State of Idaho
Department of Environmental Quality
Air Quality Division

AIR QUALITY PERMIT
STATEMENT OF BASIS

Permit to Construct No. P-2008.0005

Final

J. R. Simplot Company, Food Group, Aberdeen Plant

Aberdeen, Idaho

Facility ID No. 011-00029

April 3, 2008

Almer Casile

Permit Writer

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

Table of Contents

ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE 3

1. FACILITY INFORMATION 4

2. APPLICATION SCOPE 4

3. TECHNICAL ANALYSIS 5

4. REGULATORY REVIEW 7

5. PERMIT FEES 11

6. PUBLIC COMMENT 11

APPENDIX A – AIRS INFORMATION 12

APPENDIX B – EMISSIONS INVENTORY 14

APPENDIX C – MODELING ANALYSIS 17

Acronyms, Units, and Chemical Nomenclature

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

1. FACILITY INFORMATION

1.1 Facility Description

J. R. Simplot Company, Food Group, produces preformed parfried potatoes, french fried parfried potatoes, and corn fried products.

1.2 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).

July 28, 2004	PTC No. P-030318 issued for the construction and operation of a process wastewater anaerobic digester, a biogas flare, and a biogas/natural gas hot water boiler used to heat the influent wastewater to the digester. (S)
December 3, 2004	PTC No. P-040318 issued for the installation of an 80 MMBtu/hr natural gas boiler, which replaces Boiler No. 1 (35.037 MMBtu/hr) and Boiler No. 2 (35.037 MMBtu/hr). (S)

2. APPLICATION SCOPE

This permitting action modifies PTC No. P-030318 to include the Nebraska boiler as an emission unit and allow it to use biogas as a fuel. This permitting action will supersede PTCs No. P-030318 and P-040318, issued on July 28, 2004 and December 3, 2004, respectively.

2.1 Application Chronology

January 14, 2008	DEQ received application and application fee
February 1, 2008	DEQ determined application complete.
March 11, 2008	DEQ issued permit for facility review.
March 28, 2008	DEQ issued updated processing fee invoice.
April 2, 2008	DEQ received processing fee.

3. TECHNICAL ANALYSIS

3.1 Emission Unit and Control Device

Table 3.1 EMISSION UNIT AND CONTROL DEVICE INFORMATION

Description	Control Device
Anaerobic digester	Biogas flare Varec Model 244 W 12.9 MMBtu/hr
Hot Water Boiler Manufacturer: Cleaver Brooks Model No.: 700-350-160 Rated Capacity: 4.95 MMBtu/hr Fuel: Biogas/natural gas	None
Boiler Manufacturer: Nebraska Model No.: NOS-2A-58 Rated Capacity: 80 MMBtu/hr Fuel: Natural gas/biogas	Low NO_X burner

3.2 Emissions Inventory

An emission inventory was developed for the Nebraska boiler. Emissions estimates of criteria pollutant, TAP, and HAP PTE, as submitted by the facility, were based on AP 42, Section 1.4 emission factors and process information. Specifically, because biogas is similar to natural gas, the facility used emission factors from AP 42, Section 1.4 to provide the basis for NO_X, CO, VOC, PM_{10}, TAP, and HAP emissions from the combustion of biogas. As stated by the facility, biogas flowrate in the emission calculations was adjusted by 35% to account for the incombustible portion and lower heat content of the biogas. As a result, the estimated emission rates using biogas/natural gas are higher than 100% natural gas because the emission factors in AP 42 are in units of lb/MMBtu. The facility used process data and worst case (i.e. 100% of the Nebraska boiler's exhaust sent through condensing economizer) to calculate SO_2 emission estimates attributable to biogas combustion. The facility also assumed H_2S is converted 100% to SO_2. Maximum H_2S concentration in the biogas was calculated using physical characteristics of facility wastewater. Example calculations can be found in Appendix B.

Table 3.2 CRITERIA POLLUTANT EMISSIONS SUMMARY

Pollutant	Existing Nebraska Boiler PTE[1]		Proposed Nebraska Boiler PTE[2]	
	lb/hr	T/y	lb/hr	T/y
NO_X	3.81	16.69	4.03	17.65
CO	6.40	28.03	6.42	28.11
SO_2	0.05	0.20	6.05	26.49
PM_{10}	0.58	2.54	0.58	2.54
VOC	0.42	1.84	0.42	1.84

[1] – Based on Nebraska boiler combusting 100% natural gas
[2] – Based on Nebraska boiler combusting natural gas/biogas fuel mixture

Table 3.3 TAP AND HAP EMISSIONS SUMMARY

Toxic Air Pollutants	Existing Nebraska Boiler PTE[1]	Proposed Nebraska Boiler PTE[2]	Change in PTE	Screening Emission Level[3]	Exceed Screening Level
	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(Y/N)
3-Methylchloranthrene	1.37E-07	1.38E-07	3.61E-I0	2.50E-06	N
Benzene	1.60E-04	1.60E-04	4.21E-07	8.00E-04	N
Benzo(a)pyrene	9.14E-08	9.17E-08	2.41E-10	2.00E-06	N
Dichlorobenzene	9.14E-05	9.17E-05	2.41E-07	30	N
Formaldehyde	5.71E-03	5.73E-03	1.50E-05	5.10E-04	N
Hexane	1.37E-01	1.38E-01	3.61E-04	12	N
Naphthalene	4.65E-05	4.66E-05	1.22E-07	3.33	N
Pentane	1.98E-01	1.99E-01	5.21E-04	118	N
Toluene	2.59E-04	2.60E-04	6.82E-07	25	N
Arsenic	1.52E-05	1.53E-05	4.01E-08	1.50E-06	N
Barium	3.35E-04	3.36E-04	8.82E-07	0.033	N
Beryllium	9.14E-07	9.17E-07	2.41E-09	2.80E-05	N
Cadmium	8.38E-05	8.04E-02	2.21E-07	3.70E-06	N
Chromium 111	8.75E-05	8.77E-05	2.30E-07	3.30E-02	N
Chromium VI	1.92E-05	1.93E-05	5.05E-08	5.60E-07	N
Cobalt	6.04E-03	6.04E-03	1.68E-08	0.0033	N
Copper	6.05E-02	6.05E-02	1.70E-07	0.013	N
Manganese	2.90E-05	2.90E-05	7.62E-08	0.067	N
Mercury	1.98E-05	1.99E-05	5.21E-08	0.001	N
Molybdenum	8.38E-05	8.04E-02	2.21E-07	0.333	N
Nickel	1.60E-04	1.60E-04	4.21E-07	2.70E-05	N
Selenium	1.83E-06	1.83E-06	4.81E-09	0.013	N
Zinc	2.21E-03	2.22E-03	5.82E-06	0.667	N
Nitrous oxide	1.68E-0 1	1.68E-01	4041E-04	6	N
PAH Total	8.69E-07	8.71E-07	2.29E-09	9.10E-05	N

[1] – Based on Nebraska boiler combusting 100% natural gas
[2] – Based on Nebraska boiler combusting natural gas/biogas fuel mixture
[3] – IDAPA 58.01.01.585 and 585, Screening Emission Levels

Estimated TAP emission increases associated with the proposed project do not exceed the applicable screening emission levels.

3.3 Ambient Air Quality Impact Analysis

The facility submitted dispersion modeling for SO_2. Emission estimates of the change in emission of NO_X, PM_{10}, and CO did not exceed the modeling thresholds. A review of the significant contribution of SO_2 revealed that facility-wide modeling was required. AERMOD, Version 07026, was used to determine the total ambient concentration. No modeling of any TAP associated with the project was performed because no TAPs exceeded its associated EL. In accordance with IDAPA 58.01.01.209.05.b, no further procedures for demonstrating preconstruction compliance are required.

The facility has demonstrated 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. A summary of the modeling analysis results is presented in the following table.

Table 3.4 FULL IMPACT ANALYSIS RESULTS FOR CRITERIA POLLUTANT(S)

Pollutant	Averaging Period	Facility Ambient Impact (µg/m3)	Background Concentration (µg/m^3)	Total Ambient Concentration (µg/m^3)	NAAQS (µg/m^3)	Percent of NAAQS
PM_{10}	24-hour				150	NA
	Annual				50	NA
NO_2	Annual				100	NA
SO_2	3-hr	444.81	34	478.81	1,300	37
	24-hr	150.32	26	178.32	365	48
	Annual	16.24	8	24.24	80	30
CO	1-hour				40,000	NA
	8-hour				10,000	NA
Pb	Quarterly				1.5	NA

NA: The emissions rate is below the modeling threshold; modeling is not required in accordance with State of Idaho Air Quality Modeling Guidance DEQ Publication, December 2002, or alternative threshold approved by DEQ Modeling Coordinator.

4. REGULATORY REVIEW

4.1 Attainment Designation (40 CFR 81.313)

The facility is located in Bingham County which is designated as attainment or unclassifiable for PM_{10}, $PM_{2.5}$, CO, NO_2, SO_X, and Ozone. Reference 40 CFR 81.313.

4.2 Permit to Construct (IDAPA 58.01.01.201)

IDAPA 58.01.01.201 ..... Permit to Construct Required

The facility's proposed project does not meet the permit to construct exemption criteria contained in Sections 220 through 223 of the Rules. Therefore, a PTC is required

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

IDAPA 58.01.01.312..... Duty To Apply

The facility is not a Tier I source in accordance with IDAPA 58.01.01.006.113. Therefore, the requirements of IDAPA 58.01.01.312 do not apply.

4.4 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 52.21(b). Therefore, in accordance with 40 CFR 52.21(a)(2), the PSD requirements do not apply.

4.5 NSPS Applicability (40 CFR 60)

40 CFR 60, Subpart Dc.....National Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.

40 CFR 60.40c..... Applicability and Delegation of Authority.

In accordance with 40 CFR 60.40c(a), the Nebraska boiler is an affected facility because it is a steam generating unit with a rated capacity of 20.5 MMBtu/hr that commenced modification after June 9, 1989. 40 CFR 60.40c(b) does not apply to the facility. 40 CFR 60.40c(c) applies to the Nebraska boiler because it meets the applicability requirements 40 CFR 60.40c(a). 40 CFR 60.40c(d) is an informational section. 40 CFR 60.40c(e) does not apply because the Nebraska boiler is not a heat recovery steam generator. 40 CFR 60.40c(f) and (g) are informational.

40 CFR 60.41c..... Definitions.

The definitions of this section apply to the facility.

40 CFR 60.42c..... Standard for Sulfur Dioxide.

40 CFR 60.42c(a) does not apply because the Nebraska boiler does not combust coal. 40 CFR 60.42c(b), (b)(1), (b)(1)(i)-(ii), (b)(2), (b)(2)(i)-(ii) do not apply because the Nebraska boiler combust neither coal, nor coal with any other fuel. 40 CFR 60.42c(c) and (c)(1) through (4) do not apply because the Nebraska boiler does not combust coal, alone or in combination with any other fuel.

40 CFR 60.42c(d) does not apply because the Nebraska boiler does not combust oil. 40 CFR 60.42c(e) does not apply because the Nebraska boiler does not combust coal, oil, or coal and oil with any other fuel. 40 CFR 60.42c(f), (f)(1), and (f)(2) do not apply because the permittee is not reducing SO_2 emissions through fuel pretreatment and because it has chosen to comply with the percent sulfur content limitation of 40 CFR 60.42c(d). 40 CFR 60.42c(g) does not apply because the permittee does not combust oil. 40 CFR 60.42c(h), (h)(1) through (3) and (i) do not apply because the permittee does not combust oil or coal. 40 CFR 60.42c(j) is informational.

40 CFR 60.43c..... Standard for Particulate Matter.

40 CFR 60.43c(a), (a)(1), and (a)(2) do not apply because the Nebraska boiler does not combust coal or mixtures of coal with other fuels. 40 CFR 60.43c(b), (b)(1), and (b)(2) do not apply because the Nebraska boiler does not combust wood or mixtures of wood with other fuels (except coal). The opacity requirement 40 CFR 60.43c(c) does not apply because the Nebraska boiler does not combust coal, oil, or wood. 40 CFR 60.43c(d) does not apply because the opacity requirement of 40 CFR 60.43c(c) does not apply. 40 CFR 60.43c(e), e(1), (e)(2), (e)(2)(i) and (ii), (e)(3), and (e)(4) do not apply because the Nebraska boiler has a heat input capacity of 8.7 MW (30 million Btu/hr) or greater and does not combust coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels.

40 CFR 60.44c..... Compliance and Performance Test Methods and Procedures for Sulfur Dioxide.

The requirements of 40 CFR 60.44c(a) through (j) do not apply because the requirements of 60 CFR 42c do not apply and the permittee does not combust coal, oil, or coal and oil with any other fuel.

40 CFR 60.45c..... Compliance and Performance Test Methods and Procedures for Particulate Matter.

The requirements of 40 CFR 60.45c do not apply because the requirements of 40 CFR 60.43c do not apply.

40 CFR 60.46c..... Emission Monitoring for Sulfur Dioxide.

The requirements of 40 CFR 60.46c do not apply because the requirements of 40 CFR 60.42c do not apply.

40 CFR 60.47c..... Emission Monitoring for Sulfur Dioxide.

The requirements to install, calibrate, maintain, and operate a COMS for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system of 40 CFR 60.47c(a) do not apply because the particulate matter requirements of 40 CFR 60.43c do not apply. The requirements of 40 CFR 60.47c(b) do not apply because the facility does not operate of COMS. The requirement of 40 CFR 60.47c(c) does not apply because the particulate matter requirements of 40 CFR 60.43c do not apply.

40 CFR 60.48c..... Reporting and Recordkeeping Requirements.

40 CFR 60.48c(a), and (a)(1) apply to the Nebraska boiler. 40 CFR 60.48c(a)(2) through(4) do not apply because the facility does not have any federally enforceable limits on annual capacity, nor has the facility requested to use an emerging technology to control SO_2 emissions. 40 CFR 60.48c(b) does not apply because the permittee is not subject to the SO_2 emission limits of 40 CFR 42c, the PM or opacity limits of 40 CFR 60.43c, or required to perform tests in accordance with 40 CFR 60.42c or 43c. 40 CFR 60.48c(c) does not apply because the opacity requirements 40 CFR 60.43c do not apply. The permittee is not required to report to the Administrator in accordance 40 CFR 60.48c(d) because the permittee is not subject to fuel oil sulfur limits. 40 CFR 60.48c(e) does not apply because the facility is not subject to fuel oil sulfur limits. 40 CFR 60.48c(3) through (10) do not apply because the facility is not subject to SO_2 emission limits nor does it use a CEMS.

40 CFR 60.48c(f)(1), (2), and (3) do apply because the Nebraska boiler does not combust distillate oil, residual oil, or coal.40 CFR 48c(g), (i) and (j) generally apply. 40 CFR 48c(h) does not apply because the permittee is not subject to a limit on annual capacity.

4.6 NESHAP Applicability (40 CFR 61)

No NESHAPs apply to this facility

4.7 MACT Applicability (40 CFR 63)

No MACT apply to this facility because it is a minor source of HAPs.

4.8 CAM Applicability (40 CFR 64)

40 CFR 64 does not apply to this facility because it is not required to obtain a part 70 or 71 permit.

4.9 Permit Conditions Review

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

Old Permit Condition 2.3 from PTC No. P-030318 has been revised to include the new total SO_2 emission limit of 26.5 T/yr. This emission limit represents total emissions from the Nebraska boiler, hot water boiler, and biogas flare.

Revised Permit Condition 2.3 now contains the following: "The total SO_2 emissions from the Nebraska boiler stack, hot water boiler stack, and the biogas flare shall not exceed 26.5 tons per any consecutive 12-month period."

Old Permit Condition 2.5 has been revised to state "hot water heater" where it previously stated "boiler," and retains the same permit condition number. Old Permit Conditions 2.6 through 2.8 from PTC No. P-030318 have not been changed, and are listed in the permit under the same permit condition numbers.

Old Permit Condition 2.9 from PTC No. P-030318 has been removed. The permittee has fulfilled the initial testing requirement.

Old Permit Condition 2.10 from PTC No. P-030318 has been revised and renumbered to new Permit Condition 2.9. New Permit Condition 2.9 contains only requirements to monitor biogas flow. The permittee exercised its option under old Permit Condition 2.14 to have DEQ review and eliminate the need for H_2S monitoring requirements. Based on the H_2S and process data submitted in the application, DEQ has eliminated the requirements because steady state operations of potato processing and emission estimates based on stack test data. New Permit Condition 2.9 now reads as follows:

> For the totalizing gas flow rate analyzer upstream of the Nebraska boiler, hot water heater and biogas flare, the permittee shall install, calibrate, maintain, operate, and record parameters in accordance with the O&M manual and the requirements listed below:
>
> - Once per month, the total gas flow shall be recorded.
> - The monthly SO_2 emissions from the Nebraska boiler, hot water heater, and biogas flare shall be calculated using the corresponding monthly biogas flow.
> - Monthly SO_2 emissions shall be used to determine rolling 12-month total SO_2 emissions.

Old permit condition 2.11 from PTC No. P-030318 has been renumbered to new Permit Condition 2.10.

Old permit condition 2.12 from PTC No. P-030318 has been revised and renumbered to new Permit Condition 2.11. Permit 2.11 now contains only references to the pilot flame detector and no references to the H_2S monitor.

Old Permit Condition 2.13 from PTC No. P-030318 has been removed. The condition stated that "the permittee may develop and propose to the DEQ an alternate method for determining H_2S concentrations to replace the method required in this permit." The permittee may do this at any time by submitting an application in accordance with IDAPA 58.01.01.200 of the Rules.

Old Permit Condition 2.14 from PTC No. P-030318 has been removed. The condition stated that after 12 months of H_2S monitoring data collection, the permittee "may request that DEQ review the data and determine if the H_2S monitoring requirements can be eliminated." The permittee has made the request, so the old permit condition has been removed.

Old Permit Condition 2.15 from PTC No. P-030318 has been renumbered to new Permit Condition 2.12.

Old Permit Conditions 2.1, 2.2, 2.4, and 2.5 from PTC No. P-040318 have been renumbered to new Permit Conditions 3.1, 3.2, 3.4, and 3.5. Old Permit Condition 2.7 has been removed because Boiler No. 1 and Boiler No. 2 have already been removed.

Old Permit Condition 2.3 from PTC No. P-040318 has been revised to include the total SO_2 requirement previously stated in new Permit Condition 2.3. Old Permit Condition 2.3 has been renumbered to new Permit Condition 3.3

Old Permit Condition 2.6 from PTC No. P-040318 has been revised to allow combustion of a mixture of natural gas and biogas in the Nebraska boiler. Old Permit Condition 2.6 has been renumbered to new Permit Condition 3.6

Old Permit Condition 2.8 from PTC No. P-040318 has been revised to include the requirements of 40 CFR 60.48c(g)(2). Old Permit Condition 2.8 is now new Permit Condition 3.7

New Permit Conditions 3.8 through 3.10 contain the applicable monitoring, notification, and recordkeeping requirements from 40 CFR 60, Subpart Dc.

New Permit Condition 3.11 contains the generally applicable reporting, record keeping, and notification requirements of Subpart A of the New Source Performance Standards of 40 CFR 60.

5. PERMIT FEES

Table 5.1 lists the processing fee associated with this permitting action. The facility is subject to a processing fee of $2500.00 because its increase in emissions is 1.26 T/yr. Refer to the chronology for fee receipt dates.

Table 5.1 PTC PROCESSING FEE TABLE

Emissions Inventory			
Pollutant	**Annual Emissions Increase (T/yr)**	**Annual Emissions Reduction (T/yr)**	**Annual Emissions Change (T/yr)**
NO_X	0.97	0	0.97
SO_2	0.2	0	0.2
CO	0.07	0	0.07
PM_{10}	0.01	0	0.01
VOC	0.0	0	0.0
HAPS	5.90E-03	0	5.90E-03
Total:	1.26	0	1.26
Fee Due	**$ 2500.00**		

6. PUBLIC COMMENT

An opportunity for public comment period on the PTC application was provided from January 23, 2008 to February 6, 2008 in accordance with IDAPA 58.01.01.209.01.c. During this time, there were no comments on the application and no requests for a public comment period on DEQ's proposed action.

APPENDIX A – AIRS INFORMATION

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

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

AIR PROGRAM POLLUTANT	SIP	PSD	NSPS (Part 60)	NESHAP (Part 61)	MACT (Part 63)	SM80	TITLE V	AREA CLASSIFICATION A-Attainment U-Unclassified N- Nonattainment
SO_2	B		B					U
NO_x	B							U
CO	B							U
PM_{10}	B							U
PT (Particulate)	B		B					U
VOC	B							U
THAP (Total HAPs)								
			APPLICABLE SUBPART					
			Dc					

[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 – EMISSIONS INVENTORY

TABLE 3-1

EXISTING AND PROPOSED NEBRASKA BOILER CRITERIA POLLUTANT POTENTIAL TO EMIT

Simplot – Aberdeen
Aberdeen, Idaho

Pollutant	Existing Nebraska Boiler Potential to Emit[1]		Proposed Nebraska Boiler Project Potential to Emit [2]		Change in Potential Emissions		Modeling De Minimus Thresholds [3]	
	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)
NOx	3.81	16.69	4.03	17.65	0.22	0.97	--	1
CO	6.40	28.03	6.42	28.11	0.02	0.07	14	--
SO_2	0.05	0.20	6.05	26.49	6.00	26.29	0.2	1
PM_{10}	0.58	2.54	0.58	2.54	0.00	0.01	0.2	1
VOC	0.42	1.84	0.42	1.84	0.00	0.00	--	--

[1] – Based on the Nebraska boiler combusting 100 percent natural gas.

[2] – Based on the Nebraska boiler combusting a natural gas/biogas fuel mixture.

[3] – Modeling thresholds from Table 1 of the State of Idaho Air Quality Modeling Guideline (Doc. I D AQ-011 (rev. 1 12/31/02)).

TABLE 3-2

EXISTING AND PROPOSED NEBRASKA BOILER
TAP AND HAP POTENTIAL TO EMIT
Simplot – Aberdeen
Aberdeen, Idaho

Toxic Air Pollutants	Existing Nebraska Boiler Potential to Emit[1]		Proposed Nebraska Boiler Project Potential to Emit[2]		Change in Potential Emissions		Screening Emission Levels [3]
	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)
3-Methylchloranthrene	1.37E-07	6.01E-07	1.38E-07	6.02E-07	3.61E-10	1.58E-09	2.50E-06
Benzene	1.60E-04	7.01E-04	1.60E-04	7.03E-04	4.21E-07	1.84E-06	8.00E-04
Benzo(a)pyrene	9.14E-08	4.00E-07	9.17E-08	4.02E-07	2.41E-10	1.05E-09	2.00E-06
Dichlorobenzene	9.14E-05	4.00E-04	9.17E-05	4.02E-04	2.41E-07	1.05E-06	30
Formaldehyde	5.71E-03	2.50E-02	5.73E-03	2.51E-02	1.50E-05	6.59E-05	5.10E-04
Hexane	1.37E-01	6.01E-01	1.38E-01	6.02E-01	3.61E-04	1.58E-03	12
Naphthalene	4.65E-05	2.04E-04	4.66E-05	2.04E-04	1.22E-07	5.36E-07	3.33
Pentane	1.98E-01	8.68E-01	1.99E-01	8.70E-01	5.21E-04	2.28E-03	118
Toluene	2.59E-04	1.13E-03	2.60E-04	1.14E-03	6.82E-07	2.99E-06	25
Arsenic	1.52E-05	6.67E-05	1.53E-05	6.69E-05	4.01E-08	1.76E-07	1.50E-06
Barium	3.35E-04	1.47E-03	3.36E-04	1.47E-03	8.82E-07	3.86E-06	0.033
Beryllium	9.14E-07	4.00E-06	9.17E-07	4.02E-06	2.41E-09	1.05E-08	2.80E-05
Cadmium	8.38E-05	3.67E-04	8.40E-05	3.68E-04	2.21E-07	9.66E-07	3.70E-06
Chromium III	8.75E-05	3.83E-04	8.77E-05	3.84E-04	2.30E-07	1.01E-06	3.30E-02
Chromium VI	1.92E-05	8.41E-05	1.93E-05	8.43E-05	5.05E-08	2.21E-07	5.60E-07
Cobalt	6.40E-06	2.80E-05	6.42E-06	2.81E-05	1.68E-08	7.38E-08	0.0033
Copper	6.48E-05	2.84E-04	6.49E-05	2.84E-04	1.70E-07	7.47E-07	0.013
Manganese	2.90E-05	1.27E-04	2.90E-05	1.27E-04	7.62E-08	3.34E-07	0.067
Mercury	1.98E-05	8.68E-05	1.99E-05	8.70E-05	5.21E-08	2.28E-07	0.001
Molybdenum	8.38E-05	3.67E-04	8.40E-05	3.68E-04	2.21E-07	9.66E-07	0.333
Nickel	1.60E-04	7.01E-04	1.60E-04	7.03E-04	4.21E-07	1.84E-06	2.70E-05
Selenium	1.83E-06	8.01E-06	1.83E-06	8.03E-06	4.81E-09	2.11E-08	0.013
Zinc	2.21E-03	9.68E-03	2.22E-03	9.70E-03	5.82E-06	2.55E-05	0.667
Nitrous oxide	1.68E-01	7.34E-01	1.68E-01	7.36E-01	4.41E-04	1.93E-03	6
PAH Total	8.69E-07	3.80E-06	8.71E-07	3.81E-06	2.29E-09	1.00E-08	9.10E-05

[1] – Based on the Nebraska boiler combusting 100 percent natural gas.

[2] – Based on the Nebraska boiler combusting a natural gas/biogas fuel mixture.

[3] – Screening Emission Levels from IDAPA 58.01.01.585 and IDAPA 58.01.01.586.

APPENDIX C – MODELING ANALYSIS

(Reserved)