

## **Statement of Basis**

**Permit to Construct No. P-2007.0197  
Project ID 61907**

**LJD Holdings, Inc. dba B&D Foods  
Boise, Idaho**

**Facility ID 001-00162**

**Final**

**October 11, 2017**  
**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.

|  |           |
|--|-----------|
| <b>ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE.....</b>           | <b>3</b>  |
| <b>FACILITY INFORMATION.....</b>                                 | <b>5</b>  |
| Description .....  | 5         |
| Permitting History .....   | 5         |
| Application Scope .....  | 5         |
| Application Chronology.....                                      | 5         |
| <b>TECHNICAL ANALYSIS.....</b>                                   | <b>6</b>  |
| Emission Units and Control Equipment.....                        | 6         |
| Emission Inventories .....                                       | 6         |
| Ambient Air Quality Impact Analyses.....                         | 10        |
| <b>REGULATORY ANALYSIS.....</b>                                  | <b>11</b> |
| Attainment Designation (40 CFR 81.313) .....                     | 11        |
| Facility Classification.....                                     | 11        |
| Permit to Construct (IDAPA 58.01.01.201).....                    | 12        |
| Tier II Operating Permit (IDAPA 58.01.01.401).....               | 12        |
| Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70)..... | 12        |
| PSD Classification (40 CFR 52.21) .....                          | 12        |
| NSPS Applicability (40 CFR 60).....                              | 12        |
| NESHAP Applicability (40 CFR 61).....                            | 13        |
| MACT Applicability (40 CFR 63).....                              | 13        |
| Permit Conditions Review .....                                   | 13        |
| <b>PUBLIC REVIEW.....</b>  | <b>17</b> |
| Public Comment Opportunity .....                                 | 17        |
| <b>APPENDIX A – EMISSION INVENTORIES</b>                         |           |
| <b>APPENDIX B – FACILITY DRAFT COMMENTS</b>                      |           |
| <b>APPENDIX C – PROCESSING FEE</b>                               |           |

## 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  |
| CAA               | Clean Air Act  |
| CAS No.           | Chemical Abstracts Service registry number   |
| CEMS              | continuous emission monitoring systems   |
| cfm               | cubic feet per minute  |
| CFR               | Code of Federal Regulations  |
| CMS               | continuous monitoring systems  |
| CO                | carbon monoxide  |
| CO <sub>2</sub>   | carbon dioxide   |
| CO <sub>2</sub> e | CO <sub>2</sub> equivalent emissions   |
| COMS              | continuous opacity monitoring systems  |
| DEQ               | Department of Environmental Quality  |
| dscf              | dry standard cubic feet  |
| EL                | screening emission levels  |
| EPA               | U.S. Environmental Protection Agency   |
| GHG               | greenhouse gases   |
| gph               | gallons per hour   |
| gpm               | gallons per minute   |
| gr                | grains (1 lb = 7,000 grains)   |
| HAP               | hazardous air pollutants   |
| hp                | horsepower   |
| 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 |
| iwg               | inches of water gauge  |
| km                | kilometers   |
| lb/hr             | pounds per hour  |
| lb/qtr            | pound per quarter  |
| m                 | meters   |
| MACT              | Maximum Achievable Control Technology  |
| mg/dscm           | milligrams per dry standard cubic meter  |
| 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 <sub>2</sub>   | nitrogen dioxide   |
| NO <sub>x</sub>   | nitrogen oxides  |
| NSPS              | New Source Performance Standards   |
| O&M               | operation and maintenance  |
| O <sub>2</sub>    | oxygen   |
| PAH               | polycyclic aromatic hydrocarbons   |
| PCB               | polychlorinated biphenyl   |
| PM                | particulate matter   |
| PM <sub>2.5</sub> | particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers                                      |
| PM <sub>10</sub>  | particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers                                       |
| POM               | polycyclic organic matter  |

|                   |  |
|-------------------|--|
| ppm               | parts per million  |
| ppmw              | parts per million by weight  |
| PSD               | Prevention of Significant Deterioration  |
| psig              | pounds per square inch gauge   |
| PTC               | permit to construct  |
| PTE               | potential to emit  |
| PW                | process weight rate  |
| <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  |
| SM80              | synthetic minor facility with emissions greater than or equal to 80% of a major source threshold |
| SO <sub>2</sub>   | sulfur dioxide   |
| SO <sub>x</sub>   | sulfur oxides  |
| T/day             | tons per calendar day  |
| T/hr              | tons per hour  |
| T/yr              | tons per consecutive 12 calendar month period  |
| T2                | Tier II operating permit   |
| TAP               | toxic air pollutants   |
| TEQ               | toxicity equivalent  |
| ULSD              | ultra-low sulfur diesel  |
| U.S.C.            | United States Code   |
| VOC               | volatile organic compounds   |
| yd <sup>3</sup>   | cubic yards  |
| µg/m <sup>3</sup> | micrograms per cubic meter   |

## **FACILITY INFORMATION**

### ***Description***

B & D Foods is a food processing plant. The plant produces frozen battered meat and poultry. The frying process consists of applying batter to meat or poultry, frying the battered food, recoating the food with batter, refrying the food, and freezing the product for distribution.

### ***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).

|                  |  |
|------------------|--|
| October 11, 2017 | P-2007.0197 Project 61907, replace control equipment to assure compliance with PM limits, and increase throughput limits to process 120,000 pounds per day. (A)                      |
| May 20, 2015     | P-2007.0197 Project 61375, increase incinerator, fryer, and oil heater operation and throughput limits to process 90,000 pounds per day. (S)   |
| April 18, 2008   | P-2007.0197 Project 0197, replace Hot Oil Heater 1 and Fryer 1. (S)  |
| June 9, 2006     | PTC No. P-050006, initial permit for an existing facility with two oil heaters, two hot oil fryers, a mist eliminator and an incinerator processing up to 60,000 pounds per day. (S) |

### ***Application Scope***

This PTC is for a permit modification at an existing minor facility.

The applicant has proposed to:

- Remove existing incinerator and mist eliminator, and replace with a wet scrubber and mist eliminator to assure compliance with PM limits and to address consent order requirements.
- Increase the meat and poultry throughput from 90,000 pounds per day to 120,000 pounds per day.
- Add a broiler heater.
- Reduce annual operation to 260 day/yr and 24 hr/day for the broiler and 20 hr/day for the fryers.

### ***Application Chronology***

|                             |  |
|-----------------------------|--|
| January 10, 2017            | DEQ issued a Consent Order requiring PTC revision to address PM limits and testing (Enforcement Case No. E-2016.0012). |
| June 8, 2017                | DEQ received an application and an application fee.  |
| June 13 – 28, 2017          | DEQ provided an opportunity to request a public comment period on the application and proposed permitting action.      |
| July 7, 2017                | DEQ determined that the application was incomplete.  |
| July 18 and August 23, 2017 | DEQ received supplemental information from the applicant, including revised emission estimates.                        |
| August 7, 2017              | DEQ made available the draft permit and statement of basis for peer and regional office review.                        |
| August 16, 2017             | DEQ determined that the application was complete.  |
| August 16, 2017             | DEQ made available the draft permit and statement of basis for applicant review.                                       |
| October 4, 2017             | DEQ received the permit processing fee.  |
| October 11, 2017            | DEQ issued the final permit and statement of basis.  |

## TECHNICAL ANALYSIS

### *Emission Units and Control Equipment*

Table 1 EMISSIONS UNIT AND CONTROL EQUIPMENT INFORMATION

| Permit Section | Source  | Control Equipment  |
|----------------|---|--|
| 2              | <u>Oil Heater 1</u><br>Manufacturer: Eclipse<br>Model: 4IJ, Version 2<br>Heat input rating: 1.8 MMBtu/hr<br>Date of Construction: 2006<br>Maximum Operation: 18 hr/day and 260 day/yr<br>Fuel: Natural gas only                       | None   |
|                | <u>Oil Heater 2</u><br>Manufacturer: Maxon<br>Model: 422M<br>Heat input rating: 1.44 MMBtu/hr<br>Date of Construction: 2006<br>Maximum Operation: 18 hr/day and 260 day/yr<br>Fuel: Natural gas only                                  | None   |
|                | <u>Broiler Heater</u><br>Manufacturer: Sellers<br>Model: M Series Ultra Low NO <sub>x</sub><br>Heat input rating: 2.3 MMBtu/hr<br>Date of Construction: 2017<br>Maximum Operation: 24 hr/day and 260 day/yr<br>Fuel: Natural gas only | Low-NO <sub>x</sub> burners  |
| 3              | <u>Fryer 1</u><br>Manufacturer: Immerso-Cook, Maxon<br>Model: 2395.01.900<br>Heat input rating: 1.5 MMBtu/hr<br>Maximum Production: 120,000 lb product/day<br>Maximum Operation: 20 hr/day and 260 day/yr<br>Fuel: Natural gas only   | <u>Cyclonic Scrubber, Wet Scrubber, and Mist Eliminator</u><br>Manufacturer: Air Clear, Inc.<br>Model: CS-PF-30<br>Pressure drop: 1-12 iwg<br>Heat input rating: 1.5 MMBtu/hr<br>Control efficiency: 99.95% for PM <sub>10</sub><br>Fuel: Natural gas only |
|                | <u>Fryer 2</u><br>Manufacturer: Immerso-Cook, Maxon<br>Model: 2395.01.900<br>Heat input rating: 1.5 MMBtu/hr<br>Maximum Production: 120,000 lb product/day<br>Maximum Operation: 20 hr/day and 260 day/yr<br>Fuel: Natural gas only   |  |

### *Emission Inventories*

#### Potential to Emit

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.

Using this definition of Potential to Emit an emission inventory was developed for the heaters, fryers, and incinerator associated with the meat and poultry processing operations at the facility (refer to Appendix A) for this proposed modification.

**Uncontrolled Potential to Emit**

Using the definition of Potential to Emit, uncontrolled Potential to Emit is then defined 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 **not** be treated as part of its design **since** the limitation or the effect it would have on emissions **is not** state or federally enforceable.

The uncontrolled Potential to Emit is used to determine if a facility is a “Synthetic Minor” source of emissions. Synthetic Minor sources are facilities that have an uncontrolled Potential to Emit for regulated air pollutants or HAP above the applicable Major Source threshold without permit limits.

It was previously determined for this facility that uncontrolled emissions were less than 100 T/yr for all pollutants and the facility classification has not changed as a result of estimated emission increases.

**Pre-Project Potential to Emit**

Pre-project Potential to Emit is used to establish the change in emissions at a facility as a result of this project.

As proposed by the applicant to ensure the most conservative estimate of emission increases for this project as possible, pre-project emissions were set to zero for all criteria pollutants.

**Post-Project Potential to Emit**

Post-project Potential to Emit is used to establish the change in emissions at a facility and to determine the facility’s classification as a result of this project. Post-project Potential to Emit includes all permit limits resulting from this project.

The following table presents the post-project Potential to Emit for criteria pollutants from all emissions units at the facility as determined by the applicant and verified by DEQ staff. See Appendix A for a detailed presentation of the calculations of these emissions for each emissions unit.

**Table 2 POST-PROJECT POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS**

| Source                     | PM <sub>10</sub>     |                     | PM <sub>2.5</sub>    |                     | SO <sub>2</sub>      |                     | NO <sub>x</sub>      |                     | CO                   |                     | VOC                  |                     |
|----------------------------|----------------------|---------------------|----------------------|---------------------|----------------------|---------------------|----------------------|---------------------|----------------------|---------------------|----------------------|---------------------|
|                            | lb/hr <sup>(a)</sup> | T/yr <sup>(b)</sup> |
| Oil Heater 1               | 0.013                | 0.035               | 0.013                | 0.035               | 0.001                | 0.003               | 0.176                | 0.459               | 0.148                | 0.385               | 0.010                | 0.025               |
| Oil Heater 2               | 0.011                | 0.028               | 0.011                | 0.028               | 0.001                | 0.002               | 0.141                | 0.367               | 0.119                | 0.308               | 0.008                | 0.020               |
| Fryer 1 and 2              | 0.283                | 0.737               | 0.283                | 0.737               | 0.000                | 0.000               | 0.000                | 0.000               | 0.000                | 0.000               | 0.000                | 0.000               |
| Unit Heater 1              | 0.0015               | 0.0035              | 0.0015               | 0.0035              | 0.0001               | 0.0003              | 0.020                | 0.046               | 0.016                | 0.039               | 0.0001               | 0.001               |
| Unit Heater 2              | 0.0015               | 0.0035              | 0.0015               | 0.0035              | 0.0001               | 0.0003              | 0.020                | 0.046               | 0.016                | 0.039               | 0.0001               | 0.001               |
| Unit Heater 3              | 0.0011               | 0.0026              | 0.0011               | 0.0026              | 0.0001               | 0.0002              | 0.015                | 0.034               | 0.012                | 0.029               | 0.0001               | 0.001               |
| Pressure Water Heater      | 0.007                | 0.0164              | 0.007                | 0.0164              | 0.0006               | 0.0013              | 0.092                | 0.216               | 0.077                | 0.181               | 0.0001               | 0.001               |
| Hot Water Heater 5         | 0.002                | 0.0048              | 0.002                | 0.0048              | 0.0002               | 0.0004              | 0.027                | 0.063               | 0.023                | 0.053               | 0.0001               | 0.001               |
| Hot Water Heater 6         | 0.0005               | 0.0011              | 0.0005               | 0.0011              | 0.0004               | 0.0001              | 0.006                | 0.015               | 0.005                | 0.013               | 0.0001               | 0.001               |
| Furnace 1                  | 0.001                | 0.0022              | 0.001                | 0.0022              | 0.0007               | 0.0002              | 0.012                | 0.029               | 0.010                | 0.024               | 0.0001               | 0.001               |
| Furnace 2                  | 0.0003               | 0.0007              | 0.0003               | 0.0007              | 0.0002               | 0.0001              | 0.004                | 0.009               | 0.003                | 0.008               | 0.0001               | 0.001               |
| Furnace 3                  | 0.0003               | 0.0007              | 0.0003               | 0.0007              | 0.0002               | 0.0001              | 0.004                | 0.009               | 0.003                | 0.008               | 0.0001               | 0.001               |
| Broiler Heater             | 0.0218               | 0.0681              | 0.0218               | 0.0681              | 0.0017               | 0.0054              | 0.144                | 0.448               | 0.241                | 0.753               | 0.0158               | 0.049               |
| <b>Post-Project Totals</b> | <b>0.34</b>          | <b>0.90</b>         | <b>0.34</b>          | <b>0.90</b>         | <b>0.006</b>         | <b>0.013</b>        | <b>0.66</b>          | <b>1.74</b>         | <b>0.67</b>          | <b>1.84</b>         | <b>0.03</b>          | <b>0.10</b>         |
| <b>BRC<sup>(c)</sup></b>   |                      | <b>1.50</b>         |                      | <b>1.00</b>         |                      | <b>4.00</b>         |                      | <b>4.00</b>         |                      | <b>10.00</b>        |                      | <b>4.00</b>         |

a) Controlled average emission rate in pounds per hour is a daily average, based on the proposed daily operating schedule and daily limits.  
 b) Controlled average emission rate in tons per year is an annual average, based on the proposed annual operating schedule and annual limits.  
 c) Potential emission rates are considered “below regulatory concern” for criteria pollutants when less than 10% of significant emission rates as defined in IDAPA 58.01.01.006.

**Change in Potential to Emit**

The change in facility-wide potential to emit is used to determine if a public comment period may be required and to determine the processing fee per IDAPA 58.01.01.225. The following table presents the facility-wide change in the potential to emit for criteria pollutants.

**Table 3 CHANGES IN POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS <sup>(a)</sup>**

| Source                         | PM <sub>2.5</sub> |      | PM <sub>10</sub> |      | SO <sub>2</sub> |       | NO <sub>x</sub> |      | CO    |      | VOC   |      |
|--------------------------------|-------------------|------|------------------|------|-----------------|-------|-----------------|------|-------|------|-------|------|
|                                | lb/hr             | T/yr | lb/hr            | T/yr | lb/hr           | T/yr  | lb/hr           | T/yr | lb/hr | T/yr | lb/hr | T/yr |
| Pre-Project Potential to Emit  | 0.00              | 0.00 | 0.00             | 0.00 | 0.000           | 0.00  | 0.00            | 0.00 | 0.00  | 0.00 | 0.00  | 0.00 |
| Post-Project Potential to Emit | 0.34              | 0.90 | 0.34             | 0.90 | 0.006           | 0.013 | 0.66            | 1.74 | 0.67  | 1.84 | 0.03  | 0.10 |
| Changes in Potential to Emit   | 0.34              | 0.90 | 0.34             | 0.90 | 0.006           | 0.013 | 0.66            | 1.74 | 0.67  | 1.84 | 0.03  | 0.10 |

a) Facility-wide emissions were evaluated for BRC, with pre-project emissions set to zero. Permitted emissions (pre- and post-project) were compared for the purposes of determining the PTC processing fee in Appendix C.

As described above, as proposed by the applicant to ensure the most conservative estimate of emission increases for this project as possible, pre-project emissions were set to zero for all criteria pollutants.

Facility-wide emission rates of criteria pollutants (PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, and VOC) were below the “below regulatory concern” (BRC) threshold levels of less than 10% of “significant” emission rates for criteria pollutants defined in IDAPA 58.01.01.006.

For determining the processing fee, the proposed potential to emit was compared to allowable emissions from the prior permitting action (P-2007.0197 Project 61375); calculations are provided in Appendix C.

**TAP Emissions**

As proposed by the applicant to ensure the most conservative estimates possible, facility-wide emissions of toxic air pollutants (TAP) were compared to relevant screening emission levels (EL). Summaries of facility-wide emissions of non-carcinogenic and carcinogenic TAP are provided in the following tables.

**Table 4 FACILITY-WIDE EMISSIONS OF NON-CARCINOGENIC TOXIC AIR POLLUTANTS**

| Toxic Air Pollutant | Averaging Period | Emissions Rate (T/yr) | Emissions Rate (lb/hr) | Screening Emission Level (lb/hr) | Exceeds Screening Level? (Y/N) |
|---------------------|------------------|-----------------------|------------------------|----------------------------------|--------------------------------|
| Barium              | Daily            | 1.17E-04              | 2.66E-05               | 0.033                            | No                             |
| Chromium            | Daily            | 3.71E-05              | 8.47E-06               | 0.033                            | No                             |
| Cobalt              | Daily            | 2.23E-06              | 5.08E-07               | 0.0033                           | No                             |
| Copper              | Daily            | 2.25E-05              | 5.14E-06               | 0.067                            | No                             |
| Manganese           | Daily            | 1.01E-05              | 2.30E-06               | 0.067                            | No                             |
| Molybdenum          | Daily            | 2.91E-05              | 6.65E-06               | 0.333                            | No                             |
| Selenium            | Daily            | 6.36E-07              | 1.45E-07               | 0.013                            | No                             |
| Vanadium            | Daily            | 6.09E-05              | 1.39E-05               | 0.003                            | No                             |
| Zinc                | Daily            | 7.68E-04              | 1.75E-04               | 0.667                            | No                             |
| Hexane              | Daily            | 4.77E-02              | 1.09E-02               | 12                               | No                             |
| Pentane             | Daily            | 6.89E-02              | 1.57E-02               | 118                              | No                             |
| Toluene             | Daily            | 9.01E-05              | 2.06E-05               | 25                               | No                             |
| Naphthalene         | Daily            | 1.62E-05              | 3.69E-06               | 3.33                             | No                             |

**Table 5 FACILITY-WIDE EMISSIONS OF CARCINOGENIC TOXIC AIR POLLUTANTS**

| Toxic Air Pollutant                  | Averaging Period | Emissions Rate (T/yr) | Emissions Rate (lb/hr) | Screening Emission Level (lb/hr) | Exceeds Screening Emission Level? (Y/N) |
|--------------------------------------|------------------|-----------------------|------------------------|----------------------------------|---|
| Benzene                              | Annual           | 5.56E-05              | 1.27E-05               | 8.00E-04                         | No                                      |
| POM <sup>(a)</sup>                   | Annual           | 3.02E-07              | 6.89E-08               | 2.00E-06                         | No                                      |
| 2-Methylnaphthalene <sup>(b)</sup>   | Annual           | 6.36E-07              | 1.45E-07               | 9.10E-05                         | No                                      |
| 3-Methylchloranthrene <sup>(b)</sup> | Annual           | 4.77E-08              | 1.09E-08               | 9.10E-05                         | No                                      |
| Acenaphthene <sup>(b)</sup>          | Annual           | 4.77E-08              | 1.09E-08               | 9.10E-05                         | No                                      |
| Acenaphthylene <sup>(b)</sup>        | Annual           | 4.77E-08              | 1.09E-08               | 9.10E-05                         | No                                      |
| Anthracene <sup>(b)</sup>            | Annual           | 6.36E-08              | 1.45E-08               | 9.10E-05                         | No                                      |
| Benzo(g,h,i)perylene <sup>(b)</sup>  | Annual           | 3.18E-08              | 7.26E-09               | 9.10E-05                         | No                                      |
| Dichlorobenzene <sup>(b)</sup>       | Annual           | 3.18E-05              | 7.26E-06               | 9.10E-05                         | No                                      |
| Fluoranthene <sup>(b)</sup>          | Annual           | 7.95E-08              | 1.81E-08               | 9.10E-05                         | No                                      |
| Fluorene <sup>(b)</sup>              | Annual           | 7.42E-08              | 1.69E-08               | 9.10E-05                         | No                                      |
| Phenanthrene <sup>(b)</sup>          | Annual           | 4.50E-07              | 1.03E-07               | 9.10E-05                         | No                                      |
| Pyrene <sup>(b)</sup>                | Annual           | 1.32E-07              | 3.02E-08               | 9.10E-05                         | No                                      |
| Formaldehyde                         | Annual           | 1.99E-03              | 4.54E-04               | 5.10E-04                         | No                                      |
| Naphthalene                          | Annual           | 1.62E-05              | 3.69E-06               | 9.10E-05                         | No                                      |
| Arsenic                              | Annual           | 5.30E-06              | 1.21E-06               | 1.50E-06                         | No                                      |
| Beryllium                            | Annual           | 3.18E-07              | 7.26E-08               | 2.80E-05                         | No                                      |
| Cadmium <sup>(c)</sup>               | Annual           | 2.91E-05              | (6.65E-06) 3.16E-06    | 3.70E-06                         | No                                      |
| Nickel                               | Annual           | 5.56E-05              | 1.27E-05               | 2.70E-05                         | No                                      |

- a) Polycyclic Organic Matter (POM) is considered as one TAP comprised of benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, chrysene, indeno(1,2,3-cd)pyrene, benzo(a)pyrene. The total is compared to benzo(a)pyrene.
- b) These pollutants are evaluated individually against the Polycyclic Aromatic Hydrocarbon (PAH) screening emission level (EL).
- c) Cadmium (attributed to fuel combustion) exceeds the EL on the basis of facility-wide emissions, but not on the basis of the emission increase resulting from this project. Because Section 210 allows for a full increment for each modification, the EL is not exceeded for the emission increase whether examined on the basis of adding the broiler heater under continuous operation (8,760 hr/yr), or examined on the basis of the change in annual facility-wide emissions.

With the exception of cadmium, facility-wide TAP emissions were estimated based on maximum hourly rates and compared to daily and annual increments in Sections 585 and 586, respectively. For cadmium, the emission increase resulting from this project was used for comparison to the increment in Section 586.

Emission increases of non-carcinogenic and carcinogenic TAP did not exceed applicable screening emission levels (EL) in IDAPA 58.01.01.585–586 for the proposed project.

**HAP Emissions**

The following table presents the post project potential to emit for HAP pollutants from all emissions units at the facility as submitted by the Applicant and verified by DEQ staff. Refer to Appendix A for a detailed presentation of the calculations of these emissions for each emissions unit.

Table 6 HAZARDOUS AIR POLLUTANT POTENTIAL TO EMIT SUMMARY

| Toxic Air Pollutant                 | Averaging Period | Emissions Rate (T/yr) |
|-------------------------------------|------------------|-----------------------|
| Chromium                            | Daily            | 3.71E-05              |
| Manganese                           | Daily            | 1.01E-05              |
| Selenium                            | Daily            | 6.36E-07              |
| Hexane                              | Daily            | 4.77E-02              |
| Toluene                             | Daily            | 9.01E-05              |
| Naphthalene                         | Daily            | 1.62E-05              |
| Benzene                             | Annual           | 5.56E-05              |
| POM <sup>(a)</sup>                  | Annual           | 3.02E-07              |
| 2-Methylnaphthalene <sup>(b)</sup>  | Annual           | 6.36E-07              |
| 3-Methylcholanthrene <sup>(b)</sup> | Annual           | 4.77E-08              |
| Acenaphthene <sup>(b)</sup>         | Annual           | 4.77E-08              |
| Acenaphthylene <sup>(b)</sup>       | Annual           | 4.77E-08              |
| Anthracene <sup>(b)</sup>           | Annual           | 6.36E-08              |
| Benzo(g,h,i)perylene <sup>(b)</sup> | Annual           | 3.18E-08              |
| Dichlorobenzene <sup>(b)</sup>      | Annual           | 3.18E-05              |
| Fluoranthene <sup>(b)</sup>         | Annual           | 7.95E-08              |
| Fluorene <sup>(b)</sup>             | Annual           | 7.42E-08              |
| Phenanthrene <sup>(b)</sup>         | Annual           | 4.50E-07              |
| Pyrene <sup>(b)</sup>               | Annual           | 1.32E-07              |
| Formaldehyde                        | Annual           | 1.99E-03              |
| Naphthalene                         | Annual           | 1.62E-05              |
| Arsenic                             | Annual           | 5.30E-06              |
| Beryllium                           | Annual           | 3.18E-07              |
| Cadmium <sup>(c)</sup>              | Annual           | 2.91E-05              |
| Nickel                              | Annual           | 5.56E-05              |
| Total HAP                           | Annual           | 0.050                 |
| Maximum Individual HAP              | Annual           | 0.048                 |

**Ambient Air Quality Impact Analyses**

The estimated emission rates of PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, HAP, and TAP from this project were below applicable screening emission levels (EL) and published DEQ modeling thresholds established in IDAPA 58.01.01.585-586 and in the State of Idaho Air Quality Modeling Guideline.<sup>1</sup> Refer to the Emission Inventories section for additional information concerning the emission inventories.

- As described above, as proposed by the applicant to ensure the most conservative estimate of emission increases for this project as possible, pre-project emissions were set to zero for all criteria pollutants.
- Facility-wide emission rates of criteria pollutants (PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, and VOC) were below the “below regulatory concern” (BRC) threshold levels of less than 10% of “significant” emission rates for criteria pollutants defined in IDAPA 58.01.01.006, and therefore modeling was not required.

<sup>1</sup> State of Idaho Guideline for Performing Air Quality Impact Analyses, Doc ID AQ-011, September 2013.

- Emission increases of non-carcinogenic and carcinogenic TAP did not exceed applicable screening emission levels (EL) in IDAPA 58.01.01.585–586 for the proposed project, and therefore modeling was not required to demonstrate preconstruction compliance with TAP increments in accordance with IDAPA 58.01.01.210.

Emission limits (Permit Condition 3.3), production throughput limits (Permit Condition 3.6), and requirements to operate control equipment (Permit Conditions 3.10 through 3.13) were established to limit criteria pollutants to below BRC.

The applicant has demonstrated pre-construction compliance to DEQ’s satisfaction that emissions from this facility will not cause nor significantly contribute to a violation of any ambient air quality standard. The applicant has also demonstrated preconstruction compliance to DEQ’s satisfaction that the emissions increase due to this permitting action will not exceed any acceptable ambient concentration (AAC) or acceptable ambient concentration for carcinogens (AACC) for toxic air pollutants (TAP).

## REGULATORY ANALYSIS

### ***Attainment Designation (40 CFR 81.313)***

The facility is located in Ada County, which is designated as attainment or unclassifiable for PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>2</sub>, CO, and Ozone. Refer to 40 CFR 81.313 for additional information.

### ***Facility Classification***

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  $\geq 10$  T/yr or if the aggregate of all HAPS (Total HAPs) has actual or potential emissions  $\geq 25$  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  $\geq 8$  T/yr of a single HAP or  $\geq 20$  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  $\geq 100$  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  $\geq 80$  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.

“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. Therefore, the following table compares the uncontrolled Potential to Emit and the Potential to Emit for criteria pollutants to the Major Source thresholds to determine if the facility is “Synthetic Minor.”

**Table 7 Regulated Air Pollutant Facility Classification**

| Pollutant         | Uncontrolled PTE (T/yr) | Permitted PTE (T/yr) | Major Source Thresholds (T/yr) | AIRS/AFS Classification | Uncontrolled PTE Exceeds the Major Source Threshold and PTE Exceeds the Major Source Threshold? |
|-------------------|-------------------------|----------------------|--------------------------------|-------------------------|---|
| PM                | <100                    | 0.90                 | 100                            | B                       | No  |
| PM <sub>10</sub>  | <100                    | 0.90                 | 100                            | B                       | No  |
| PM <sub>2.5</sub> | <100                    | 0.90                 | 100                            | B                       | No  |
| SO <sub>2</sub>   | 0.02                    | 0.013                | 100                            | B                       | No  |
| NO <sub>x</sub>   | 3.01                    | 1.74                 | 100                            | B                       | No  |
| CO                | 3.06                    | 1.84                 | 100                            | B                       | No  |
| VOC               | 0.15                    | 0.10                 | 100                            | B                       | No  |
| HAP (single)      | 0.048                   | 0.048                | 10                             | B                       | No  |
| HAP (total)       | 0.050                   | 0.050                | 25                             | B                       | No  |

As demonstrated in Table 7, the facility has uncontrolled potential to emit criteria pollutants (PM, PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, and VOC) and hazardous air pollutants (HAP) less than major source thresholds. Therefore, this facility is designated as a minor facility.

**Permit to Construct (IDAPA 58.01.01.201)**

The permittee has requested that a PTC be issued to the facility for the modified emissions source. 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)**

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)**

Post-project facility-wide emissions from this facility do not have a potential to emit greater than 100 tons per year for all criteria pollutants, 10 tons per year for any one HAP, or 25 tons per year for all HAP combined as demonstrated in the Emission Inventories section. 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)**

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 in 40 CFR Part 60.

## NESHAP Applicability (40 CFR 61)

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

## MACT Applicability (40 CFR 63)

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

## Permit Conditions Review

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

Revised Permit Conditions 1.1, 1.3, 2.1, 3.2, and 3.14

(Permit Conditions 1.1, 1.3, 2.2, 3.2, and 3.9 of P-2007.0197 PROJ 61375)

1.1 This is a modified permit to construct (PTC) which authorizes an increase in daily throughput of fried meat and poultry product to the fryers, an increase in daily incinerator and fryer operation, and an increase in annual incinerator and fryer operation.

1.3 This PTC replaces Permit to Construct No. P-2007.0197, issued on April 18, 2008.

Table 1.1 lists all sources of regulated emissions in this permit.

Table 1.1 Regulated Sources

| Permit Section | Source  | Control Equipment   |
|----------------|---|---|
| 2              | <u>Oil heater 1:</u><br>Manufacturer: Eclipse<br>Model: 41J, Version 2<br>Heat input rating: 1.8 MMBtu/hr<br>Fuel: Natural gas only     | None  |
|                | <u>Oil heater 2:</u><br>Manufacturer: Maxon<br>Model: #422M<br>Heat input rating: 1.44 MMBtu/hr<br>Fuel: Natural gas only               | None  |
| 3              | <u>Fryer 1:</u><br>Manufacturer: Immerso-Cook, Maxon<br>Model: 2395.01.900<br>Heat input rating: 1.5 MMBtu/hr<br>Fuel: Natural gas only | <u>Mist eliminator (in line before the incinerator):</u><br>Manufacturer: Amistco<br>Model: TM-1109<br>Control efficiency: 99.9% for PM <sub>10</sub> , 60% for PM <sub>2.5</sub> |
|                | <u>Fryer 2:</u><br>Manufacturer: Immerso-Cook, Maxon<br>Model: 2395.01.900<br>Heat input rating: 1.5 MMBtu/hr<br>Fuel: Natural gas only | <u>Incinerator:</u><br>Manufacturer: Maxon<br>Model: NP II<br>Heat input rating: 1.5 MMBtu/hr<br>Control efficiency: 85.0% for PM <sub>10</sub><br>Fuel: Natural gas only         |

## 2.2 Control Device Descriptions

Table 2.1 Oil Heaters 1 and 2 Description

| Emissions Units / Processes | Control Devices | Emission Points |
|-----------------------------|-----------------|-----------------|
| Oil Heater 1                | None            | HEATER1         |
| Oil Heater 2                | None            | HEATER2         |

## 3.2 Control Device Descriptions

Table 3.1 Fryers 1 and 2 Description

| Emissions Units / Processes | Control Devices                                  | Emission Points |
|-----------------------------|--|-----------------|
| Fryer 1                     | Mist eliminator (in line before the incinerator) | INCINERATOR     |
| Fryer 2                     | Incinerator                                      |                 |

### 3.4 Opacity Limit

*Emissions from the Fryers 1 and 2 Incinerator stack, or any other stack, vent, or functionally equivalent opening associated with the Fryers 1 and 2 Incinerator, 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.*

### 3.9 Visible Emissions Monitoring

*The permittee shall monitor visible emissions from the incinerator exhaust stack for at least one 10-minute period per week until one year after permit issuance. If no opacity exceedances are observed after one year, the permittee may begin monitoring visible emissions once per calendar month. If an opacity exceedance is observed during any monthly observation, the permittee shall take immediate corrective action and resume weekly visible emissions observations for the next four consecutive weeks and show no exceedances before resuming the monthly monitoring schedule.*

*The permittee shall maintain records of the results of each visible emissions observation. The records shall include, at a minimum, the date and results of each inspection and a description of the following:*

- *The permittee's assessment of the conditions existing at the time visible emissions are present (if observed),*
- *Any corrective action taken in response to the visible emissions, and*
- *The date corrective action was taken.*
- *Records of this information shall be kept on site for the most recent two year period and shall be made available to DEQ representatives upon request.*

These permit conditions have been revised to reflect the purpose of this permitting action, and to include updated references and information regarding process and control equipment.

Added Permit Condition 2.4 & Revised Permit Conditions 2.3 and 3.13  
(Permit Conditions 2.3 and 3.9 of P-2007.0197 PROJ 61375)

### 2.3 Opacity Limit

*Emissions from the Oil Heaters 1 and 2 stack, or any other stack, vent, or functionally equivalent opening associated with Oil Heaters 1 and 2, 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.*

These permit conditions have been added and updated to reflect the addition of the Broiler Heater. The Broiler Heater, Oil Heater 1, and Oil Heater 2 are subject to opacity and fuel-burning equipment PM limits.

Revised Permit Conditions 2.5 and 3.9 (Permit Conditions 2.3 and 3.6 of P-2007.0197 PROJ 61375)

### 2.5 Allowable Fuel

*Oil Heaters 1 and 2 shall combust natural gas exclusively.*

### 3.6 Allowable Fuel

*Fryers 1 and 2 and the Incinerator shall combust natural gas exclusively.*

These permit conditions have been updated to reflect the addition of the Broiler Heater and removal of incinerator control equipment. All fuel-burning equipment combusts only natural gas as proposed by the applicant.

Revised Permit Condition 3.3 (Permit Condition 3.3 of P-2007.0197 PROJ 61375)

### 3.3 Emission Limits

*The emissions from the Fryer 1 and 2 Incinerator stack shall not exceed any corresponding emissions rate limits listed in Table 3.2.*

*Table 3.2 Fryer 1 and 2 Incinerator Emission Limits<sup>(a)</sup>*

| Source Description                     | PM <sub>10</sub> <sup>(b)</sup> |                     | PM <sub>2.5</sub> <sup>(b)</sup> |                     |
|--|---------------------------------|---------------------|----------------------------------|---------------------|
|  | lb/hr <sup>(c)</sup>            | T/yr <sup>(d)</sup> | lb/hr <sup>(c)</sup>             | T/yr <sup>(d)</sup> |
| Fryer 1 and 2 and Incinerator combined | 0.31                            | 0.886               | 0.191                            | 0.545               |

- a In absence of any other credible evidence, compliance is ensured by complying with permit operating, monitoring, and record keeping requirements.*
- b Particulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers and two point five (2.5) micrometers, including condensable particulate as defined in IDAPA 58.01.01.006.*
- c Pounds per hour, as determined by a test method prescribed by IDAPA 58.01.01.157, EPA reference test method, continuous emission monitoring system (CEMS) data, or DEQ-approved alternative.*
- d Tons per any consecutive 12-calendar month period.*

This permit condition has been updated to reflect the revised emission estimates from the fryers, and accounting for replacement of the control equipment. Because PM<sub>2.5</sub> and PM<sub>10</sub> were assumed to be equivalent for the purposes of estimating emissions, including both limits was considered as redundant. The PM<sub>10</sub> emission limit was determined to be more stringent (than a PM<sub>2.5</sub> limit) and was retained.

Added Permit Condition 3.5 and 3.15

This permit condition was added to incorporate Odors limit and complaint response monitoring in accordance with IDAPA 58.01.01.776. Replacement of control equipment has been proposed by the applicant, and control of volatile organics and associated odors could be impacted by this change.

Added Permit Conditions 3.7, 3.8, and 3.17 and Revised Permit Conditions 3.6 and 3.16 (Permit Condition 3.5 of P-2007.0197 PROJ 61375)

3.5 *Throughput Limits*

*The combined weight of finished meat and poultry product shall not exceed 90,000 pounds per calendar day and 14,265 tons in any consecutive 12-calendar months.*

3.10 *Throughput Monitoring and Recordkeeping*

*The permittee shall monitor and record the combined weight of finished meat and poultry on a calendar day basis to demonstrate compliance with the Throughput Limits permit condition.*

These permit conditions establish facility-wide production throughput and fryer operational limits based on operating schedules proposed by the applicant, to ensure compliance with emission limits and the emission estimates relied upon to limit facility-wide emissions below regulatory concern.

Permit Conditions 3.13 and 3.20 allow up to 180 days for installation and performance testing of the replacement control equipment, so long as existing control equipment (incinerator) continues to be used.

Added Permit Conditions 3.11 and 3.12 and Revised Permit Conditions 3.10, 3.13, and 3.16 through 3.19 (Permit Conditions 3.7, 3.8, 3.11, and 3.13 and Removed Permit Conditions 3.12 and 3.14 of P-2007.0197 PROJ 61375)

3.7 *Pressure Drop Across Mist Eliminator*

*The pressure drop across the mist eliminator shall be maintained between 0.01 and 1.0 inches water gauge. The mist eliminator shall be operating during any frying activities.*

3.8 *Incinerator Operation*

*The permittee shall operate the incinerator in accordance with the manufacturer's specifications. The incinerator shall be operating during any frying activities. In addition, the operating temperature of the incinerator (as measured downstream of the burner) shall be maintained at or above the operating temperature established during the performance test.*

3.11 *Mist Eliminator Pressure Drop Monitoring and Recordkeeping*

*The permittee shall monitor and record the pressure drop across the mist eliminator once per day while the mist eliminator is operating to demonstrate compliance with the Pressure Drop Across Mist Eliminator Permit Condition.*

3.12 *Incinerator Operating Temperature Monitoring and Recordkeeping*

*The permittee shall monitor and record the operating temperature (established during the performance test) of the incinerator (as measured downstream of the burner) once per day while the incinerator is operating to demonstrate compliance with the Incinerator Operation Permit Condition.*

3.13 *Mist Eliminator O & M Manual*

*The permittee shall have developed an O&M manual for the mist eliminator. The O&M manual shall describe the procedures that will be followed to comply with the General Compliance General Provisions and the manufacturer specifications for the mist eliminator. The manual shall contain, at a minimum, the following:*

- *The recommended pressure drop operating range of the mist eliminator, and*
- *The routine maintenance and repair procedures for the mist eliminator.*

*The manual shall remain on site at all times and shall be made available to DEQ representatives upon request. A copy of the initial O&M manual, and any subsequent revisions, shall be submitted to DEQ.*

3.14 *Incinerator O & M Manual*

*The permittee shall have developed an O&M manual for the incinerator. The O&M manual shall describe the procedures that will be followed to comply with the General Compliance General Provisions and the manufacturer specifications for the incinerator. The manual shall contain at a minimum, the following:*

- *The recommended incinerator combustion temperature and oxygen (O<sub>2</sub>) content, and*
- *The routine maintenance and repair procedures for the incinerator.*

*The manual shall remain on site at all times and shall be made available to DEQ representatives upon request. A copy of the initial O&M manual, and any subsequent revisions, shall be submitted to DEQ.*

These permit conditions have been updated to require operation in accordance with manufacturer specifications and key operating parameters established during performance testing and in accordance with an updated O&M manual for the replacement control equipment.

Because time will be required to remove and replace control equipment, operation using the existing incinerator is permitted until replacement is complete, with up to 6 additional months for performance testing allowed to accommodate the transition (Permit Conditions 3.13 and 3.20).

Revised Permit Conditions 3.20 through 3.22  
(Permit Conditions 3.15 and 3.14 of P-2007.0197 PROJ 61375)

3.15 *PM<sub>10</sub>, PM<sub>2.5</sub>, and Opacity Performance Testing*

*Performance testing on the incinerator stack shall be performed within 180 days of permit issuance.*

*The performance test shall measure the PM<sub>10</sub> and the PM<sub>2.5</sub> emission rate in pounds per hour and the opacity to demonstrate compliance with the PM<sub>10</sub> and PM<sub>2.5</sub> Emissions Limit and Opacity Limit permit conditions.*

*The performance test shall be conducted under worst-case normal operating conditions and in accordance with IDAPA 58.01.01.157, and Performance Testing General Provision of this permit. The permittee is encouraged to submit a performance testing protocol for approval 30 days prior to conducting the performance tests.*

3.16 *PM<sub>10</sub>, PM<sub>2.5</sub>, and Opacity Performance Testing Methods and Procedures*

*The permittee shall use EPA Methods 5 and 202, or EPA Methods 201A and 202, or such comparable and equivalent methods approved in accordance with Subsection 157.02.d, to determine compliance with the PM<sub>10</sub> and the PM<sub>2.5</sub> Emissions Limit permit condition.*

*The permittee shall use EPA Method 9 to determine compliance with the Opacity Limit permit condition with the method of calculating opacity exceedances altered in accordance with IDAPA 58.01.01.625.04.*

### **3.17 Performance Test Monitoring and Recordkeeping**

*The permittee shall monitor and record the following during the performance test:*

- *The weight of meat and poultry product to the fryers, in pounds per hour, at least once every 15 minutes,*
- *The visible emissions observed,*
- *The mist eliminator pressure drop and the incinerator operating temperature and O2 content at least once every 15 minutes.*

These permit conditions have been updated to require performance testing following installation of replacement control equipment.

Because time will be required to remove and replace control equipment, operation using the existing incinerator is permitted until replacement is complete, with up to 6 additional months for performance testing allowed to accommodate the transition (Permit Conditions 3.13 and 3.20).

## **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. During this time, there was no comment or request for a public comment period on DEQ's proposed action. Refer to the Application Chronology section for public comment opportunity dates.

## APPENDIX A – EMISSION INVENTORIES

| Daily Throughput Calculations  |              |
|--|--------------|
| 120,000 production lb/day and 10% of oil stays within finished product and 45% stays in batter. <sup>1</sup> |              |
| Average Daily Oil Usage  | 15600 lb/day |
| Production Hours   | 18 hr/day    |
| Oil to Exhaust   | 10200 lb/day |
| Oil to Exhaust by hour   | 566.67 lb/hr |
| Combo new wet scrubber + mist eliminator total PM removal efficiency for particles >= 2.5 micron             | 99.95%       |
| Combo Wet Scrubber + Mist Eliminator-controlled emissions  | 0.28 lb/hr   |
| Fryer operating hours  | 18 hr/day    |
| Broiler Heater operating hours   | 24 hr/day    |
| Total Daily PM Emissions (Fryer oil)   | 5.67 lb/day  |
| Annual operating days  | 260 day/yr   |
| Total Annual PM Emissions in tons (Fryer oil)  | 0.737 T/yr   |

Guaranteed by Air Clear, Inc.

2 hours of cleanup for fryer during day for 20 total work hours/day

<sup>1</sup>Phytochemical and Microbiological Properties of Selected Rice Flour-Based Batters for Fried Chicken Drumsticks,\* A. Mukprasit, T.J. Herald, D.L. Boyle, and C.A.E. Boyle, 2001, Poultry Science Association Journal, 82:985-995. Values used in calculations taken from Table 1, wheat flour mixture number SW055M.

| Fryers                 | Size MMBtu/hr | Hrs/yr | lb/MMscf | PM10     | PM2.5    | NOx      | CO      | SOx      | VOC      |
|------------------------|---------------|--------|----------|----------|----------|----------|---------|----------|----------|
|                        |               |        |          | 7.6 T/yr | 7.6 T/yr | 100 T/yr | 84 T/yr | 0.6 T/yr | 5.5 T/yr |
| Hot Oil Heater (NG) #1 | 1.8           | 5200   |          | 0.035    | 0.035    | 0.459    | 0.385   | 0.003    | 0.025    |
| Hot Oil Heater (NG) #2 | 1.44          | 5200   |          | 0.028    | 0.028    | 0.367    | 0.308   | 0.002    | 0.020    |
| Fryers (Oil)           |               | 5200   |          | 0.737    | 0.737    |          |         |          |          |
|                        |               |        |          | 0.799    | 0.799    | 0.826    | 0.694   | 0.005    | 0.045    |

  

| Fryers            | Size MMBtu/hr | lb/MMscf | PM10      | PM2.5     | NOx       | CO       | SOx       | VOC       |
|-------------------|---------------|----------|-----------|-----------|-----------|----------|-----------|-----------|
|                   |               |          | 7.6 lb/hr | 7.6 lb/hr | 100 lb/hr | 84 lb/hr | 0.6 lb/hr | 5.5 lb/hr |
| Hot Oil Heater #1 | 1.8           |          | 0.013     | 0.013     | 0.176     | 0.148    | 1.059E-03 | 0.010     |
| Hot Oil Heater #2 | 1.44          |          | 0.011     | 0.011     | 0.141     | 0.119    | 8.471E-04 | 0.008     |
| Fryers (Oil)      |               |          | 0.283     | 0.283     |           |          |           |           |
|                   |               |          | 0.307     | 0.307     | 0.318     | 0.267    | 0.002     | 0.017     |

Regulatory Analysis - B&D Foods, Inc.

|                           | PM10  | PM2.5 | NOx   | CO    | SOx   | VOC   |
|---------------------------|-------|-------|-------|-------|-------|-------|
| Below Reg. Concern (T/yr) | 1.50  | 1.00  | 4.00  | 10.00 | 4.00  | 4.00  |
| Emissions (T/yr)          | 0.903 | 0.903 | 1.741 | 1.838 | 0.013 | 0.095 |
| Emissions (lb/hr)         | 0.344 | 0.344 | 0.661 | 0.676 | 0.005 | 0.033 |
| Modeling Required? (Y/N)  | No    | No    | No    | No    | No    | No    |

| Heaters               | MMBtu/hr | lb/hr     | lb/hr    | lb/hr    | lb/hr    | lb/hr    | lb/hr       |
|-----------------------|----------|-----------|----------|----------|----------|----------|-------------|
| Unit Heater #1        | 0.2      | 0.0014902 | 0.00149  | 0.019608 | 0.015471 | 0.000118 | 1.90311E-06 |
| Unit Heater #2        | 0.2      | 0.0014902 | 0.00149  | 0.019608 | 0.015471 | 0.000118 | 1.90311E-06 |
| Unit Heater #3        | 0.15     | 0.0011176 | 0.001118 | 0.014706 | 0.012359 | 8.82E-05 | 1.42734E-06 |
| Pressure Water Heater | 0.94     | 0.0070039 | 0.007004 | 0.092157 | 0.077412 | 0.000553 | 8.94464E-06 |
| Hot water Heater #5   | 0.275    | 0.002049  | 0.002049 | 0.026961 | 0.022647 | 0.000162 | 2.61678E-06 |
| Hot water Heater #6   | 0.065    | 0.0004843 | 0.000484 | 0.006373 | 0.005353 | 3.82E-05 | 6.18512E-07 |
| Furnace #1            | 0.125    | 0.0009314 | 0.000931 | 0.012255 | 0.010294 | 7.35E-05 | 1.18945E-06 |
| Furnace #2            | 0.04     | 0.000298  | 0.000298 | 0.003922 | 0.003294 | 2.35E-05 | 3.80623E-07 |
| Furnace #3            | 0.04     | 0.000298  | 0.000298 | 0.003922 | 0.003294 | 2.35E-05 | 3.80623E-07 |
| Totals (lb/hr)        |          | 0.0151627 | 0.015163 | 0.19951  | 0.167588 | 0.001197 | 1.93642E-05 |

  

| Heaters               | MMBtu/hr | T/yr     | T/yr     | T/yr     | T/yr     | T/yr     | T/yr     |
|-----------------------|----------|----------|----------|----------|----------|----------|----------|
| Unit Heater #1        | 0.2      | 0.003487 | 0.003487 | 0.045882 | 0.038541 | 0.000275 | 0.000004 |
| Unit Heater #2        | 0.2      | 0.003487 | 0.003487 | 0.045882 | 0.038541 | 0.000275 | 0.000004 |
| Unit Heater #3        | 0.15     | 0.002615 | 0.002615 | 0.034412 | 0.028906 | 0.000206 | 0.000003 |
| Pressure Water Heater | 0.94     | 0.016389 | 0.016389 | 0.215647 | 0.181144 | 0.001294 | 0.000021 |
| Hot water Heater #5   | 0.275    | 0.004795 | 0.004795 | 0.063088 | 0.052994 | 0.000379 | 0.000005 |
| Hot water Heater #6   | 0.065    | 0.001139 | 0.001139 | 0.014912 | 0.012526 | 0.000089 | 0.000001 |
| Furnace #1            | 0.125    | 0.002179 | 0.002179 | 0.028676 | 0.024088 | 0.000172 | 0.000003 |
| Furnace #2            | 0.04     | 0.000697 | 0.000697 | 0.009176 | 0.007708 | 0.000055 | 0.000001 |
| Furnace #3            | 0.04     | 0.000697 | 0.000697 | 0.009176 | 0.007708 | 0.000055 | 0.000001 |
| Totals (T/yr)         |          | 0.035481 | 0.035481 | 0.466853 | 0.392156 | 0.002801 | 0.000045 |

| Broiler Heater  | lb/MMscf | PM10     | PM2.5    | NOx     | CO      | SOx      | VOC      |
|-----------------|----------|----------|----------|---------|---------|----------|----------|
| Size (Mmbtu/hr) | Hrs/yr   | 7.6 T/yr | 7.6 T/yr | 50 T/yr | 84 T/yr | 0.6 T/yr | 5.5 T/yr |
|                 | 2,929    | 0.06809  | 0.06809  | 0.44796 | 0.75258 | 0.00538  | 0.04928  |
| Size (Mmbtu/hr) |          | lb/hr    | lb/hr    | lb/hr   | lb/hr   | lb/hr    | lb/hr    |
|                 | 2,929    | 0.02182  | 0.02182  | 0.14358 | 0.24121 | 0.00172  | 0.01579  |

| Idaho State TAP                    | CAS        | 585/586 | EF (lb/MMscf) | Max lb/hr | Max (T/yr) | 24-hr or Annual Average (lb/hr) <sup>3</sup> | EL 24-hr or Annual (lb/hr) | Modeling Required (Y/N) |
|------------------------------------|------------|---------|---------------|-----------|------------|--|----------------------------|-------------------------|
| Benzene                            | 71-43-2    | 586     | 2.10E-03      | 1.27E-05  | 5.56E-05   | 1.27E-05                                     | 8.00E-04                   | N                       |
| POM <sup>1</sup>                   |            | 586     | 1.14E-05      | 6.89E-08  | 3.02E-07   | 6.89E-08                                     | 2.00E-06                   | N                       |
| 2-Methylnaphthalene <sup>2</sup>   | 91-57-6    | 586     | 2.40E-05      | 1.45E-07  | 6.36E-07   | 1.45E-07                                     | 9.10E-05                   | N                       |
| 3-Methylchloranthrene <sup>2</sup> | 56-49-5    | 586     | 1.80E-06      | 1.09E-08  | 4.77E-08   | 1.09E-08                                     | 9.10E-05                   | N                       |
| Acenaphthene <sup>2</sup>          | 83-32-9    | 586     | 1.80E-06      | 1.09E-08  | 4.77E-08   | 1.09E-08                                     | 9.10E-05                   | N                       |
| Acenaphthylene <sup>2</sup>        | 203-96-8   | 586     | 1.80E-06      | 1.09E-08  | 4.77E-08   | 1.09E-08                                     | 9.10E-05                   | N                       |
| Anthracene <sup>2</sup>            | 120-12-7   | 586     | 2.40E-06      | 1.45E-08  | 6.36E-08   | 1.45E-08                                     | 9.10E-05                   | N                       |
| Benzo(g,h,i)perylene <sup>2</sup>  | 191-24-2   | 586     | 1.20E-06      | 7.26E-09  | 3.18E-08   | 7.26E-09                                     | 9.10E-05                   | N                       |
| Dichlorobenzene <sup>2</sup>       | 25321-22-6 | 586     | 1.20E-03      | 7.26E-06  | 3.18E-05   | 7.26E-06                                     | 9.10E-05                   | N                       |
| Fluoranthene <sup>2</sup>          | 206-44-0   | 586     | 3.00E-06      | 1.81E-08  | 7.95E-08   | 1.81E-08                                     | 9.10E-05                   | N                       |
| Fluorene <sup>2</sup>              | 86-73-7    | 586     | 2.80E-06      | 1.69E-08  | 7.42E-08   | 1.69E-08                                     | 9.10E-05                   | N                       |
| Phenanthrene <sup>2</sup>          | 85-01-8    | 586     | 1.70E-05      | 1.03E-07  | 4.50E-07   | 1.03E-07                                     | 9.10E-05                   | N                       |
| Pyrene <sup>2</sup>                | 129-00-0   | 586     | 5.00E-06      | 3.02E-08  | 1.32E-07   | 3.02E-08                                     | 9.10E-05                   | N                       |
| Formaldehyde                       | 50-00-0    | 586     | 7.50E-02      | 4.54E-04  | 1.99E-03   | 4.54E-04                                     | 5.10E-04                   | N                       |
| Naphthalene                        | 91-20-3    | 586     | 6.10E-04      | 3.69E-06  | 1.62E-05   | 3.69E-06                                     | 9.10E-05                   | N                       |
| Arsenic                            | 7440-38-2  | 586     | 2.00E-04      | 1.21E-06  | 5.30E-06   | 1.21E-06                                     | 1.50E-06                   | N                       |
| Beryllium                          | 7440-41-7  | 586     | 1.20E-05      | 7.26E-08  | 3.18E-07   | 7.26E-08                                     | 2.80E-05                   | N                       |
| Cadmium <sup>4</sup>               | 7440-43-9  | 586     | 1.10E-03      | 6.65E-06  | 2.91E-05   | 6.65E-06                                     | 3.70E-06                   | Y                       |
| Nickel                             | 7440-02-0  | 586     | 2.10E-03      | 1.27E-05  | 5.56E-05   | 1.27E-05                                     | 2.70E-05                   | N                       |
| Barium                             | 7440-39-3  | 585     | 4.40E-03      | 2.66E-05  | 1.17E-04   | 2.66E-05                                     | 0.033                      | N                       |
| Chromium                           | 7440-47-3  | 585     | 1.40E-03      | 8.47E-06  | 3.71E-05   | 8.47E-06                                     | 0.033                      | N                       |
| Cobalt                             | 7440-48-4  | 585     | 8.40E-05      | 5.08E-07  | 2.23E-06   | 5.08E-07                                     | 0.0033                     | N                       |
| Copper                             | 7440-50-8  | 585     | 8.50E-04      | 5.14E-06  | 2.25E-05   | 5.14E-06                                     | 0.067                      | N                       |
| Manganese                          | 7439-96-5  | 585     | 3.80E-04      | 2.30E-06  | 1.01E-05   | 2.30E-06                                     | 0.067                      | N                       |
| Molybdenum                         | 7439-98-7  | 585     | 1.10E-03      | 6.65E-06  | 2.91E-05   | 6.65E-06                                     | 0.333                      | N                       |
| Selenium                           | 7782-49-2  | 585     | 2.40E-05      | 1.45E-07  | 6.36E-07   | 1.45E-07                                     | 0.013                      | N                       |
| Vanadium                           | 7440-62-2  | 585     | 2.30E-03      | 1.39E-05  | 6.09E-05   | 1.39E-05                                     | 0.003                      | N                       |
| Zinc                               | 7440-66-6  | 585     | 2.90E-02      | 1.75E-04  | 7.68E-04   | 1.75E-04                                     | 0.667                      | N                       |
| Hexane                             | 110-54-3   | 585     | 1.80E+00      | 1.09E-02  | 4.77E-02   | 1.09E-02                                     | 12                         | N                       |
| Pentane                            | 109-66-0   | 585     | 2.60E+00      | 1.57E-02  | 6.89E-02   | 1.57E-02                                     | 118                        | N                       |
| Toluene                            | 108-88-3   | 585     | 3.40E-03      | 2.06E-05  | 9.01E-05   | 2.06E-05                                     | 25                         | N                       |
| Naphthalene                        | 91-20-3    | 585     | 6.10E-04      | 3.69E-06  | 1.62E-05   | 3.69E-06                                     | 3.33                       | N                       |

1. POM is the combination of benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene.  
and are compared against the emission level of benzo(a)pyrene.

2. These pollutants are evaluated individually against the PAH emission level.

3. 585 is based on 24-hr average and 586 pollutants are annual averages

4. The cadmium exceeds the EL at 8760 starting from zero. However, the EL allows for a full increment for this modification. Therefore, the actual incremental increase due to the new low NOx boiler is 3.16E-6 lb/hr which is below the increment of 3.70E-6. Further note: This emission estimate is based upon year-round 24-hour per day operation. In reality, the low NOx boiler used to heat the broiler operates only about 2 days/week for 18 hours/day on 260 days of the year.

#### Greenhouse Gas Emissions

| Emission Unit        | Rating (MMBtu/hr) | CO <sub>2</sub> | N <sub>2</sub> O | CH <sub>4</sub> | CO <sub>2</sub> e <sup>1</sup>   |
|----------------------|-------------------|-----------------|------------------|-----------------|----------------------------------|
| pounds per hour      |                   |                 |                  |                 |                                  |
| Oil Heater #1        | 1.80              | 211.76          | 3.88E-03         | 4.06E-03        | 213.02                           |
| Oil Heater #2        | 1.44              | 169.41          | 3.11E-03         | 3.25E-03        | 170.42                           |
| Broiler Heater       | 2.93              | 344.59          | 6.32E-03         | 6.60E-03        | 346.64                           |
| <b>Total</b>         |                   | <b>725.76</b>   | <b>1.33E-02</b>  | <b>1.39E-02</b> | <b>730.08</b>                    |
| metric tons per year |                   |                 |                  |                 |                                  |
| Emission Unit        | Rating (MMBtu/hr) | CO <sub>2</sub> | N <sub>2</sub> O | CH <sub>4</sub> | CO <sub>2</sub> e <sup>1,2</sup> |
| Oil Heater #1        | 1.80              | 841.45          | 1.54E-02         | 1.61E-02        | 846.57                           |
| Oil Heater #2        | 1.44              | 673.16          | 1.23E-02         | 1.29E-02        | 677.26                           |
| Broiler Heater       | 2.93              | 1,369.22        | 2.51E-02         | 2.62E-02        | 1,377.56                         |
| <b>Total</b>         |                   | <b>2,883.83</b> | <b>5.29E-02</b>  | <b>5.53E-02</b> | <b>2,901.38</b>                  |

1. The total CO<sub>2</sub>e was calculated using global warming potentials from 40 CFR Part 98, Subpart A, Table A-1

2. The conversion from pounds to metric tons is 2204.6 lb to each metric ton.

Natural Gas Combustion - TAPS Inventory

|                    |      |         |   |
|--------------------|------|---------|---|
| NG heating value   | 1020 | btu/scf | Note: Actual plant operations include using broiler heater approximately 1-2 days/week and fryer oil heaters 3-5 days/week.<br>Estimates presented here assume 24-hour per day operation 365 days per year. |
| Max hours per day  | 24   | hrs/day |   |
| Max hours per year | 8760 | hrs/yr  |   |

| Emission Unit               | Rating (MMBtu/hr) |
|-----------------------------|-------------------|
| Hot Oil Heater (NG) #1      | 1.8               |
| Hot Oil Heater (NG) #2      | 1.44              |
| Broiler Heater (Low NOx NG) | 2.929             |
| Incinerator                 | 1.5               |
| <b>Total</b>                | <b>6.17</b>       |

Note: This incinerator will be replaced with wet scrubber-mist eliminator combo during 2017 permitting action.

| Non Metal HAP <sup>2</sup>                  | CAS        | EF (lb/MMscf) | lb/hr    | T/yr     |
|---|------------|---------------|----------|----------|
| Benzene                                     | 71-43-2    | 2.10E-03      | 1.27E-05 | 5.56E-05 |
| Dichlorobenzene                             | 25321-22-6 | 1.20E-03      | 7.26E-06 | 3.18E-05 |
| Formaldehyde                                | 50-00-0    | 7.50E-02      | 4.54E-04 | 1.99E-03 |
| Hexane                                      | 110-54-3   | 1.80E+00      | 1.09E-02 | 4.77E-02 |
| Naphthalene                                 | 91-20-3    | 6.10E-04      | 3.69E-06 | 1.62E-05 |
| Toluene                                     | 108-88-3   | 3.40E-03      | 2.06E-05 | 9.01E-05 |
| 2-Methylnaphthalene <sup>1</sup>            | 91-57-6    | 2.40E-05      | 1.45E-07 | 6.36E-07 |
| 3-Methylchloranthrene <sup>1</sup>          | 56-49-5    | 1.80E-06      | 1.09E-08 | 4.77E-08 |
| 7,12-Dimethylbenz(a)anthracene <sup>1</sup> |            | 1.60E-05      | 9.68E-08 | 4.24E-07 |
| Acenaphthene <sup>1</sup>                   | 83-32-9    | 1.80E-06      | 1.09E-08 | 4.77E-08 |
| Acenaphthylene <sup>1</sup>                 | 203-96-8   | 1.80E-06      | 1.09E-08 | 4.77E-08 |
| Anthracene <sup>1</sup>                     | 120-12-7   | 2.40E-06      | 1.45E-08 | 6.36E-08 |
| Benz(a)anthracene <sup>1</sup>              | 56-55-3    | 1.80E-06      | 1.09E-08 | 4.77E-08 |
| Benzo(a)pyrene <sup>1</sup>                 | 50-32-8    | 1.20E-06      | 7.26E-09 | 3.18E-08 |
| Benzo(b)fluoranthene <sup>1</sup>           | 205-99-2   | 1.80E-06      | 1.09E-08 | 4.77E-08 |
| Benzo(g,h,i)perylene <sup>1</sup>           | 191-24-2   | 1.20E-06      | 7.26E-09 | 3.18E-08 |
| Benzo(k)fluoranthene <sup>1</sup>           | 205-82-3   | 1.80E-06      | 1.09E-08 | 4.77E-08 |
| Chrysene <sup>1</sup>                       | 218-01-9   | 1.80E-06      | 1.09E-08 | 4.77E-08 |
| Dibenzo(a,h)anthracene <sup>1</sup>         | 53-70-3    | 1.20E-06      | 7.26E-09 | 3.18E-08 |
| Dichlorobenzene <sup>1</sup>                | 25321-22-6 | 1.20E-03      | 7.26E-06 | 3.18E-05 |
| Fluoranthene <sup>1</sup>                   | 206-44-0   | 3.00E-06      | 1.81E-08 | 7.95E-08 |
| Fluorene <sup>1</sup>                       | 86-73-7    | 2.80E-06      | 1.69E-08 | 7.42E-08 |
| Indeno(1,2,3-cd)pyrene <sup>1</sup>         | 193-39-5   | 1.80E-06      | 1.09E-08 | 4.77E-08 |
| Phenanthrene <sup>1</sup>                   | 85-01-8    | 1.70E-05      | 1.03E-07 | 4.50E-07 |
| Pyrene <sup>1</sup>                         | 129-00-0   | 5.00E-06      | 3.02E-08 | 1.32E-07 |

1. The pollutant is a HAP because it is considered a polycyclic organic matter (POM).

2. Emission factors are based on AP-42 (1998), Section 1.4, Natural Gas Combustion, Table 1.4-3.

| Metal HAP <sup>1</sup> | CAS       | EF (lb/MMscf) | lb/hr    | T/yr     |
|------------------------|-----------|---------------|----------|----------|
| Arsenic                | 7440-38-2 | 2.00E-04      | 1.21E-06 | 5.30E-06 |
| Beryllium              | 7440-41-7 | 1.20E-05      | 7.26E-08 | 3.18E-07 |
| Cadmium                | 7440-43-9 | 1.10E-03      | 6.65E-06 | 2.91E-05 |
| Chromium               | 7440-47-3 | 1.40E-03      | 8.47E-06 | 3.71E-05 |
| Cobalt                 | 7440-48-4 | 8.40E-05      | 5.08E-07 | 2.23E-06 |
| Lead                   | 7439-92-1 | 5.00E-04      | 3.02E-06 | 1.32E-05 |
| Manganese              | 7439-96-5 | 3.80E-04      | 2.30E-06 | 1.01E-05 |
| Mercury                | 7439-97-6 | 2.60E-04      | 1.57E-06 | 6.89E-06 |
| Molybdenum             | 7439-98-7 | 1.10E-03      | 6.65E-06 | 2.91E-05 |
| Nickel                 | 7440-02-0 | 2.10E-03      | 1.27E-05 | 5.56E-05 |
| Selenium               | 7782-49-2 | 2.40E-05      | 1.45E-07 | 6.36E-07 |

1. Emission factors are based on AP-42 (1998), Section 1.4, Natural Gas Combustion, Table 1.4-4.

**Total HAP 5.01E-02**

Calculation of Incremental Increase in Emissions between 2008 Permitted Operations and Proposed 2017 Permitted Operations

| Idaho State TAP | CAS       | 585/586 | EF (lb/MMscf) | 2008 Permit Basis |            |                        | Proposed 2017 Permit Basis |             |                        | Incremental Emissions Increase (lb/hr) | Annual EL (lbs/hr) | Modeling Required (Y/N) |
|-----------------|-----------|---------|---------------|-------------------|------------|------------------------|----------------------------|-------------|------------------------|--|--------------------|-------------------------|
|                 |           |         |               | Max lb/hr         | Max (T/yr) | Annual Average (lb/hr) | Max lb/hr                  | Max (T/yr)  | Annual Average (lb/hr) |  |                    |                         |
| Cadmium         | 7440-43-9 | 586     | 0.0011        | 5.11E-06          | 2.24E-05   | 5.11E-06               | 6.65284E-06                | 2.91395E-05 | 6.65284E-06            | 1.54E-06                               | 3.70E-06           | N                       |

Note:

Since the incremental increase in Cadmium emissions due to operational changes between the 2008 permit and the current proposed permit is less than the allowable emission level, modeling is not required.

**APPENDIX B – FACILITY DRAFT COMMENTS**

## **The following comments were received from the facility on August 23, 2017:**

### **Facility Comment: Draft PTC Condition 2.4 – Fuel-Burning Equipment PM Limit**

B&D requests that this permit condition be removed from the draft permit. Draft permit condition 4.1 states that “All emissions authorized herein shall be consistent with the terms and conditions of this permit and the “Rules for the Control of Air Pollution in Idaho.” Since IDAPA 58.01.01.676-677, which is cited in draft permit condition 2.4, specifies fuel-burning equipment PM emission limits identical to those specified in draft permit condition 2.4, the condition is redundant.

**DEQ Response:** Consistent with other permits issued to minor sources, all applicable requirements to permitted emissions units have been incorporated into the permit, including applicable state and federal emission standards in accordance with Section 203 of the Rules for the Control of Air Pollution in Idaho (Rules). The fuel-burning equipment PM limit is an emission limit specifically applicable to the oil heaters and broiler heater, and as such has been explicitly incorporated into the permit.

Permit Condition 4.1 is a general duty to comply clause that recognizes that the permittee has the primary responsibility to ensure that emissions authorized in the permit are in compliance with the limits and conditions of the permit, are in compliance with any applicable limits and requirements not incorporated into the permit, and are consistent with the information provided in the application. This duty includes the requirement to comply with the fuel-burning equipment PM limits as incorporated in the permit, and as promulgated in the Rules.

### **Facility Comments: Draft PTC Conditions 3.3 and 3.4 – Emission Limits and Opacity Limit**

Draft Permit Conditions 3.3 and 3.4 both refer to the “Fryer 1 and 2 Incinerator.” Since the incinerator will no longer exist at the B&D facility after installation of the new mist eliminator and wet scrubber, B&D requests that the Fryer exhaust stack be renamed the “Fryer 1 and 2 Stack” or the “Fryer 1 and 2 Wet Scrubber Stack” for clarity.

**DEQ Response:** Permit Conditions 3.3 and 3.4 have been updated to reference “Fryer 1 and 2 Wet Scrubber Stack” as requested.

### **Facility Comment: Draft PTC Condition 3.8 – Broiler Operation**

B&D operates the broiler oven one day per week to roast poultry. The boiler used to heat the broiler oven, however, is run 24 hours per day 5 days per week to provide heated sanitation water (for cleaning) at the facility. This detail came to light during draft permit review so an analysis of the impact to criteria and HAP/TAP emissions as a result of 6 additional hours of operation per day was conducted.

Facility-wide emissions of PM<sub>10</sub> increase from 0.886 T/yr to 0.903 T/yr when considering 1,560 hours of additional operation per year for this low NO<sub>x</sub> boiler. PM<sub>10</sub> and all other criteria pollutants remain below the level of regulatory concern as shown in the accompanying revised emission inventory spreadsheet. No impact to HAP/TAP emissions was noted since HAP/TAP emissions in the emission inventory were originally estimated based on continuous operation (8,760 hr/yr).

Since all criteria pollutants remain below regulatory concern under this requested increase in operating hours, B&D requests that draft permit condition 3.8 be revised to reflect actual facility operations of 24 hours per day, 260 days per year.

**DEQ Response:** Permit Condition 3.8 has been revised to remove broiler hourly limitations as requested, based on the updated emission inventory provided.

**Facility Comment: Draft PTC Condition 3.13 – Control Equipment Operation**

B&D requests that the compliance schedule laid out in draft permit condition 3.13 be extended and consist of two stages:

- a) Stage 1 (fall 2017 deadline) – Have stack test performed in order to provide baseline engineering data to Air Clear, Inc. for sizing and design of the wet scrubber and mist eliminator.
- b) Stage 2 (spring 2018 deadline) – Order, delivery, installation, and performance testing of wet scrubber and mist eliminator pollution control system.

B&D has scheduled Ace Environmental, LLC to visit the facility and perform stack testing on September 18, 2017. Results from the stack testing are expected by October 9, 2017. An order will be formally placed with Air Clear, Inc. immediately upon receipt of stack testing results. Air Clear, Inc. requires 12-14 weeks for delivery and two additional weeks for installation of the new pollution control equipment.

B&D proposes that draft Permit Condition 3.13 contain separate deadlines for completing the preliminary stack testing and for final installation of the new equipment. B&D further proposes that the deadline for final installation be 180 days after the deadline for preliminary stack testing to ensure that deadlines can be met and compliance can be reliably demonstrated.

**DEQ Response:** Permit Condition 3.13 has been revised to include an explicit deadline for installation of January 15, 2018 based on the information provided, and Permit Condition 3.20 was revised for consistency.

Although it was noted that baseline testing will be necessary to determine control equipment design, Stage 1 testing as described was not required by DEQ and as such, a deadline for this testing has not been established in this permit, nor subsequent deadlines made contingent upon its outcome.

**Facility Comment: Draft PTC Condition 3.14 – Visible Emission Monitoring**

B&D requests, in lieu of 12 months of weekly monitoring beginning with permit issuance, that six months of weekly monitoring be required beginning after new pollution control equipment is installed and operational. It will be difficult for B&D to reliably demonstrate compliance with opacity limits prior to installation of the wet scrubber and mist eliminator.

**DEQ Response:** Permit Condition 3.14 has been revised to allow monitoring to commence after control equipment installation. The requirement for one year of monitoring was retained.

## APPENDIX C – 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.

|                          |                            |
|--------------------------|----------------------------|
| <b>Company:</b>          | LJD Holdings dba B&D Foods |
| <b>Address:</b>          | 3494 South TK Avenue       |
| <b>City:</b>             | Boise                      |
| <b>State:</b>            | ID                         |
| <b>Zip Code:</b>         | 83705                      |
| <b>Facility Contact:</b> | Thaddius Wenderoth         |
| <b>Title:</b>            | Project Manager            |
| <b>AIRS No.:</b>         | 001-00162                  |

- 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           | Proj 61375 PTE<br>(T/yr) | Proj 61907 PTE<br>(T/yr) | Annual Emissions<br>Change (T/yr) |
| NO <sub>x</sub>     | 1.15                     | 1.74                     | 0.6                               |
| SO <sub>2</sub>     | 0.007                    | 0.013                    | 0.006                             |
| CO                  | 0.97                     | 1.84                     | 0.87                              |
| PM10                | 0.65                     | 0.90                     | 0.25                              |
| VOC                 | 0.06                     | 0.10                     | 0.04                              |
| TAPS/HAPS           | 0.09                     | 0.02                     | -0.07                             |
| <b>Total:</b>       | <b>2.9</b>               | <b>4.6</b>               | <b>1.7</b>                        |
| Fee Due             |                          | <b>\$ 2,500.00</b>       |                                   |

Comments: