

Statement of Basis

Final

Cargill Environmental Finance/Kettle Butte Dairy

**Roberts, Idaho
Facility ID No. 051-00027
Permit to Construct Revision
P-2010.0051**

**April 23, 2010
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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

CFR	Code of Federal Regulations
DEQ	Department of Environmental Quality
EPA	U.S. Environmental Protection Agency
ICE	internal combustion engines
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
NSPS	New Source Performance Standards
PC	permit condition
PTC	permit to construct
PTE	potential to emit
Rules	Rules for the Control of Air Pollution in Idaho

FACILITY INFORMATION

Description

Cargill Environmental Finance/Kettle Butte (Kettle Butte) was permitted to construct an anaerobic digester operation at the Kettle Butte Dairy. Manure from the dairy is pumped into the anaerobic digester where the naturally occurring digestion process will result in the production of biogas. Biogas is collected from the anaerobic digester and used as fuel in two reciprocating IC engines used to power electrical generators. Prior to combustion in the IC engines the biogas is passed through a bio-scrubber to decrease the concentration of H₂S in the biogas stream. The generators produce electricity to be sold to the local utility. During emergencies and routine maintenance the IC engines are taken offline and the excess biogas will be combusted in a flare at the facility. Prior to combustion in the flare the biogas may or may not be passed through a bio-scrubber to decrease the concentration of H₂S in the biogas stream. Heat produced from the IC engines is used to maintain the operating temperature in the digester and as process heat for the dairy.

The project includes the installation of the manure digester, a bio-scrubber, two reciprocating IC engines powering electrical generators, and an emergency flare which are all operated by Kettle Butte Dairy. Kettle Butte Dairy operates the existing dairy and manages the solids and wastewater generated by the process. Air emissions from the system are released through the two stacks associated with the IC engines and the stack for the emergency flare.

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).

March 30, 2010 P-2010.0051, Revise the performance test date requirement, Permit status (A)

Application Scope

This PTC is a revision of an existing PTC.

The applicant has proposed to:

- Revise Permit Condition 3.26 to align with the performance test date requirements as stated within 40 CFR 60 general conditions. Refer to the Permit Conditions Review section of this document for the details.

Application Chronology

March 30, 2010 DEQ received an application for the permit revision.

April 13, 2010 DEQ determined that the application was complete.

TECHNICAL ANALYSIS

Emissions Units and Control Devices

There were no changes to any emission units or control devices in this revision from the initial PTC No. P-2008.0146 issued December 1, 2009.

Emissions Inventories

There were no changes to any emissions inventories in this revision from the initial PTC No. P-2008.0146 issued December 1, 2009.

Ambient Air Quality Impact Analyses

An ambient air quality impact analysis is not required for this permit because there is not an allowable emissions increase.

REGULATORY ANALYSIS

This permitting action is a revision to change the performance testing timeframe of permit condition 2.26 to correspond to the timeframe stated in 40 CFR 60 General Conditions.

Permit Conditions Review

This section describes the permit conditions for this permit revision or only those permit conditions that were revised as a result of this permitting action.

1. Existing Permit Condition 2.26

Conduct a performance test within 60 days of initial IC engine operation and conduct subsequent performance testing every 8,760 hours of each IC engine's operation or every 3-years, whichever comes first, in accordance with 40 CFR 60.4243(b)(2)(ii).

Revised Permit Condition 2.26 a change in the timeline for the performance test to align with 40 CFR 60 General Conditions

Within 60 days after achieving the maximum production rate at which the facility will be operated but not later than 180 days after initial startup of such facility, conduct an initial performance test on the IC engine operation and conduct subsequent performance testing every 8,760 hours of each IC engine's operation or every 3-years, whichever comes first, in accordance with 40 CFR 60.4243(b)(2)(ii).

2. Existing Permit Condition 2.27

40 CFR 60.4243, Subpart JJJJ – Testing Requirements for Owners and Operators of Stationary Spark Ignition Internal Combustion Engines

Revised Permit Condition 2.27 a typographical error in the NSPS citation, 4243 was changed to 4244

40 CFR 60.4244, Subpart JJJJ – Testing Requirements for Owners and Operators of Stationary Spark Ignition Internal Combustion Engines

PUBLIC REVIEW

Public Comment Opportunity

This permitting action is a permit revision with no increase in allowable emissions. In accordance with IDAPA 589.01.01.209.04, an opportunity for public comment is not required.