compliance with NAAQS.

Table 2.1 Applicable Regulatory Limits

Pollutant	Averaging Period	Significant Contribution Levels (µg/m ³) ^{a, b}	Regulatory Limit (µg/m ³) ^c	Modeled Value Used ^d
PM ₁₀ ^e	Annual	1	50 ^f	Maximum 1 st highest ^g

^a IDAPA 58.01.01.006.93
^b Micrograms per cubic meter
^c IDAPA 58.01.01.577 for criteria pollutants, IDAPA 58.01.01.585 for non-carcinogenic toxic air pollutants IDAPA 58.01.01.586 for carcinogenic toxic air pollutants.
^d The maximum 1st highest modeled value is always used for significant impact analysis and for all toxic air pollutants.
^e Particulate matter with an aerodynamic diameter less than or equal to a nominal ten micrometers
^f Never expected to be exceeded in any calendar year.
^g Concentration at any modeled receptor.

2.2 Background Concentrations

Background concentrations aren't necessary for this analysis because the increase in ambient concentrations is less than the SCLs.

3. ASSESSMENT OF MODELING ANALYSIS

3.1 Modeling Methodology

Geomatrix Consultants, Inc., Simplot's consultant, performed the dispersion modeling analysis. The analysis included a SCL analysis for annual PM₁₀ emissions. Annual PM₁₀ emissions are the only ones which increase as a result of this project. The following table summarizes the modeled parameters and DEQ's review and determination of those parameters.

Table 3.1 Modeling Parameters

Parameter	What Facility Submitted	DEQ's Review/Determination
Modeling protocol	None submitted	Although no protocol was submitted, the analysis adhered to established guidelines for ambient air quality modeling.
Model Selection	ISCST3	ISCST3 is an approved dispersion model, however, it does not calculate concentrations in building cavity regions. DEQ ran the modeling analysis with ISCPRIME since modeled receptors are located within building recirculation cavities.
Meteorological Data	1987-1991 Pocatello surface data coupled with 1987-1991 Salt Lake City upper air data	This is the most representative data available for this area.
Model Options	Regulatory default	Regulatory default options are appropriate for this analysis.
Land Use	Rural	The land within three kilometers of this facility is largely undeveloped or rural. The population density was estimated to be 12 people per square kilometer, far below the EPA urban criterion of 750 people per square kilometer.
Terrain	Terrain effects were accounted for in the analysis	Receptor elevations were included in the analysis and the model was run to account for the effects of both simple and complex terrain.
Building Downwash	Building downwash effects were calculated	DEQ ran the ISCST3 model with the PRIME downwash algorithm. The PRIME algorithm calculates concentrations in both building wakes and recirculation cavities.
Receptor Network	25 meter spacing along the fenceline; 50 meter spacing out to 1,000 meters; 250 meter spacing out to 5,000 meters	This receptor grid is sufficient to reasonably resolve the maximum modeled concentration.
Facility Layout	N/A	The facility layout was verified with the submitted facility plot plans and aerial photographs.

3.2 Emission Rates and Emission Release Parameters

Emissions from the Line 2 fryer are vented through the facility’s wet electrostatic precipitator (WESP). The increase in daily PM₁₀ emissions will not exceed the currently permitted rates from the WESP. The Line 2 fryer will increase the annual PM₁₀ emissions from the WESP. Emissions increases of all other pollutants are below modeling thresholds.

Table 3.2 Emission Release Parameters

Stack ID	Source Description	Easting (m)	Northing (m)	Elevation (m)	Stack Height (ft)	Stack Temperature (°F)	Exit Velocity (m/s)	Stack Diameter (ft)	PM ₁₀ Emissions Rate (lb/hr)
WESP	Wet electrostatic precipitator	350,747	4,756,415	1,340	65.0	138	10.8	4.0	1.12

3.4 Results

The results of the analysis, presented in Table 3.3, are those calculated by DEQ using ISCST3 with the PRIME algorithm. The results of the analysis are less than the applicable SCL, therefore, no further analysis is required. The results demonstrate, to DEQ’s satisfaction, that the project will not cause or contribute to a violation of any ambient air quality standard.

Table 3.3 Significant Impact Analysis Results

Pollutant	Averaging Period	Ambient Concentration (µg/m ³)	Significant Contribution Levels (µg/m ³)	Exceeds the SCL (Y or N)
PM ₁₀	Annual	0.30	1	N