



State of Idaho
Department of Environmental Quality
Air Quality Division

**AIR QUALITY PERMIT
STATEMENT OF BASIS**

Permit to Construct No. P-2008.0102

Final

XL Four Star Beef Inc.

Nampa, Idaho

Facility ID No. 027-00024

November 10, 2008

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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.

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Acronyms, Units, and Chemical Nomenclature

AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EPA	U.S. Environmental Protection Agency
gpm	gallons per minute
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
MACT	Maximum Achievable Control Technology
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO _x	nitrogen oxides
NSPS	New Source Performance Standards
ORP	oxygen reduction potential
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
SM	Synthetic Minor
SO ₂	sulfur dioxide
TAP	Toxic Air Pollutant
VOC	volatile organic compound
XL	XL Four Star Beef Inc.

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Permittee:	XL Four Star Beef Inc.	Permit No.	P-2008.0102
Location:	Nampa, Idaho	Facility ID No.	027-00024

1. FACILITY INFORMATION

1.1 Facility Description

XL four Star Beef Inc. (XL) operates a cattle slaughtering and rendering facility in Nampa

1.2 Permitting Action and Facility Permitting History

Permit to Construct (PTC)

This PTC is a revision of an existing PTC. This permitting action is to revise PTC No. P-060029, issued July 31, 2006, by replacing the Quad Corp wet chamber scrubber existing at the rendering operations with a packed-bed wet scrubber. Also, this permit changes the names of the facility's contact and the responsible official.

The following information was derived from a review of the permit files available to DEQ. Permit status is noted as active and in effect (A) or superseded (S).

- July 31, 2006 PTC No. P-060029, PTC revision-transfer of ownership and company name change from Swift Beef to XL Four Star Beef Inc., (A, however, status will become "S" upon issuance of this permit)
- August 10, 2004 PTC No. P-030026, PTC modification-scrubber operating requirements, (S)
- March 5, 2004 PTC No. P-030052, PTC modification-anaerobic lagoon biogas flare SO₂ emissions increase, (S)
- September 23, 2003 PTC No. 027-00024, PTC modification-anaerobic lagoon biogas flare, (S)
- September 17, 2002 PTC No. 027-00024, PTC revision-company name change from ConAgra Beef Company to Swift Beef, (S)
- April 8, 2002 PTC No. 027-00024, PTC modification-replacement of rendering cooker and heat exchanger; request to burn tallow in existing boiler, (S)
- April 6, 2000 PTC Exemption for two natural gas boilers in accordance with IDAPA 16.01.01.222.02c, (S)
- July 26, 1993 PTC Exemption for a replacement of an old 1,500 hp boiler existing at Armour Fresh Meats Company located in Nampa with two new 700 hp boilers in accordance with 16.01.01012.02h, (S)
- April 9, 1991 PTC No. 0400-00241 issued to Armour Fresh Meats Company to allow for the construction of a rendering plant and blood dryer at the facility located in Nampa, (S)

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- April 15, 1984 PTC No.0400-0024 issued to Armour Food Company for the amendment pertaining to the operation of the facility's slaughterhouse and rendering plant located in Nampa, (S)
- February 1, 1984 PTC No.0400-0024 issued to Armour Food Company for the operation of the facility's slaughterhouse and rendering plant located in Nampa, (S)

2. APPLICATION SCOPE AND APPLICATION CHRONOLOGY

2.1 Application Scope

The purpose of this permit is to revise PTC No. P-060029, issued July 31, 2006 by replacing the Quad Corp wet spray chamber scrubber existing at the rendering operations with a packed-bed wet scrubber for a suitable working environment and to control the odors. Also, this permit changes the names of the facility's contact and the responsible official.

2.2 Application Chronology

- | | |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| June 9, 2008 | DEQ received a PTC application from XL to revise PTC No. P-060029, issued July 31, 2006 to allow for the replacing of the Quad Corp wet chamber scrubber at the rendering operations with a packed-bed scrubber. The facility also requested to change the names of the facility's contact and the responsible official in the existing permit. |
| June 10, 2008 | DEQ received the PTC application fee from XL. XL also submitted a processing fee of \$250.00 for this project. |
| June 26, 2008 | DEQ determined the application incomplete. |
| July 23, 2008 | DEQ received a response to the incompleteness from XL. |
| August 5, 2008 | DEQ determined the application complete. |
| August 28, 2008 | DEQ provided the draft permit to DEQ's Boise Regional Office for review and comment. |
| September 5, 2008 | DEQ provided the draft permit to the facility for review and comment. |
| November 10, 2008 | DEQ issued final P-2008.0102 to XL for the revision to the rendering operations. |

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3. TECHNICAL ANALYSIS

3.1 Emission Unit and Control Device

Table 3.1 EMISSION UNIT AND CONTROL DEVICE INFORMATION

Emission Unit /ID No.	Emissions Unit Description	Control Device Description	Emissions Discharge Point ID No. and/or Description
Rendering Operations	Rendering operations room	Packed-bed wet scrubber with dimension of 20' x 7.33" x 7.33". Manufacturer: ERC/Lancy; Model No. SS-25K-PBS; the 25,000 cfm packed-bed scrubber is equipped with mist eliminators, high volume water nozzles, and a chlorine dioxide scrubbing medium	Packed-bed wet scrubber stack. Stack height: 33.2 feet Stack dimensions: 36 x 26 inches Stack flow: 25,000 cfm

3.2 Emissions Inventory

Permit No. P-060029, issued July 31, 2006, contains the existing Quad Corp wet spray chamber scrubber which, according to the applicant, is very seldom used at the facility due to the inefficient design to remove the room air odors. The proposed 25,000 packed-bed wet scrubber is more efficient in scrubbing the air contaminants than the existing Quad Corp spray chamber scrubber and contains a higher water flow of 250 gpm compared with a 14 gpm for the existing Quad Corp spray chamber scrubber. The 25,000 packed-bed wet scrubber also contains a packing material which is more efficient than the Quad Corp spray chamber. Therefore, emissions from the proposed 25,000 packed-bed scrubber will be lower than the Quad Corp spray chamber scrubber. No emission estimates were submitted in the application due to the upgrade of the air pollution control device, which is replacing the existing and the less efficient control device.

3.3 Ambient Air Quality Impact Analysis

Because the proposed to construct the 25,000 packed-bed wet scrubber will not result in an emissions increase, no modeling was performed.

4. REGULATORY REVIEW

4.1 Attainment Designation (40 CFR 81.313)

The facility is located in Canyon 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 applicant has applied for a PTC revision.

4.3 Tier II Operating Permit (IDAPA 58.01.01.401)

Not applicable

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

The facility is not a major source as defined under IDAPA 58.01.01.008. Therefore, it is not subject to Title V program.

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4.5 PSD Classification (40 CFR 52.21)

The facility is not subject to PSD requirements because the facility is not a major facility and this permitting action is not a major modification.

4.6 NSPS Applicability (40 CFR 60)

Not applicable for the proposed construction of the packed-bed wet scrubber at the rendering operations.

4.7 NESHAP Applicability (40 CFR 61)

Not applicable.

4.8 MACT Applicability (40 CFR 63)

Not applicable.

4.9 CAM Applicability (40 CFR 64)

Not applicable because this source is not a major source

4.10 Permit Conditions Review

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

Revised PTC's Cover Page

DEQ included a NAICS (North America Industry Classification System) code on the cover page of this permit to reflect changes that have been made to DEQ's PTC template. The NAICS code for this facility is 311611, *Animal (except Poultry) Slaughtering*.

Additionally, the cover page of this permit includes the new facility contact, responsible official, titles, and telephone numbers, as requested by the permittee on July 23, 2008.

In this permit revision, all references to the control equipment, Quad Corp wet spray-chamber scrubber that existed in PTC No. P-060029, issued on July 31, 2006, is replaced by the new packed-bed wet scrubber.

The permittee requested from DEQ a naming convention for the scrubbers existing at the facility which identify each scrubber based on the amount of air that flows through the scrubber to be used in the revised permit. For example, the 25,000 packed-bed scrubber refers to and identifies the packed-bed wet scrubber that has an air flow of 25,000 cfm. The rest of the scrubbers existing at the facility are identified in this permit by 60,000 (for the packed-bed scrubber) and 12,000 (for the venturi scrubber).

Existing Permit Condition 3.6.3.1

Existing permit Condition 3.6.3.1 stated:

The scrubbing media flow rate to the spray-chamber wet scrubber shall be maintained at or above 14 gal/min when in use.

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Revised Permit Condition 3.6.3

Revised Permit Condition 3.6.3 states the following:

The scrubbing media flow rate to the 25,000 packed-bed wet scrubber shall be maintained at or above 250 gpm when in use. Compliance with this permit condition is determined through Permit Condition 3.9.4. Permit Condition 3.9.4 states the following: The permittee shall monitor and record the scrubbing media flow rate in gallons per minute through the 25,000 packed-bed wet scrubber once every eight hours.

Existing Permit Condition 3.9.3.1

Permit Condition 3.9.3.1 states the following:

The permittee shall install, calibrate, maintain, and operate an ORP controller to continuously measure the chemical concentrations in the spray-chamber wet scrubber when in operation. The chemical concentrations shall be monitored and recorded once every eight hours during operation.

Revised Permit Condition 3.9.3

Revised Permit Condition 3.9.3 states the following:

The permittee shall install, calibrate, maintain, and operate an ORP controller to continuously measure the chemical concentrations in the 25,000 packed-bed wet scrubber when in operation. The chemical concentrations shall be monitored and recorded once every eight hours during operation.

5. PERMIT FEES

The facility is subject to a processing fee of \$250.00 because this project is a permit revision where no engineering analysis is required. There is no emissions increase for this permitting action. The processing fees were received on June 10, 2008.

6. PUBLIC COMMENT

An opportunity for public comment period on the PTC application was provided from June 17, 2008, to July 1, 2008, in accordance with IDAPA 58.01.01.209.01.c. During this time, DEQ received a request from the Idaho Conservation League to provide the permit for public comment. Therefore, DEQ provided the draft permit for a public comment period from September 23, 2008, through October 23, 2008. However, due an error in publishing the public comment in the Idaho Statesman instead of the Idaho Press Tribune, DEQ republished it with a new public comment period. The new public comment period was from October 2, 2008, through November 3, 2008. Comments on the permit were received from the public. The comments and respond to the comments are included in the Air Quality Permitting-Response to Public Comments document.

Appendix A – AIRS Information

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

Permittee/Facility Name: XL Four Star Beef Inc.
Facility Location: Nampa, Idaho
AIRS Number: 027-00024

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

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

^b AIRS/AFS Classification Codes:

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