



State of Idaho
Department of Environmental Quality
Air Quality Division

**AIR QUALITY PERMIT
STATEMENT OF BASIS**

Permit to Construct No. P-2007.0197

FINAL

LJD Holdings, Inc., dba B and D Foods

Boise, Idaho

Facility ID No. 001-00162

March 21, 2008

Robert Baldwin

A handwritten signature in black ink, appearing to read "RB", written over the name "Robert Baldwin".

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.

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Acronyms, Units, and Chemical Nomenclature

AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
Btu	British thermal unit
CO	carbon monoxide
dba	doing business as
DEQ	Department of Environmental Quality
EPA	U.S. Environmental Protection Agency
HAPs	Hazardous Air Pollutants
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
lb/hr	pounds per hour
MACT	Maximum Achievable Control Technology
MMBtu	million British thermal units
NG	natural gas
NESHAP	National Emission Standards for Hazardous Air Pollutants
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
PSD	Prevention of Significant Deterioration
PTC	permit to construct
PTE	potential to emit
Rules	Rules for the Control of Air Pollution in Idaho
SIC	Standard Industrial Classification
SM	Synthetic Minor
SO ₂	sulfur dioxide
SO _x	sulfur oxides
T/yr	tons per year
VOC	volatile organic compound

STATEMENT OF BASIS

Permittee:	B and D Foods	Permit No.: P-2007.0197
Location:	Boise, Idaho	Facility ID No. 001-00162

1. FACILITY INFORMATION

1.1 Facility Description

LJD Holdings Inc., dba B and D Foods (B&D Foods) is a food processing plant. The plant produces frozen battered meat and poultry. The plant's maximum capacity is 60,000 pounds of meat and poultry product per day. The process consists of applying batter to meat or poultry, frying the battered product, recoating the product with batter, refrying the product, and freezing the product for distribution. The plant is presently operating 16 hours per day, 5 days a week, and 50 weeks per year.

1.2 Permitting History

This PTC is for a modification of the existing facility's PTC No. P-050006 issued on June 9, 2006. The following information was derived from a review of the permit files available to DEQ. Permit status is noted as active and in effect (A) or superseded (S).

June 9, 2006	PTC No. P-050006 issued for the two oil heaters, two hot oil fryers, the mist eliminator and incinerator. (S)
November 4, 2004	DEQ issued a Consent Order. (S)

2. APPLICATION SCOPE

This permit is for the modification to the facility that included the following:

- Replacement of the 1.44 MMBtu/hr hot oil heater 1 with a 1.8 MMBtu/hr hot oil heater
- Replacement of the Maxon M422 fryer 1 with a Immerson-Cook, Model #2395.01.900
- Replacement of the Munters Corporation mist eliminator with a Amistco Separation Products mist eliminator, both have an efficiency of 99.9% for PM₁₀.

2.1 Application Chronology

October 15, 2007	DEQ received application for modification.
November 14, 2007	DEQ determined the application complete.
January 14, 2008	DEQ sent the facility a draft permit for review.
January 21, 2008	DEQ received an extension request from the facility.
February 1, 2008	DEQ received a second extension request from the facility to respond to draft permit.
February 18, 2008	DEQ received new information from facility correcting the product capacity of the modification and the frying oil parameter associated with that product capacity.
March 7, 20089	DEQ received an email confirming control devices efficiencies.

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3. TECHNICAL ANALYSIS

3.1 Emission Units and Control Devices

Table 3.1 EMISSION UNITS AND CONTROL DEVICE INFORMATION

Emission Unit /ID No.	Description	Control Device
Hot oil heater 1	NG fired to heat cooking oil in fryer 1	None
Hot oil heater 2	NG fired to heat cooking oil in fryer2	None
Incinerator	NG fired to burn oil the passed thru mist eliminator	Mist Eliminator prior to incinerator

3.2 Emissions Inventory

Emissions calculations were determined by DEQ and are presumed to accurately reflect emissions from this facility. A summary of the EI is provided as Appendix B. Table 3.2 provides a summary of the EI.

Table 3.2 EMISSIONS ESTIMATES OF CRITERIA POLLUTANTS

Emissions Unit	PM ₁₀		SO ₂		NO _x		CO		VOC	
	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	Lb/hr	T/yr	lb/hr	T/yr
Oil heater 1	0.014	0.036	.001	0.003	0.18	0.473	0.15	0.397	0.01	0.026
Oil heater 2	0.011	0.029	.001	0.002	0.14	0.378	0.12	0.318	0.008	0.021
Incinerator	0.012	0.023	.001	0.002	0.15	0.300	0.13	0.252	0.008	0.017
Fryers	0.28	0.56								
Total, Point Sources	0.317	0.648	0.003	0.007	0.47	1.15	0.4	0.967	0.026	0.064

The two oil heaters and the incinerator are fired on natural gas

3.3 Ambient Air Quality Impact Analysis

The PM₁₀ emissions increase for the 1.8 MMBtu/hr burner's replacement was well below the emissions increase trigger of 1 lb/hr of PM₁₀ for additional modeling to be required. The annual PM₁₀ emissions increased by 202 lbs/yr. This annual limit is below the threshold limit requiring modeling of 0.2 T/yr. Therefore, no additional modeling was performed for this modification.

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. The facility has also demonstrated compliance to DEQ's satisfaction that emissions increase due to this permitting action will not exceed any AAC or AACC for TAPs.

4. REGULATORY REVIEW

4.1 Attainment Designation (40 CFR 81.313)

The facility is located in Ada County, which is designated as attainment or unclassifiable for PM₁₀, PM_{2.5}, CO, NO₂, SO_x, and Ozone. Reference 40 CFR 81.313.

4.2 Permit to Construct (IDAPA 58.01.01.201)

The increased emissions from the replacement of the 1.44 MMBtu/hr oil heater with the 1.8 MMBtu/hr oil heater requires a modification to the permit P-050006 issued on June 9, 2006.

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Permittee:	B and D Foods	Permit No.: P-2007.0197
Location:	Boise, Idaho	Facility ID No. 001-00162

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

The emissions from this facility do not exceed any Title V threshold.

4.4 PSD Classification (40 CFR 52.21)

PSD does not apply.

4.5 NSPS Applicability (40 CFR 60)

NSPS does not apply.

4.6 NESHAP Applicability (40 CFR 61)

NESHAP does not apply.

4.7 MACT Applicability (40 CFR 63)

MACT does not apply.

4.8 CAM Applicability (40 CFR 64)

CAM does not apply.

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.

Existing PC 3.3 requires the PM₁₀ emissions from the two fryers common exhaust stack not to exceed 0.374 pound per hour and 894 pounds per any consecutive 12-month period. This requirement was replaced with the new Permit Condition 3.4

New PC 3.4 limits the permittee to maximum of 60,000 pounds of meat and poultry product in a calendar day. By revising the existing PC 3.3, compliance can be demonstrated by monitoring the meat and poultry product produced in a calendar day.

Modified PC 3.6 was required to reflect the change in mist eliminator from the Munter TS-5/2-25 to the Amistco Mist Eliminator TM-1109. Both mist eliminators have an efficiency of 99.9%.

New PC 3.9 requires monitoring the amount of meat and poultry product produced per calendar day to demonstrate compliance with PC 3.4.

Existing 3.11 requiring the development of an O&M manual for the mist eliminator has been revised and renumbered to PC 3.12. The new PC 3.12 requires the development of an O&M manual for the new Amistco Mist Eliminator TM-1109.

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5. PERMIT FEES

Table 5.1 lists the processing fee associated with this permitting action. The facility is subject to a processing fee of \$2,500 because the permitted emissions increase is 1.08 tons per year. IDAPA 58.01.01.225 states that the modification to an existing source with an increase of emissions of one (1) to less than ten (10) tons per year is \$2,500. A processing fee of \$1,000 was received by DEQ on October 16, 2007. The balance due is \$1,500.00.

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	0.49	0	0.49
SO ₂	0.003	0	0.003
CO	0.41	0	0.41
PM ₁₀	0.15	0	0.15
VOC	0.028	0	0.028
HAPS	0.0	0	0.0
Total:	1.08	0	1.08
Fee Due	\$ 2,500.00		

6. PUBLIC COMMENT

An opportunity for public comment period on the PTC application was provided from October 30, 2007 to November 13, 2007 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: LJD Holdings, dba B and D Foods
Facility Location: Boise, Idaho
AIRS Number: 001-00162

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							U
NO _x	B							U
CO	B							U
PM ₁₀	B							U
PT (Particulate)	B							
VOC	B							U
THAP (Total HAPs)	B							
			APPLICABLE SUBPART					

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

^b AIRS/AFS Classification Codes:

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

APPENDIX B – EMISSIONS INVENTORY

Present actual emissions of LDJ Holdings Inc. dba B & D Foods at 40-50,000 lbs/day of product. Emissions are calculated for 60,000 lbs/day of product to match permit production limit.

SOURCE	SIZE	Hours/yr	Ft3/yr	PM10	NOx	CO	Sox	VOC
				7.6	100	84	0.6	5.5
	mm Btu/hr			T/yr	T/yr	T/yr	T/yr	T/yr
Hot oil heater	1.8	5250	9450000	0.036	0.473	0.397	0.003	0.026
Hot oil heater	1.44	5250	7560000	0.029	0.378	0.318	0.002	0.021
Incinerator	1.5	4000	6000000	0.023	0.300	0.252	0.002	0.017
Fryers (Oil)		4000		0.56				
Pollutant entering the atmosphere (T/yr)				0.648	1.151	0.967	0.007	0.064

Hot oil heater are heated two hours before starting of process line.
 As of 2/18/08 process required 7200 lbs. of replacement oil per day for 40-50,000 production.
 The process operates 16 hours/day, 5 days/week, 50 wk/yr.
 10-14% of oil is retained in batter, batter is 45-50% of product wt., meat is 50-55% of product,
 Average process is 40-50,000 lbs/day of product. Current max is 60,000 lbs/day product.

Worst Case for 60,000 lbs/day

Replacement oil = $7200 * 60 / 50 = 8640$ lbs/day
 Oil to exhaust = Replacement oil less carryout with batter = $8640 - 10\% * 45\% * 60,000 = 5940$ lbs/day
 or 371.25 lbs/hr
 amt smaller than 5 microns = 1% = 3.71 lbs/hr at 60% efficiency collected by the mist eliminator
 thus 1.49 lbs./hr passes through mist eliminator
 passes through at 99.9% efficient mist eliminator = $(371 - 3.71) * .001 = 0.37$ lbs/hr
 amt. larger
 total going into incinerator = $1.49 + 0.37 = 1.86$ lbs/hr
 total exiting 85% efficient incinerator = $1.86 * 0.15 = 0.28$ lbs/hr

For 60,000 lbs/day of product 0.28 lbs/hr PM₁₀
 at 4000 hours per year **0.56 T/yr** PM₁₀ for the oil emissions

In permit P-050006 the PM₁₀ 0.34 lb/hr limit is not exceeded but the 894 lb/yr limit is exceeded for the 60,000 lb/day production limit. However, the 0.2 T/yr net increase that triggers modeling the threshold is not exceeded. Thus no additional modeling is required. The actual annual increase is $1120 - 894 = 226$ lbs/yr.

Potential emission of LDJ Holdings Inc. dba B & D Foods For 60,000 pound of product per day.

SOURCE	SIZE	Hours/yr	Ft3/yr	PM10	NOx	CO	Sox	VOC
				7.6	100	84	0.6	5.5
	mm Btu/hr			T/yr	T/yr	T/yr	T/yr	T/yr
Hot oil heater	1.8	8760	15768000	0.060	0.788	0.662	0.005	0.043
Hot oil heater	1.44	8760	12614400	0.048	0.631	0.530	0.004	0.035
Incinerator	1.5	8760	13140000	0.050	0.657	0.552	0.004	0.036
Fryers (Oil)		8760		1.23				
Pollutant entering the atmosphere (T/yr)				1.39	2.08	1.74	0.01	0.11