

# **Statement of Basis**

**Tier I Operating Permit No. T1-2016.0016**

**Project ID 61694**

**Busch Ag Resources Inc. - Malt Plant**

**Idaho Falls, Idaho**

**Facility ID 019-00025**

**Final**

**December 6, 2016-**

**Craig Woodruff** *CW*

**Permit Writer**

The purpose of this Statement of Basis is to set forth the legal and factual basis for the Tier I operating permit terms and conditions, including references to the applicable statutory or regulatory provisions for the terms and conditions, as required by IDAPA 58.01.01.362

1.	ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE.....	3
2.	INTRODUCTION AND APPLICABILITY .....	5
3.	FACILITY INFORMATION .....	6
4.	APPLICATION SCOPE AND APPLICATION CHRONOLOGY .....	7
5.	EMISSIONS UNITS, PROCESS DESCRIPTION(S), AND EMISSIONS INVENTORY.....	8
6.	EMISSIONS LIMITS AND MRRR.....	18
7.	REGULATORY REVIEW .....	31
8.	PUBLIC COMMENT .....	59
9.	EPA REVIEW OF PROPOSED PERMIT .....	59

APPENDIX A - EMISSIONS INVENTORY

APPENDIX B - FACILITY COMMENTS FOR DRAFT PERMIT

## 1. ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

acfm	actual cubic feet per minute
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
BMP	best management practices
Btu	British thermal unit
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	continuous emission monitoring systems
cfm	cubic feet per minute
CFR	Code of Federal Regulations
CI	compression ignition
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
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
HHV	higher heating value
hp	horsepower
hr/yr	hours per consecutive 12 calendar month period
ICE	internal combustion engines
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
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
MRRR	Monitoring, Recordkeeping and Reporting Requirements
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
PC	permit condition
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
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
RICE	reciprocating internal combustion engines
<i>Rules</i>	<i>Rules for the Control of Air Pollution in Idaho</i>
scf	standard cubic feet
SIP	State Implementation Plan
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
T1	Tier I operating permit
T2	Tier II operating permit
TAP	toxic air pollutants
T-RACT	Toxic Air Pollutant Reasonably Available Control Technology
ULSD	ultra low sulfur diesel
U.S.C.	United States Code
VOC	volatile organic compound

## 2. INTRODUCTION AND APPLICABILITY

Busch Agricultural Resources Inc., Idaho Falls Malt Facility produces barley malt from barley grain, and is located at 5755 S. Yellowstone Hwy., near Idaho Falls Idaho. The facility is classified as a major facility, as defined by IDAPA 58.01.01.008.10.c, because it emits or has the potential to emit PM<sub>10</sub>/PM<sub>2.5</sub> and NO<sub>x</sub> above the major source threshold of 100 tons-per-year.

At the time of this permitting action, the facility is not a major source of HAP emissions. As a major facility, Busch Agricultural Resources is required to apply for a Tier I operating permit pursuant to IDAPA 58.01.01.301. The application for a Tier I operating permit must contain a certification from Busch Agricultural Resources as to its compliance status with all applicable requirements (IDAPA 58.01.01.314.09).

IDAPA 58.01.01.362 requires that as part of its review of the Tier I application, DEQ shall prepare a technical memorandum (i.e. statement of basis) that sets forth the legal and factual basis for the draft Tier I operating permit terms and conditions including reference to the applicable statutory provisions or the draft denial. This document provides the basis for the draft Tier I operating permit for Busch Agricultural Resources.

The format of this Statement of Basis follows that of the permit with the exception of the facility's information discussed first followed by the scope, the applicable requirements and permit shield, and finally the general provisions.

Busch Agricultural Resources' Tier I operating permit is organized into sections. They are as follows:

### **Section 2 - Tier I Operating Permit Scope**

The scope describes this permitting action.

### **Section 3 - Facility-Wide Conditions**

The Facility-wide Conditions section contains the applicable requirements (permit conditions) that apply facility-wide. Where required, monitoring, recordkeeping and reporting requirements sufficient to assure compliance with each permit condition follows the permit condition.

### **Sections 4 through 7 - Malt Drying and Sulfuring - Kilns No. 1, 2, 3 East, and 3 West, Natural Gas-Fired Boilers No. 1, 2, and 3, Barley and Malt Unloading, Handling, and Loadout, and Emergency IC Engine Powering a Fire Pump**

The emissions unit-specific sections of the permit contain the applicable requirements that specially apply to each regulated emissions unit. Some requirements that apply to an emissions unit (e.g. opacity limits) may be contained in the facility-wide conditions. As with the facility-wide conditions, monitoring, recordkeeping and reporting requirements sufficient to assure compliance with each applicable requirement immediately follows the applicable requirement.

### **Section 8 - Non-applicable Requirements and Insignificant Activities**

This section lists those requirements that the applicant has requested as non-applicable, and DEQ proposes to grant a permit shield in accordance with IDAPA 58.01.01.325.

If requested by the applicant, this section also lists emissions units and activities determined to be insignificant activities based on size or production as allowed by IDAPA 58.01.01.317.01.b.

## Section 9 - General Provisions

The final section of the permit contains standard terms and conditions that apply to all major facilities subject to IDAPA 58.01.01.300. This section is the same for all Tier I sources. These conditions have been reviewed by EPA and contain all terms required by IDAPA 58.01.01 et al as well as requirements from other air quality laws and regulations. Each general provision has been paraphrased so it is more easily understood by the general public; however, there is no intent to alter the effect of the requirement. Should there be a discrepancy between a paraphrased general provision in this statement of basis and the rule or permit, the rule or permit shall govern.

### 3. FACILITY INFORMATION

#### 3.1 Facility Description

The Busch Agricultural Resources, LLC, Idaho Falls Malt facility produces barley malt from barley grains. The facility has three process unit areas: grain handling, malt production, and utility operations.

The grain handling area includes equipment for loading and unloading grain, malt, and byproduct materials; equipment for cleaning grain and malt; and equipment for conveying and storing grain and malt.

Malt production uses ethyl alcohol to dissolve an additive for the malt houses and four indirect-fired natural-gas kilns are used to dry the green malt.

Utility operations include three natural-gas-fired boilers. The boilers provide steam for the malting process equipment.

#### 3.2 Facility Permitting History

##### Tier I Operating Permit History - Previous 5-year permit term August 3, 2011 to August 3, 2016

The following information is the permitting history of this Tier I facility during the previous five-year permit term which was from August 3, 2011 to August 3, 2016. This 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).

August 3, 2011            T1-2010.0127, Previous Tier I permit renewal, Permit status (A, will be S as a result of this project)

##### Underlying Permit History - Includes every underlying permit issued to this facility

The following information is the comprehensive permitting history of all underlying applicable permits issued to this Tier I facility. This 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).

February 11, 2011	P-2010.0146, project number 60616, PTC project to increase the barley load-out limit and other minor permit changes as requested by the facility. (A).
December 14, 2005	PTC No. P-050504, Permit to incorporate NSPS requirements from Subpart DD (S)
May 23, 2005	PTC No. P-040523, Permit to increase the annual barley throughput and to install additional storage for the seed conditioning facility (S)
March 11, 2005	PTC No. P-040520, Permit to install the dust system 800 and kiln #3 vacuum system (S, previously incorporated into the Tier I permit)
October 26, 2004	PTC No. P-030539, Permit to expand the loadout capacity for the barley, malt, and by-products loadout facility (S)
September 5, 2003	PTC No. P-030506, Permit to install two burners in kilns #3 and #4 (S)

June 18, 2002	PTC No. 019-00028, Permit to install additional storage for the grain elevator (S)
April 30, 2002	PTC No. 019-00025, Permit to expand the facility (S)
December 11, 2001	PTC No. 019-00028, Permit to increase the annual barley throughput in the grain elevator (S)
December 13, 1995	PTC No. 051-00015, Permit for the small grains seed conditioning plant (S)
September 29, 1995	PTC No. 051-00015, Permit for the barley seed conditioning plant (S)
December 29, 1993	PTC No. 0260-0025, Permit to modify the malt plant (S)
August 5, 1993	PTC No. 0260-0025, Permit to modify the malt plant (S)
May 15, 1992	PTC No. 0780-0015, Permit for the barley seed conditioning plant (S)
March 12, 1991	PTC No. 0260-0025, Permit for the malt drying and sulfuring kilns (S)
October 2, 1990	PTC No. 0260-0025, Permit for the malt plant (S)
June 19, 1990	PTC No. 0780-0015, Permit for the barley seed conditioning plant (S)
February 20, 1990	PTC No. 0260-0028, Permit for the barley grain elevator, Permit status (S)
April 10, 1989	PTC No. 0260-0025, Initial permit for the malt plant, Permit status (S)
April 10, 1989	PTC No. 0260-0028, Initial permit for the barley grain elevator, Permit status (S)

#### **4. APPLICATION SCOPE AND APPLICATION CHRONOLOGY**

##### **4.1 Application Scope**

This permit is the renewal of the facility's currently effective Tier I operating permit. This permit will also incorporate additional insignificant activities at the facility.

##### **4.2 Application Chronology**

February 4, 2016	DEQ received an application.
June 2, 2016	DEQ determined that the application was complete.
August 23, 2016	DEQ made available the draft permit and statement of basis for peer and regional office review.
September 19, 2016	DEQ made available the draft permit and statement of basis for applicant review.
Oct. 25 – Nov. 25, 2016	DEQ provided a public comment period on the proposed action.
November 28, 2016	DEQ provided the proposed permit and statement of basis for EPA review.
December 6, 2016	DEQ issued the final permit and statement of basis.

## **5. EMISSIONS UNITS, PROCESS DESCRIPTION(S), AND EMISSIONS INVENTORY**

**5.1** This section lists the emissions units, describes the production or manufacturing processes, and provides the emissions inventory for this facility. The information presented was provided by the applicant in its permit application. Also listed in this section are the insignificant activities based on size or production rate.

The primary emissions from this facility are gaseous emissions formed as combustion by-products during operations of the natural gas-fired malt drying and sulfuring kilns and the boilers, and particulate matter emissions from the barley and malt unloading, handling, and loadout operations. The primary emissions of concern are NO<sub>x</sub>, CO, PM<sub>10</sub>, SO<sub>2</sub>, and VOC. HAP emissions from the facility are below major source thresholds of 10 T/yr of any single HAP and below 25 T/yr for any combination of HAPs.

5.2 Process No. 1 - MALT DRYING AND SULFURING – KILNS NO. 1, 2, 3 EAST, AND 3 WEST

Table 5.1 lists the emissions units and control devices associated with the malt drying and sulfuring – kilns no. 1, 2, 3 East, and 3 West.

Table 5.1 EMISSIONS UNITS, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION

Emissions Unit ID No.	Emissions Unit Description	Control Device (if applicable)	Emission Point ID No.
S08	<p><u>Malt Drying and Sulfuring – Kiln No. 1:</u>                      Manufacturer: Custom built                      Model: N/A                      Installed: Unknown                      Burner Model: Unknown                      Maximum Heat Input Rating: 68 MMBtu/hr                      Fuel: Natural gas only                      Sulfuring Malt Rate: 0.018 T/hr</p>	N/A	<p><u>Process Exhaust:</u>                      Exit height: 95.0 ft (29.0 m)                      Exit diameter: 15.9 ft (4.8 m)                      Exit flow rate: 565,000 acfm                      Exit temperature: 70 °F (294.3 K)</p> <p><u>Kiln Exhaust:</u>                      Exit height: 95.0 ft (29 m)                      Exit diameter: 3.0 ft (0.9 m)                      Exit flow rate: 20,000 acfm                      Exit temperature: 300 °F (422.0 K)</p>
S09	<p><u>Malt Drying and Sulfuring – Kiln No. 2:</u>                      Manufacturer: Custom built                      Model: N/A                      Installed: Unknown                      Burner Model: Unknown                      Maximum Heat Input Rating: 68 MMBtu/hr                      Fuel: Natural gas only                      Sulfuring Malt Rate: 0.018 T/hr</p>	N/A	<p><u>Process Exhaust:</u>                      Exit height: 95.0 ft (29.0 m)                      Exit diameter: 15.9 ft (4.8 m)                      Exit flow rate: 565,000 acfm                      Exit temperature: 70 °F (294.3 K)</p> <p><u>Kiln Exhaust:</u>                      Exit height: 95.0 ft (29.0 m)                      Exit diameter: 3.0 ft (0.9 m)                      Exit flow rate: 20,000 acfm                      Exit temperature: 300 °F (422.0 K)</p>
S21	<p><u>Malt Drying and Sulfuring – Kiln No. 3:</u>                      Manufacturer: Custom built                      Model: N/A                      Installed: Unknown                      Burner Model: Unknown                      Maximum Heat Input Rating: 81.6 MMBtu/hr                      Fuel: Natural gas only                      Sulfuring Malt Rate: 0.032 T/hr</p>	N/A	<p><u>Process Exhaust:</u>                      Exit height: 72.0 ft (22.0 m)                      Exit diameter: 32.0 ft (9.7 m)                      Exit flow rate: 900,000 acfm                      Exit temperature: 70 °F (294.3 K)</p> <p><u>Kiln Exhaust (Three identical stacks):</u>                      Exit height: 78.0 ft (23.8 m)                      Exit diameter: 1.8 ft (0.55 m)                      Exit flow rate: 4,160 acfm                      Exit temperature: 131 °F (328.2 K)</p>
S22	<p><u>Malt Drying and Sulfuring – Kiln No. 4:</u>                      Manufacturer: Custom built                      Model: N/A                      Installed: Unknown                      Burner Model: Unknown                      Maximum Heat Input Rating: 81.6 MMBtu/hr                      Fuel: Natural gas only                      Sulfuring Malt Rate: 0.032 T/hr</p>	N/A	<p><u>Process Exhaust:</u>                      Exit height: 72.0 ft (22.0 m)                      Exit diameter: 32.0 ft (9.7 m)                      Exit flow rate: 900,000 acfm                      Exit temperature: 70 °F (294.3 K)</p> <p><u>Kiln Exhaust (Three identical stacks):</u>                      Exit height: 78.0 ft (23.8 m)                      Exit diameter: 1.8 ft (0.55 m)                      Exit flow rate: 4,160 acfm                      Exit temperature: 131 °F (328.2 K)</p>

Process Description:

Green malt is dried in the kilns. The kilns are heated through indirect heat using natural gas-fired burners. Hot air is recovered, after passing through the kilns, using a heat recovery unit. The drying process is a batch process requiring approximately 24 hours for completion of the drying cycle.

Each batch of green malt undergoes a sulfuring treatment once during the drying cycle. The sulfuring treatment process bleaches and brightens the malt kernels. The sulfuring treatment is accomplished by burning sulfur and allowing the resulting SO<sub>2</sub> to come into contact with the malt during the drying process.

Malt production uses ethyl alcohol to dissolve an additive for use in malt houses 1, 2, and 3.

Emissions from the steeping, germination and drying process include PM<sub>10</sub> from malt handling, PM<sub>10</sub>, NO<sub>x</sub>, SO<sub>2</sub>, CO, and VOC criteria pollutants from natural gas combustion, SO<sub>2</sub> from the sulfuring treatment, and VOC from the malting process.

Kilns 3 East and 3 West have six natural-gas burners combined. There are a total of six exhaust stacks associated with Kiln 3 East and Kiln 3 West, one stack for each of the burners. In addition, there is a pre-heater exhaust stack and two burner exhaust stacks associated with the East and West sides of Kiln 3.

**5.3 Process No. 2 - NATURAL GAS-FIRED BOILERS NO. 1, 2, AND 3**

Table 5.2 lists the emissions units and control devices associated with natural gas-fired boilers no. 1, 2, and 3.

**Table 5.2 EMISSIONS UNITS, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION**

Emissions Unit ID No.	Emissions Unit Description	Control Device (if applicable)	Emission Point ID No.
S10	<u>Boilers No. 1, 2, and 3:</u> Manufacturer: Cleaver Brooks Model: CB#700-700 Installed: Unknown Burner Model: CB#700-700 Maximum Heat Input Rating: 90 MMBtu/hr Fuel: Natural gas only	N/A	Exit height: 102 ft (31.1 m) Exit diameter: 3.5 ft (0.9 m) Exit flow rate: 24,000 acfm Exit temperature: 120 °F (322.0 K)

Process Description:

Three natural gas-fired boilers are used for utility operations at the facility. The boilers provide steam for the malting process equipment as well as heat for the buildings at the facility. All three boilers exhaust through a common stack.

#### 5.4 Process No. 3 - BARLEY AND MALT UNLOADING, HANDLING, AND LOADOUT

Table 5.3 lists the emissions units and control devices associated with barley and malt unloading, handling, and loadout.

**Table 5.3 EMISSIONS UNITS, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION**

Emissions Unit ID No.	Emissions Unit Description	Control Device (if applicable)	Emission Point ID No.
S01	<u>Dust System #1 Loading and Unloading:</u> Manufacturer: Various Model: N/A Installed: Unknown Maximum Barley Unloading: 180 T/hr Maximum By-product Loadout: 180 T/hr	<u>Dust System #1 Baghouse:</u> Manufacturer: Torit Day Model: RF-376 Type: Fabric filter Number of Bags: 376 Air to Cloth ratio: 10 to 1 PM10 control efficiency: 99%	Exit height: 35 ft (31.1 m) Exit diameter: 4.33 ft (0.9 m) Exit flow rate: 48,000 acfm Exit temperature: 70 °F (294.3 K)
S02	<u>Dust System #2 Loading and Unloading:</u> Manufacturer: Various Model: N/A Installed: Unknown Maximum By-product Loadout: 180 T/hr Malt Loadout: 260 T/hr Maximum Barley Transfer: 260 T/hr Malt Transfer: 170 T/hr	<u>Dust System #2 Baghouse:</u> Manufacturer: Torit Day Model: RF-276 Type: Fabric filter Number of Bags: 276 Air to Cloth ratio: 10 to 1 PM10 control efficiency: 99%	Exit height: 40 ft (12.2 m) Exit diameter: 4.33 ft (1.32 m) Exit flow rate: 39,500 acfm Exit temperature: 70 °F (294.3 K)
S03	<u>Dust System #3 In-House Handling of Barley and Malt:</u> Manufacturer: Various Model: N/A Installed: Unknown Maximum Barley Handling: 240 T/hr Malt Handling: 170 T/hr	<u>Dust System #3 Baghouse:</u> Manufacturer: Torit Day Model: RF-276 Type: Fabric filter Number of Bags: 276 Air to Cloth ratio: 10 to 1 PM10 control efficiency: 97%	Exit height: 231 ft (70.4 m) Exit diameter: 3.67 ft (1.1 m) Exit flow rate: 28,100 acfm Exit temperature: 70 °F (294.3 K)
S04	<u>Dust System #4 Barley Cleaning, Grading, and Associated Handling:</u> Manufacturer: Various Model: N/A Installed: Unknown Maximum Barley Handling: 164 T/hr	<u>Dust System #4 Baghouse:</u> Manufacturer: Torit Day Model: RF-232 Type: Fabric filter Number of Bags: 232 Air to Cloth ratio: 10 to 1 PM10 control efficiency: 97%	Exit height: 30 ft (9.1 m) Exit diameter: 4.21 ft (1.28 m) Exit flow rate: 29,000 acfm Exit temperature: 70 °F (294.3 K)
S05	<u>Dust System #5 Graded Barley Transfer to Malt House:</u> Manufacturer: Various Model: N/A Installed: Unknown Maximum Barley Handling: 140 T/hr	<u>Dust System #5 Baghouse:</u> Manufacturer: Torit Day Model: RF-232 Type: Fabric filter Number of Bags: 232 Air to Cloth ratio: 10 to 1 PM10 control efficiency: 97%	Exit height: 30 ft (9.1 m) Exit diameter: 3.67 ft (1.1 m) Exit flow rate: 29,000 acfm Exit temperature: 70 °F (294.3 K)
S06	<u>Dust System #6 Malt Cleaning, Grading, and Associated Handling:</u> Manufacturer: Various Model: N/A Installed: Unknown Maximum Malt Handling: 213 T/hr	<u>Dust System #6 Baghouse:</u> Manufacturer: Torit Day Model: RF-276 Type: Fabric filter Number of Bags: 276 Air to Cloth ratio: 10 to 1 PM10 control efficiency: 97%	Exit height: 40 ft (12.2 m) Exit diameter: 4.37 ft (1.33 m) Exit flow rate: 40,650 acfm Exit temperature: 70 °F (294.3 K)

Emissions Unit ID No.	Emissions Unit Description	Control Device (if applicable)	Emission Point ID No.
S07	<u>Dust System #7 Transfer of Dust:</u> Manufacturer: Various Model: N/A Installed: Unknown Maximum Dust Handling: 2.5 T/hr	<u>Dust System #7 Baghouse:</u> Manufacturer: Torit Day Model: RF-48 Type: Fabric filter Number of Bags: 48 Air to Cloth ratio: 10 to 1 PM10 control efficiency: 97%	Exit height: 63 ft (49.7 m) Exit diameter: 1.21 ft (0.37 m) Exit flow rate: 1,980 acfm Exit temperature: 70 °F (294.3 K)
DS8	<u>Dust System #8 Barley and Malt Handling:</u> Manufacturer: Various Model: N/A Installed: Unknown Maximum Barley Handling: 121 T/hr Maximum Malt Handling: 189 T/hr	N/A: Manufacturer: Donaldson Model: 72 RFW 10 AW Type: Fabric filter Number of Bags: 72 Air to Cloth ratio: 7.5 to 1 PM10 control efficiency: 99.5%	Exit height: 18 ft (5.5 m) Exit diameter: 2 ft (0.61 m) Exit flow rate: 7,000 acfm Exit temperature: 70 °F (294.3 K)
S11	<u>Headhouse Vacuum System:</u> Manufacturer: MAC Model: 96AVR14-3 Installed: Unknown Maximum Throughput: 2 T/hr	<u>Headhouse Vacuum Baghouse (inherent to the process):</u> Manufacturer: Lampson Model: 96AVR14-3 Type: Fabric filter Number of Bags: 14 Air to Cloth ratio: 10 to 1 PM10 control efficiency: 99%	Exit height: 162 ft (49.4 m) Exit diameter: 0.5 ft (0.15 m) Exit flow rate: 1,000 acfm Exit temperature: 70 °F (294.3 K)
S12	<u>Kiln House Vacuum System:</u> Manufacturer: Hoffman Model: HPC14-84 Installed: Unknown Maximum Throughput: 2 T/hr	<u>N/A (inherent to the process):</u> Manufacturer: Hoffman Model: HPC14-84 Type: Fabric filter Number of Bags: 14 Air to Cloth ratio: 3 to 1 PM10 control efficiency: 99%	Exit height: 65 ft (19.8 m) Exit diameter: 0.5 ft (0.15 m) Exit flow rate: 1,000 acfm Exit temperature: 70 °F (294.3 K)
S13	<u>Kiln No. 3 Vacuum System:</u> Manufacturer: MAC Model: 96 AVR 14-STY3 Installed: Unknown Maximum Throughput: 2 T/hr	<u>N/A (inherent to the process):</u> Manufacturer: MAC Model: 96 AVR 14-STY3 Type: Fabric filter Number of Bags: 14 Air to Cloth ratio: 3 to 1 PM10 control efficiency: 99%	Exit height: 10 ft (3.05 m) Exit diameter: 0.5 ft (0.15 m) Exit flow rate: 1,000 acfm Exit temperature: 110 °F (316.5 K)
MH1&2	<u>Malt Germination – Malt House 1 &amp; 2:</u> Manufacturer: Custom Model: N/A Installed: Unknown Maximum Throughput: N/A (Batch Process)	N/A	Four identical stacks Exit height: 80 ft (24.3 m) Exit diameter: 6 ft x 6 ft (1.8 m x 1.8 m) Exit flow rate: 129,000 acfm Exit temperature: 70 °F (294.3 K)



### Stack S06 - System 600 - Dry Malt Cleaning, Storage, and Associated Handling

System 600 controls emissions from malt cleaning, storage, and malt handling. In these processes, kiln dried malt is delivered by enclosed conveyors from the kiln to the kiln malt hopper. From this hopper, the malt is routed to two malt cleaners to remove the sprouts. The cleaned malt is routed to an elevator, which delivers it to the storage silos.

### Stack S07 - System 700 - Pneumatic Transfer of Dust from Baghouse (Systems 100-600)

System 700 controls emissions from the pneumatic transfer system used to transport the dust collected by the dust collection systems (System 100 through 600) and the facility sprout-cleaning system.

### Stack DS8 – System 800 – Germination Towers Barley Handling and Kiln 3 (east and west) Malt Handling

System 800 controls emissions from the handling of graded barley at the germination towers and Kiln 3 (east and west) and the handling of malt from Kiln 3 (east and west) back to the headhouse for storage/cleaning. Emissions due to the transfer of graded barley from the daybin elevator to the barley daybin located at the germination towers are controlled by this dust system. In addition, emissions due to the transfer of barley from the barley daybin to the barley washer via screw conveyor are controlled by System 800.

System 800 also controls emissions from the transfer of malt from Kiln 3 (East and West) to the malt leg transfer conveyor via the kiln unloading drag conveyor. Emissions from the transfer of malt from the Kiln 3 (East and West) malt leg transfer conveyor to the kiln malt daybin and the transfer out of the daybin to the headhouse return conveyor are also controlled by System 800.

### Stacks S11 and S12 - Vacuum-Cleaning Systems (Headhouse and Kiln)

The facility has three vacuum systems at the plant used for cleaning of the grain-handling areas. The first vacuum system is for cleaning the headhouse. The second vacuum system is located in the Kiln (1 and 2) building. The third vacuum system was installed in the Kiln 3 (East and West) building for use there. The expansion of this system includes areas around the daybins and the bridge. The vacuum systems are controlled using baghouses similar to the other dust control systems used at the facility.

## 5.5 Process No. 4 – EMERGENCY IC ENGINE POWERING A FIRE PUMP

Table 5.4 lists the emissions units and control devices associated with emergency IC engine powering a fire pump.

Table 5.4 EMISSIONS UNITS, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION

Emissions Unit ID No.	Emissions Unit Description	Control Device (if applicable)	Emission Point ID No.
N/A	<u>Emergency IC engine powering a fire pump:</u> Manufacturer: Detroit Diesel Model: DDFP T6At 7015 Manufacture Date: 1990 Maximum Power Rating: 315 bhp Fuel: diesel only	N/A	Exit height: 102 ft (31.1 m) Exit diameter: 3.5 ft (0.9 m) Exit flow rate: 24,000 acfm Exit temperature: 120 °F (322.0 K)

The diesel-fired emergency standby IC engine powers a fire pump to provide pressurized water to a fire suppression system.

## 5.6 Insignificant Emissions Units Based on Size or Production Rate

No emissions unit or activity subject to an applicable requirement may qualify as an insignificant emissions unit or activity. As required by IDAPA 58.01.01.317.01.b, insignificant emissions units (IEU's) based on size or production rate must be listed in the permit application. Table 5.5 lists the IEU's identified in the permit application. Also summarized is the regulatory authority or justification for each IEU.

**Table 5.5 INSIGNIFICANT EMISSION UNITS AND REGULATORY AUTHORITY/JUSTIFICATION**

Emissions Unit / Activity	Regulatory Authority / Justification
Operation, loading and unloading of storage tanks and storage vessels, with lids or other appropriate closure and less than 260 gallon capacity, 35 cubic feet, heated only to the minimum extent to avoid solidification if necessary.	b.i.(1)
Operation, loading and unloading of storage tanks, not greater than 1,100 gallon capacity, with lids or other appropriate closure, not for use with hazardous air pollutants, max. vapor pressure 550 mmHg.	b.i.(2)
Combustion source, less than five million (5,000,000) Btu/hr, exclusively using natural gas, butane, propane, and/or LPG.	b.i.(5)
Welding using not more than one (1) ton per day of welding rod.	b.i.(9)
Water cooling towers and ponds, not using chromium-based corrosion inhibitors, not used with barometric jets or condensers, not greater than ten thousand (10,000) gpm, not in direct contact with gaseous or liquid process streams containing regulated air pollutants.	b.i.(13)
Municipal and industrial water chlorination facilities of not greater than twenty million (20,000,000) gallons per day capacity. The exemption does not apply to waste water treatment.	b.i.(16)
Surface coating, using less than two (2) gallons per day.	b.i.(17)
Space heaters and hot water heaters using natural gas, propane or kerosene and generating less than five million (5,000,000) Btu/hr.	b.i.(18)
Milling and grinding activities, using paste-form compounds with less than one percent (1%) volatile organic compounds.	b.i.(22)
Surface coating, aqueous solution or suspension containing less than one percent (1%) volatile organic compounds.	b.i.(25)
Storage and handling of water based lubricants for metal working where the organic content of the lubricant is less than ten percent (10%).	b.i.(27)
Two 2,000 gallon 12% bleach tanks which meet the definition of an emission unit or activity with potential emissions less than or equal to the significant emission rate as defined in Section 006 and actual emissions less than or equal to ten percent (10%) of the levels contained in Section 006 of the definition of significant and no more than one (1) ton per year of any hazardous air pollutant.	b.i.(30)

## 5.7 Non-applicable Requirements for Which a Permit Shield is Requested

This section of the permit lists the regulations for which the facility has requested, and DEQ proposes to grant, a permit shield pursuant to IDAPA 58.01.01.325. The findings on which this shield is based are presented below:

- Requirements for Which a Permit Shield Will Be Granted

The facility has not requested any permit shields as a result of this permit renewal.

- Requirements for Which a Permit Shield Will Not Be Granted

The facility has not requested any permit shields as a result of this permit renewal.

## 5.8 Emissions Inventory

Table 5.6 summarizes the emissions inventory for this major facility. All values are expressed in units of tons-per-year and represent the facility's potential to emit. Potential to emit is 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 hour 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 emission is state or federally enforceable.

Listed below Table 5.6 are the references for the emission factors used to estimate the emissions. The documentation provided by the applicant for the emissions inventory and emission factors is provided as Appendix B of this statement of basis.

**Table 5.6 EMISSIONS INVENTORY - POTENTIAL TO EMIT (T/yr)**

Source Description	PM <sub>10</sub> T/yr	NO <sub>x</sub> T/yr	SO <sub>2</sub> T/yr	CO T/yr	VOC T/yr	HAP T/yr
Grain Handling – SO1, Unloading/Conveying	18.0	--	--	--	--	--
Grain Handling – SO1, By-Product Load-out		--	--	--	--	--
Grain Handling – SO2, By-Product Load-out	14.8	--	--	--	--	--
Grain Handling – SO2, Malt Load-out		--	--	--	--	--
Grain Handling – SO2, Barley Transfer		--	--	--	--	--
Grain Handling – SO2, Malt Transfer		--	--	--	--	--
Grain Handling – SO3, In-house Handling of Barley	0.27	--	--	--	--	--
Grain Handling – SO3, In-house Handling of Malt	0.21	--	--	--	--	--
Grain Handling – SO4, Barley Cleaning, Grading and Associated Handling	0.74	--	--	--	--	--
Grain Handling – SO5, Graded Barley Transfer to Malt House	0.27	--	--	--	--	--
Grain Handling – SO6, Dry Malt Cleaning, Storage and Associated Handling	0.58	--	--	--	--	--
Grain Handling – SO7, Transfer of Dust from Dust Systems Nos. 1, 2, 3, 4, 5 & 6	0.02	--	--	--	--	--
Grain Handling – DS8, Barley Handling	2.6	--	--	--	--	--
Grain Handling – DS8, Malt Handling		--	--	--	--	--
Fuel Burning – SO8, Kiln #1	1.94	25.50	0.15	21.42	1.40	0.55
Process – SO8, Drying of Malt	16.75	--	--	--	--	--
Process – SO8, Sulfuring (introduction of SO <sub>2</sub> to malt)	--	--	23.75	--	--	--
Fuel Burning – SO9, Kiln #2	1.94	25.50	0.15	21.42	1.40	0.55
Process – SO9, Drying of Malt	16.75	--	--	--	--	--
Process – SO9, Sulfuring (introduction of SO <sub>2</sub> to malt)	--	--	23.75	--	--	--
Fuel Burning – S10, three boiler s@ 30 MMBtu/hr (natural gas-fired)	1.08	14.15	0.08	11.89	0.78	0.72
Grain Handling – S11, Vacuum system for head house	0.004	--	--	--	--	--
Grain Handling – S12, Vacuum system for kiln house	0.004	--	--	--	--	--
Grain Handling – S13, Vacuum system for Kiln 3	0.004	--	--	--	--	--
Fuel Burning – S21, Kiln #3	1.94	25.50	0.15	21.42	1.40	0.66
Process – S21, Drying of Malt	16.75	--	--	--	--	--
Process – S21, Sulfuring (introduction of SO <sub>2</sub> to malt)	--	--	23.75	--	--	--
Fuel Burning – S22, Kiln #4	1.94	25.50	0.15	21.42	1.40	0.66
Process – S22, Drying of Malt	16.75	--	--	--	--	--
Process – S22, Sulfuring (introduction of SO <sub>2</sub> to malt)	--	--	23.75	--	--	--
Process – Germination of Malt/Addition of Alcohol	--	--	--	--	1.65	--
Fuel Burning – Fire pump IC Engine	0.03	0.49	0.03	0.11	0.04	--
<b>Total Emissions</b>	<b>113.4</b>	<b>116.6</b>	<b>95.7</b>	<b>97.7</b>	<b>8.1</b>	<b>3.15</b>

## 6. EMISSIONS LIMITS AND MRRR

This section contains the applicable requirements for this major facility. Where applicable, monitoring, recordkeeping and reporting requirements (MRRR) follow the applicable requirement and state how compliance with the applicable requirement is to be demonstrated.

This section is divided into several subsections. The first subsection lists the requirements that apply facility wide. The next subsection lists the emissions units-specific and emissions activities-specific applicable requirements. The final subsection contains the general provisions that apply to all major facilities subject to Idaho DEQ's Tier I operating permit requirements.

This section contains the following subsections:

- Facility-Wide Conditions;
- Malt drying and sulfuring – kilns No. 1, 2, 3 East , and 3 West Emissions Limits;
- Natural gas-fired boilers No. 1, 2, and 3 Emissions Limits;
- Barley and malt unloading, handling, and loadout Emissions Limits;
- Emergency IC engine powering a fire pump Emission Limits; and
- Tier I Operating Permit General Provisions.

### ***MRRR***

Immediately following each applicable requirement (permit condition) is the periodic monitoring regime upon which compliance with the underlying applicable requirement is demonstrated. A periodic monitoring regime consists of monitoring, recordkeeping and reporting requirements for each applicable requirement. If an applicable requirement does not include sufficient monitoring, recordkeeping and reporting to satisfy IDAPA 58.01.01.322.06, 07, and 08, then the permit must establish adequate monitoring, recordkeeping and reporting sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit. This is known as gap filling. In addition to the specific MRRR described under each permit condition, generally applicable facility-wide conditions and general provisions may also be required, such as monitoring, recordkeeping, performance testing, reporting, and certification requirements.

The discussion of each permit condition includes the legal and factual basis for the permit condition. If a permit condition was changed due to facility draft or public comments, a description of why and how the condition was changed is provided.

### ***State Enforceability***

An applicable requirement that is not required by the federal CAA and has not been approved by EPA as a SIP-approved requirement is identified as a "State-only" requirement and is enforceable only under state law. State-only requirements are not enforceable by the EPA or citizens under the CAA. State-only requirements are identified in the permit within the citation of the legal authority for the permit condition.

### ***Federal Enforceability***

Unless identified as "State-only," all applicable requirements, including MRRR, are state and federally enforceable. It should be noted that while a violation of a MRRR is a violation of the permit, it is not necessarily a violation of the underlying applicable requirement (e.g. emissions limit).

To minimize the length of this document, the following permit conditions and MRRR have been paraphrased. Refer to the permit for the complete requirements.

## **6.1 Facility-Wide Conditions**

### **Permit Condition 3.1 - Fugitive Dust**

All reasonable precautions shall be taken to prevent PM from becoming airborne in accordance with IDAPA 58.01.01.650-651.

[IDAPA 58.01.01.650-651, 3/30/07]

### **MRRR (Permit Conditions 3.2 through 3.4)**

- Monitor and maintain records of the frequency and the methods used to control fugitive dust emissions;
- Maintain records of all fugitive dust complaints received and the corrective action taken in response to the complaint;
- Conduct facility-wide inspections of all sources of fugitive emissions. If any of the sources of fugitive dust are not being reasonably controlled, corrective action is required.

[IDAPA 58.01.01.322.06, 07, 08, 4/5/00]

### **Permit Condition 3.5 - Odors**

The permittee shall not allow, suffer, cause, or permit the emission of odorous gases, liquids, or solids to the atmosphere in such quantities as to cause air pollution.

[IDAPA 58.01.01.775-776 (State-only), 5/1/94]

### **MRRR (Permit Condition 3.6)**

- Maintain records of all odor complaints received and the corrective action taken in response to the complaint;
- Take appropriate corrective action if the complaint has merit, and log the date and corrective action taken.

[IDAPA 58.01.01.322.06, 07 (State only), 5/1/94]

### **Permit Condition 3.7 - Visible Emissions**

The permittee shall not discharge any air pollutant to the atmosphere from any point of emission for a period or periods aggregating more than three minutes in any 60-minute period which is greater than 20% opacity as determined by procedures contained in IDAPA 58.01.01.625. These provisions shall not apply when the presence of uncombined water, nitrogen oxides, and/or chlorine gas is the only reason for the failure of the emission to comply with the requirements of this section.

[IDAPA 58.01.01.625, 4/5/00]

### **MRRR (Permit Condition 3.8 through 3.9)**

- Conduct facility-wide inspections of all emissions units subject to the visible emissions standards (or rely on continuous opacity monitoring);
- If visible emissions are observed, take appropriate corrective action and/or perform a Method 9 opacity test;
- Maintain records of the results of each visible emissions inspection.

[IDAPA 58.01.01.322.06, 07, 5/1/94]

### **Permit Conditions 3.10 through 3.14 - Excess Emissions**

The permittee shall comply with the procedures and requirements of IDAPA 58.01.01.130-136 for excess emissions. The provisions of IDAPA 58.01.01.130-136 shall govern in the event of conflicts between the excess emissions facility wide conditions and the regulations of IDAPA 58.01.01.130-136.

### **MRRR (Permit Conditions 3.10 through 3.14)**

Monitoring, recordkeeping and reporting requirements for excess emissions are provided in Sections 131 through 136.

- Take appropriate action to correct, reduce, and minimize emissions from excess emissions events;
- Prohibit excess emissions during any DEQ Atmospheric Stagnation Advisory or Wood Stove Curtailment Advisory;
- Notify DEQ of each excess emissions events as soon as possible, including information regarding upset, breakdown, or safety events.
- Submit a report for each excess emissions event to DEQ;
- Maintain records of each excess emissions event.

### **Permit Condition 3.15 - Open Burning**

The permittee shall comply with the *Rules for Control of Open Burning*, IDAPA 58.01.01.600-623.

[IDAPA 58.01.01.600-623, 5/08/09]

### **MRRR**

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

### **Permit Condition 3.16 - Asbestos**

The permittee shall comply with all applicable portions of 40 CFR 61, Subpart M when conducting any renovation or demolition activities at the facility.

[40 CFR 61, Subpart M]

### **MRRR**

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

### **Permit Condition 3.17 - Accidental Release Prevention**

(a)

An owner or operator of a stationary source that has more than a threshold quantity of a regulated substance in a process, as determined under 40 CFR 68.115, shall comply with the requirements of the Chemical Accident Prevention Provisions at 40 CFR 68 no later than the latest of the following dates:

- Three years after the date on which a regulated substance present above a threshold quantity is first listed under 40 CFR 68.130.
- The date on which a regulated substance is first present above a threshold quantity in a process.

[40 CFR 68.10 (a)]

(b)

This facility is subject to 40 CFR Part 68 and shall certify compliance with all requirements of 40 CFR Part 68, including the registration and submission of the RMP, as part of the annual compliance certification required by 40 CFR 70.6(c)(5).

[40 CFR 68.215(a)(2); IDAPA 58.01.01.322.11, 4/6/05; 40 CFR 68.215(a)(ii)]

## **MRRR**

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

### **Permit Condition 3.18 - Recycling and Emissions Reductions**

The permittee shall comply with applicable standards for recycling and emissions reduction of refrigerants and their substitutes pursuant to 40 CFR 82, Subpart F, Recycling and Emissions Reduction. [40 CFR 82, Subpart F]

## **MRRR**

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

### **Permit Condition 3.19 - NSPS 40 CFR 60, Subpart A - General Provisions**

This facility is subject to NSPS 40 CFR 60, Subparts Dc and DD, and is therefore required to comply with 40 CFR 60, Subpart A - General Provisions. [40 CFR 60, Subpart A]

## **MRRR**

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

### **Permit Condition 3.20 - MACT 40 CFR 63, Subpart A - General Provisions**

This facility is subject to MACT 40 CFR 63, Subpart ZZZZ, and is therefore required to comply with 40 CFR 63, Subpart A - General Provisions. [40 CFR 63, Subpart A]

## **MRRR**

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

### **Permit Condition 3.21 - Monitoring and Recordkeeping**

The permittee shall maintain sufficient records to assure compliance with all of the terms and conditions of this operating permit. Records of monitoring information shall include, but not be limited to, the following: (a) the date, place, and times of sampling or measurements; (b) the date analyses were performed; (c) the company or entity that performed the analyses; (d) the analytical techniques or methods used; (e) the results of such analyses; and (f) the operating conditions existing at the time of sampling or measurement. All monitoring records and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes, but is not limited to, all calibration and maintenance records, all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. All records required to be maintained by this permit shall be made available in either hard copy or electronic format to DEQ representatives upon request.

[IDAPA 58.01.01.322.06, 07, 5/1/94]

## **MRRR**

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

### **Permit Conditions 3.22 through 3.23 - Performance Testing**

If performance testing is required, the permittee shall provide notice of intent to test to DEQ at least 15 days prior to the scheduled test or shorter time period as provided in a permit, order, consent decree, or by DEQ approval. DEQ may, at its option, have an observer present at any emissions tests conducted on a source. DEQ requests such testing not be performed on weekends or state holidays.

All testing shall be conducted in accordance with the procedures in IDAPA 58.01.01.157. Without prior DEQ approval, any alternative testing is conducted solely at the permittee's risk. If the permittee fails to obtain prior written approval by DEQ for any testing deviations, DEQ may determine that the testing does not satisfy the testing requirements. Therefore, prior to conducting any performance test, the permittee is encouraged to submit in writing to DEQ, at least 30 days in advance, the following for approval:

- The type of method to be used
- Any extenuating or unusual circumstances regarding the proposed test
- The proposed schedule for conducting and reporting the test

[IDAPA 58.01.01.157, 4/5/00; IDAPA 58.01.01.322.06, 08.a, 09, 5/1/94]

### **MRRR (Permit Conditions 3.24 and 3.25)**

The permittee shall submit compliance test report(s) to DEQ following testing.

[IDAPA 58.01.01.157, 4/5/00; IDAPA 58.01.01.322.06, 08.a, 09, 5/1/94]

### **Permit Condition 3.26 - Reports and Certifications**

This permit condition establishes generally applicable MRRR for submittal of reports, certifications, and notifications to DEQ and/or EPA as specified.

[IDAPA 58.01.01.322.08, 11, 5/1/94]

### **MRRR**

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

### **Permit Condition 3.27 - Incorporation of Federal Requirements by Reference**

Unless expressly provided otherwise, any reference in this permit to any document identified in IDAPA 58.01.01.107.03 shall constitute the full incorporation into this permit of that document for the purposes of the reference, including any notes and appendices therein.

[IDAPA 58.01.01.107, 4/7/11]

### **MRRR**

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

## **6.2 Emissions Unit-Specific Emissions Limits and MRR**

This section of the statement of basis contains the emissions limits, emissions standards, and the monitoring, recordkeeping and reporting requirements (MRRR) for this facility. The regulatory authority to impose the permit conditions is included in the permit and is also listed below each permit condition as a regulatory citation. These permit conditions are the applicable requirements for this facility.

According to the Tier I renewal permit application one change has occurred at the facility in the previous five year Tier I operating permit term. The change was the addition of natural gas-fired dryer which is exempt from PTC permitting action and is incorporated in this renewal as an insignificant activity.

## **MALT DRYING AND SULFURING – KILNS NO. 1, 2, 3 EAST, AND 3 WEST**

### **Permit Condition 4.1, Particulate Matter Emissions – IDAPA 58.01.01.675, PM, PM10, SO2, NOX, CO, and VOC Emissions Limits for Combustion Emissions from the Kilns, and PM10 and SO2 Emissions Limits for the Process Operations from the Kilns**

Particulate matter (PM) emissions from the gas-fired kiln burners shall not exceed 0.015 grains per dry standard cubic foot (gr/dscf) of effluent gas adjusted to 3% oxygen by volume. In addition, the PM, particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), sulfur dioxide (SO2), oxides of nitrogen (NOX), carbon monoxide (CO), and volatile organic compound (VOC) emissions resulting from natural gas burning shall not exceed any corresponding emission rate limits listed in the permit. And PM10 and SO2 emissions resulting from process operations in the each of the kilns and exhausting from the kiln stacks shall not exceed any corresponding emission rate limits listed in the permit.

#### **MRRR – (Permit Conditions 4.3, 4.5, and 3.21)**

The permittee is required to meet specific throughput limits as well as monitor and record the annual throughput of natural gas, malt dried, and sulfur consumption for kilns No. 1, 2, 3 East, and 3 West. The compliance determination method for these requirements is Facility-Wide Permit Condition 3.21 – Monitoring and Recordkeeping.

#### **Permit Condition 4.2, Kilns Opacity Limit – IDAPA 58.01.01.625**

Emissions from each of the kiln stacks (Kilns No. 1, 2, 3 East, and 3 West), or any other stack, vent, or functionally equivalent opening associated with the kilns, shall not exceed 20% opacity for a period or periods aggregating more than three minutes in any 60-minute period.

#### **MRRR – (Permit Condition 3.8 and 3.9)**

A visible emissions evaluation is required for kiln stacks (Kilns No. 1, 2, 3 East, and 3 West), on a monthly basis and in accordance with IDAPA 58.01.01.625. The compliance determination method for IDAPA 58.01.01.625 is Facility-Wide Permit Condition 3.8 and 3.9 – Visible Emissions.

#### **Permit Condition 4.3, Kilns Throughput Limits**

The permittee is required to meet specific throughput limits as well as monitor and record the annual throughput of natural gas, malt dried, and sulfur consumption for Kilns No. 1, 2, 3 East, and 3 West.

#### **MRRR – (Permit Conditions 4.5 and 3.21)**

The permittee is required to monitor and record the annual throughput of natural gas, malt dried, and sulfur consumption for Kilns No. 1, 2, 3 East, and 3 West. The compliance determination method for this requirement is Facility-Wide Permit Condition 3.21 – Monitoring and Recordkeeping.

#### **Permit Condition 4.4, Fugitive Emissions - IDAPA 58.01.01.650-651**

The permittee is required to take all reasonable precautions to prevent PM from becoming airborne.

#### **MRRR – (Permit Conditions 4.4, 3.2, 3.3, and 3.4)**

The permittee is required to use several methods for control fugitive emissions as specified in the Reasonable Control of Fugitive Emissions permit condition. The compliance determination methods for these requirements are Facility-Wide Permit Conditions 3.2, 3.3, and 3.4 – Fugitive Dust.

## **NATURAL GAS-FIRED BOILERS NO. 1, 2, AND 3**

### **Permit Condition 5.1.1, Particulate Matter Emissions - IDAPA 58.01.01.675**

The permittee is required to ensure that PM emissions from the natural gas-fired boilers exhaust which vent to the boiler stacks, shall not exceed 0.015 gr/dscf of effluent gas adjusted to 3% oxygen by volume.

**MRRR – (Permit Conditions 5.4 and 3.21)**

The permittee is required to monitor and record the annual throughput of natural gas consumption for Boilers No. 1, 2, and 3. The compliance determination method for this requirement is Facility-Wide Permit Condition 3.21 – Monitoring and Recordkeeping.

**Permit Condition 5.1.2, PM, PM10, SO2, NOX, CO, and VOC Emissions Limits**

The permittee is required to ensure that PM, PM10, SO2, NOX, CO, and VOC emissions from the natural gas-fired boilers exhaust which vent to the boiler stack.

**MRRR – (Permit Conditions 5.4 and 3.21)**

The permittee is required to monitor and record the amount of natural gas combusted in Boilers No. 1, 2, and 3 as specified in 40 CFR 60.48.c(g) or an approved alternative method. The compliance determination method for this requirement is Facility-Wide Permit Condition 3.21 – Monitoring and Recordkeeping.

**Permit Condition 5.2, Opacity Limit**

Emissions from Boilers No. 1, 2, and 3, or any other stack, vent, or functionally equivalent opening associated with the boilers, shall not exceed 20% opacity for a period or periods aggregating more than three minutes in any 60-minute period.

**MRRR – (Permit Conditions 5.4, 3.8, and 3.9)**

The permittee is required to monitor and record the amount of natural gas combusted in Boilers No. 1, 2, and 3 as specified in 40 CFR 60.48.c(g) or an approved alternative method. The compliance determination method for IDAPA 58.01.01.625 is Facility-Wide Permit Condition 3.8 and 3.9 – Visible Emissions.

**Permit Condition 5.3, Throughput Limits**

The permittee is required to ensure that the maximum annual combined throughput for Boilers No. 1, 2, and 3 shall not exceed 283 million cubic feet in any consecutive 12-month period.

**MRRR – (Permit Conditions 5.4, 5.6, and 3.21)**

The permittee is required to monitor and record the amount of natural gas combusted in Boilers No. 1, 2, and 3 as specified in 40 CFR 60.48.c(g) or an approved alternative method. The compliance determination method for this requirement is Facility-Wide Permit Condition 3.21 – Monitoring and Recordkeeping.

**BARLEY AND MALT UNLOADING, HANDLING, AND LOADOUT**

**Permit Condition 6.3, PM and PM10 Emissions - 40 CFR 60 Subpart DD and Permitted Emissions Limits**

The permittee is required to ensure that PM emissions from the truck unloading station, truck loading station, railcar loading station, railcar unloading station, and all grain handling operations as defined by 40 CFR 60.301 shall not exceed 0.01 gr/dscf.

**MRRR – (Permit Conditions 6.9, 6.10, 6.12, 6.13, and 3.21)**

The permittee is required to conduct a performance test as required by Subpart DD, monitor barley throughput on a monthly and annual basis, monitor and record pressure drop across the baghouses on a weekly basis, and maintain an O&M manual for the baghouses. The compliance determination method for this requirement is Facility-Wide Permit Condition 3.21 – Monitoring and Recordkeeping.

**Permit Condition 6.4, Opacity Limit**

The permittee is required to ensure that visible emissions from grain handling operations as defined in 40 CFR 60.301, truck loading and unloading of grain, railcar loading and unloading of grain does not exceed 0% opacity.

**MRRR – (Permit Conditions 6.7, 6.9, 3.8 and 3.9)**

The permittee is required to perform maintenance of the baghouses if visible emissions exceed 0% opacity. In addition, the pressure drop across the baghouses is required to be maintained within manufacturer and the operation and maintenance (O&M) manual specifications. The permittee is also required to conduct performance tests on the baghouses. The compliance determination method for IDAPA 58.01.01.625 is Facility-Wide Permit Condition 3.8 and 3.9 – Visible Emissions.

**Permit Condition 6.5, Visible Emission Limits**

The permittee is required to ensure that visible emissions for an individual truck and railcar unloading station not exceed 5% opacity.

**MRRR – (Permit Conditions 6.7, 6.9, 3.8, and 3.9)**

The permittee is required to perform maintenance of the baghouses if visible emissions exceed 0% opacity. In addition, the pressure drop across the baghouses is required to be maintained within manufacturer and the operation and maintenance (O&M) manual specifications. The permittee is also required to conduct performance tests on the baghouses. The compliance determination method for IDAPA 58.01.01.625 is Facility-Wide Permit Condition 3.8 and 3.9 – Visible Emissions.

**Permit Condition 6.5, Visible Emission Limits**

The permittee is required to ensure that visible emissions from an individual truck unloading station not exceed 10% opacity.

**MRRR – (Permit Conditions 6.7, 6.9, 3.8, and 3.9)**

The permittee is required to perform maintenance of the baghouses if visible emissions exceed 0% opacity. In addition, the pressure drop across the baghouses is required to be maintained within manufacturer and the operation and maintenance (O&M) manual specifications. The permittee is also required to conduct performance tests on the baghouses. The compliance determination method for IDAPA 58.01.01.625 is Facility-Wide Permit Condition 3.8 and 3.9 – Visible Emissions.

**Permit Condition 6.5, Visible Emission Limits**

The permittee is required to ensure that visible emissions for the grain handling system not exceed 0% opacity.

**MRRR – (Permit Conditions 6.7, 6.9, 3.8, and 3.9)**

The permittee is required to perform maintenance of the baghouses if visible emissions exceed 0% opacity. In addition, the pressure drop across the baghouses is required to be maintained within manufacturer and the operation and maintenance (O&M) manual specifications. The permittee is also required to conduct performance tests on the baghouses. The compliance determination method for IDAPA 58.01.01.625 is Facility-Wide Permit Condition 3.8 and 3.9 – Visible Emissions.

**Permit Condition 6.6, Barley Unloading Throughput**

The permittee is required to ensure that the maximum annual barley unloaded at the facility shall not exceed 520,000 tons per any consecutive 12-month period.

**MRRR – (Permit Conditions 6.10 and 3.21)**

The permittee is required to monitor and record the amount of barley unloaded on a monthly and annual basis. The compliance determination method for this requirement is Facility-Wide Permit Condition 3.21 – Monitoring and Recordkeeping.

**Permit Condition 6.8, Fugitive Emissions - IDAPA 58.01.01.650-651**

The permittee is required to take all reasonable precautions to prevent PM from becoming airborne.

**MRRR – (Permit Conditions 6.14, 3.2, 3.3, and 3.4)**

The permittee is required to use several methods for control fugitive emissions as specified in the Reasonable Control of Fugitive Emissions permit condition. The compliance determination methods for these requirements are Facility-Wide Permit Conditions 3.2, 3.3, and 3.4 – Fugitive Dust.

**Permit Condition 6.9, Performance Tests**

Permit Condition 6.9.1 is a monitoring and recordkeeping requirement for performance testing, however the initial performance test required by this condition has been satisfied. The condition has been removed from the permit and replaced with [Reserved].

**EMERGENCY IC ENGINE POWERING A FIRE PUMP**

**Permit Condition 7.4, Emission Limitations and Operating Limitations – 40 CFR 63, Subpart ZZZZ**

The permittee is required to change oil and filter every 500 hours of operation or annually, inspect air cleaner every 1,000 hours of operation or annually and replace as necessary, and inspect all hoses and belts every 500 hours of operation or annually and replace as necessary.

**MRRR – (Permit Conditions 7.11, 7.12, and 3.21)**

The permittee is required to maintain records of maintenance performed on the IC engine using the methods prescribed per NESHAP Subpart ZZZZ. The compliance determination method for this requirement is Facility-Wide Permit Condition 3.21 – Monitoring and Recordkeeping.

**Permit Condition 7.5, Fuel Requirements**

The permittee is required to use diesel fuel meeting the requirements of 40 CFR 80.510(b) for nonroad diesel. Existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

**MRRR – (Permit Conditions 7.11, 7.12, and 3.21)**

The permittee is required to maintain records of maintenance performed on the IC engine using the methods prescribed per NESHAP Subpart ZZZZ. The compliance determination method for this requirement is Facility-Wide Permit Condition 3.21 – Monitoring and Recordkeeping.

**Permit Condition 7.6, General Requirements**

The permittee is required to demonstrate compliance with the emission limitations and operating limitations of Subpart ZZZZ.

**MRRR – (Permit Conditions 7.11, 7.12, and 3.21)**

The permittee is required to maintain records of maintenance performed on the IC engine using the methods prescribed per NESHAP Subpart ZZZZ. The compliance determination method for this requirement is Facility-Wide Permit Condition 3.21 – Monitoring and Recordkeeping.

**Permit Condition 7.7, Monitoring, Installation, Collection, Operation, and Maintenance Requirements**

The permittee is required to operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop their own maintenance plan.

**MRRR – (Permit Conditions 7.11, 7.12, and 3.21)**

The permittee is required to maintain records of maintenance performed on the IC engine using the methods prescribed per NESHAP Subpart ZZZZ. The compliance determination method for this requirement is Facility-Wide Permit Condition 3.21 – Monitoring and Recordkeeping.

### 6.3 General Provisions

Unless expressly stated, there are no MRRR for the general provisions.

#### **General Compliance, Duty to Comply**

The permittee must comply with the terms and conditions of the permit.

[IDAPA 58.01.01.322.15.a, 5/1/94; 40 CFR 70.6(a)(6)(i)]

#### **General Compliance, Need to Halt or Reduce Activity Not a Defense**

The permittee cannot use the fact that it would have been necessary to halt or reduce an activity as a defense in an enforcement action.

[IDAPA 58.01.01.322.15.b, 5/1/94; 40 CFR 70.6(a)(6)(ii)]

#### **General Compliance, Duty to Supplement or Correct Application**

The permittee must promptly submit such supplementary facts or corrected information upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application. The permittee must also provide information as necessary to address any new requirements that become applicable after the date a complete application has been filed but prior to the release of a draft permit.

[IDAPA 58.01.01.315.01, 5/1/94; 40 CFR 70.5(b)]

#### **Reopening, Additional Requirements, Material Mistakes, Etc.**

This term lists the instances when the permit must be reopened and revised, including times when additional requirements become applicable, when the permit contains mistakes, or when revision or revocation is necessary to assure compliance with applicable requirements.

[IDAPA 58.01.01.322.15.c, 5/1/94; IDAPA 58.01.01.386, 3/19/99; 40 CFR 70.7(f)(1), (2); 40 CFR 70.6(a)(6)(iii)]

#### **Reopening, Permitting Actions**

This term discusses modification, revocation, reopening, and/or reissuance of the permit for cause. If the permittee files a request to modify, revoke, reissue, or terminate the permit, the request does not stay any permit condition, nor does notification of planned changes or anticipated noncompliance.

[IDAPA 58.01.01.322.15.d, 5/1/94; 40 CFR 70.6(a)(6)(iii)]

#### **Property Rights**

This permit does not convey any property rights of any sort, or any exclusive privilege.

[IDAPA 58.01.01.322.15.e, 5/1/94; 40 CFR 70.6(a)(6)(iv)]

#### **Information Requests**

The permittee must furnish, within a reasonable time to DEQ, any information, including records required by the permit, that is requested in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit.

[Idaho Code §39-108; IDAPA 58.01.01.122, 4/5/00; IDAPA 58.01.01.322.15.f, 4/5/00; 40 CFR 70.6(a)(6)(v)]

#### **Information Requests, Confidential Business Information**

Upon request, the permittee must furnish to DEQ copies of records required to be kept by this permit. For information claimed to be confidential, the permittee may furnish such records along with a claim of confidentiality in accordance with Idaho Code §9-342A and applicable implementing regulations including IDAPA 58.01.01.128.

[IDAPA 58.01.01.322.15.g, 5/1/94; IDAPA 58.01.01.128, 4/5/00; 40 CFR 70.6(a)(6)(v)]

#### **Severability**

If any provision of the permit is held to be invalid, all unaffected provisions of the permit will remain in effect and enforceable.

[IDAPA 58.01.01.322.15.h, 5/1/94; 40 CFR 70.6(a)(5)]

## Changes Requiring Permit Revision or Notice

The permittee may not commence construction or modification of any stationary source, facility, major facility, or major modification without first obtaining all necessary permits to construct or an approval under IDAPA 58.01.01.213, or complying with IDAPA 58.01.01.220 through 223. The permittee must comply with IDAPA 58.01.01.380 through 386 as applicable.

[IDAPA 58.01.01.200-223, 4/2/08; IDAPA 58.01.01.322.15.i, 3/19/99; IDAPA 58.01.01.380-386, 7/1/02; 40 CFR 70.4(b)(12), (14), (15), and 70.7(d), (e)]

Changes that are not addressed or prohibited by the Tier I operating permit require a Tier I operating permit revision if such changes are subject to any requirement under Title IV of the CAA, 42 U.S.C. Section 7651 through 7651c, or are modifications under Title I of the CAA, 42 U.S.C. Section 7401 through 7515. Administrative amendments (IDAPA 58.01.01.381), minor permit modifications (IDAPA 58.01.01.383), and significant permit modifications (IDAPA 58.01.01.382) require a revision to the Tier I operating permit. IDAPA 58.01.01.502(b)(10) changes are authorized in accordance with IDAPA 58.01.01.384. Off permit changes and required notice are authorized in accordance with IDAPA 58.01.01.385.

[IDAPA 58.01.01.381-385, 7/1/02; IDAPA 58.01.01.209.05, 4/11/06; 40 CFR 70.4(b)(14) and (15)]

## Federal and State Enforceability

All permit conditions are federally enforceable unless specified in the permit as a state or local only requirement. State and local only requirements are not required under the CAA and are not enforceable by EPA or by citizens.

[IDAPA 58.01.01.322.15.j, 5/1/94; IDAPA 58.01.01.322.15.k, 3/23/98; Idaho Code §39-108; 40 CFR 70.6(b)(1), (2)]

## Inspection and Entry

Upon presentation of credentials, the facility shall allow DEQ or an authorized representative of DEQ to do the following:

- Enter upon the permittee's premises where a Tier I source is located or emissions related activity is conducted, or where records are kept under conditions of this permit;
- Have access to and copy, at reasonable times, any records that are kept under the conditions of this permit;
- Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
- As authorized by the Idaho Environmental Protection and Health Act, sample or monitor, at reasonable times, substances or parameters for the purpose of determining or ensuring compliance with this permit or applicable requirements.

[Idaho Code §39-108; IDAPA 58.01.01.322.15.l, 5/1/94; 40 CFR 70.6(c)(2)]

## New Applicable Requirements

The permittee must continue to comply with all applicable requirements and must comply with new requirements on a timely basis.

[IDAPA 58.01.01.322.10, 4/5/00; IDAPA 58.01.01.314.10.a.ii, 5/1/94; 40 CFR 70.6(c)(3) citing 70.5(c)(8)]

## Fees

The owner or operator of a Tier I source shall pay annual registration fees to DEQ in accordance with IDAPA 58.01.01.387 through IDAPA 58.01.01.397.

[IDAPA 58.01.01.387, 4/2/03; 40 CFR 70.6(a)(7)]

## Certification

All documents submitted to DEQ shall be certified in accordance with IDAPA 58.01.01.123 and comply with IDAPA 58.01.01.124.

[IDAPA 58.01.01.322.15.o, 5/1/94; 40 CFR 70.6(a)(3)(iii)(A); 40 CFR 70.5(d)]

## Renewal

The permittee shall submit an application to DEQ for a renewal of this permit at least six months before, but no earlier than 18 months before, the expiration date of this operating permit. To ensure that the term of the operating permit does not expire before the permit is renewed, the owner or operator is encouraged to submit a renewal application nine months prior to the date of expiration.

[IDAPA 58.01.01.313.03, 4/5/00; 40 CFR 70.5(a)(1)(iii)]

If a timely and complete application for a Tier I operating permit renewal is submitted, but DEQ fails to issue or deny the renewal permit before the end of the term of this permit, then all the terms and conditions of this permit including any permit shield that may have been granted pursuant to IDAPA 58.01.01.325 shall remain in effect until the renewal permit has been issued or denied.

[IDAPA 58.01.01.322.15.p, 5/1/94; 40 CFR 70.7(b)]

## Permit Shield

Compliance with the terms and conditions of the Tier I operating permit, including those applicable to all alternative operating scenarios and trading scenarios, shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that:

- Such applicable requirements are included and are specifically identified in the Tier I operating permit; or
  - DEQ has determined that other requirements specifically identified are not applicable and all of the criteria set forth in IDAPA 58.01.01.325.01(b) have been met.
- The permit shield shall apply to permit revisions made in accordance with IDAPA 58.01.01.381.04 (administrative amendments incorporating the terms of a permit to construct), IDAPA 58.01.01.382.04 (significant modifications), and IDAPA 58.01.01.384.03 (trading under an emissions cap).
- Nothing in this permit shall alter or affect the following:
  - Any administrative authority or judicial remedy available to prevent or terminate emergencies or imminent and substantial dangers;
  - The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
  - The applicable requirements of the acid rain program, consistent with 42 U.S.C. Section 7651(g)(a); and
  - The ability of EPA to obtain information from a source pursuant to Section 114 of the CAA; or the ability of DEQ to obtain information from a source pursuant to Idaho Code §39-108 and IDAPA 58.01.01.122.

[Idaho Code §39-108 and 112; IDAPA 58.01.01.122, 4/5/00;

IDAPA 58.01.01.322.15.m, 325.01, 5/1/94; IDAPA 58.01.01.325.02, 3/19/99;

IDAPA 58.01.01.381.04, 382.04, 383.05, 384.03, 385.03, 3/19/99; 40 CFR 70.6(f)]

## Compliance Schedule and Progress Reports

- For each applicable requirement for which the source is not in compliance, the permittee shall comply with the compliance schedule incorporated in this permit.
- For each applicable requirement that will become effective during the term of this permit and that provides a detailed compliance schedule, the permittee shall comply with such requirements in accordance with the detailed schedule.
- For each applicable requirement that will become effective during the term of this permit that does not contain a more detailed schedule, the permittee shall meet such requirements on a timely basis.

- For each applicable requirement with which the permittee is in compliance, the permittee shall continue to comply with such requirements.

[IDAPA 58.01.01.322.10, 4/5/00; IDAPA 58.01.01.314.9, 5/1/94; IDAPA 58.01.01.314.10, 4/5/00; 40 CFR 70.6(c)(3) and (4)]

### **Periodic Compliance Certification**

The permittee shall submit compliance certifications during the term of the permit for each emissions unit to DEQ and the EPA as specified.

- Compliance certifications for all emissions units shall be submitted annually unless otherwise specified;
- All original compliance certifications shall be submitted to DEQ and a copy of all compliance certifications shall be submitted to the EPA.

[IDAPA 58.01.01.322.11, 4/6/05; 40 CFR 70.6(c)(5)(iii) as amended, 62 Fed. Reg. 54900, 54946 (10/22/97); 40 CFR 70.6(c)(5)(iv)]

### **False Statements**

The permittee may not make any false statement, representation, or certification in any form, notice, or report required under this permit, or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.125, 3/23/98]

### **No Tampering**

The permittee may not render inaccurate any monitoring device or method required under this permit or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.126, 3/23/98]

### **Semiannual Monitoring Reports.**

In addition to all applicable reporting requirements identified in this permit, the permittee shall submit reports of any required monitoring at least every six months as specified.

[IDAPA 58.01.01.322.15.q, 3/23/98; IDAPA 58.01.01.322.08.c, 4/5/00; 40 CFR 70.6(a)(3)(iii)]

### **Reporting Deviations and Excess Emissions**

Each and every applicable requirement, including MRRR, is subject to prompt deviation reporting. Deviations due to excess emissions must be reported in accordance Sections 130-136. All instances of deviation from Tier I operating permit requirements must be included in the deviation reports. The reports must describe the probable cause of the deviation and any corrective action or preventative measures taken. Deviation reports must be submitted at least every six months unless the permit specifies a different time period as required by IDAPA 58.01.01.322.08.c. Examples of deviations include, but are not limited to, the following:

- Any situation in which an emissions unit fails to meet a permit term or condition
- Emission control device does not meet a required operating condition
- Observations or collected data that demonstrate noncompliance with an emissions standard
- Failure to comply with a permit term that requires a report

[IDAPA 58.01.01.322.15.q, 3/23/98; IDAPA 58.01.01.135, 4/11/06; 40 CFR 70.6(a)(3)(iii)]

### **Permit Revision Not Required, Emissions Trading**

No permit revision will be required, under any approved, economic incentives, marketable permits, emissions trading, and other similar programs or processes, for changes that are provided for in the permit.

[IDAPA 58.01.01.322.05.b, 4/5/00; 40 CFR 70.6(a)(8)]

## Emergency

In accordance with IDAPA 58.01.01.332, an “emergency” as defined in IDAPA 58.01.01.008, constitutes an affirmative defense to an action brought for noncompliance with such technology-based emissions limitation if the conditions of IDAPA 58.01.01.332.02 are met.

[IDAPA 58.01.01.332.01, 4/5/00; 40 CFR 70.6(g)]

## 7. REGULATORY REVIEW

### 7.1 Attainment Designation (40 CFR 81.313)

The facility is located in Bonneville County, which is designated as attainment or unclassifiable for PM<sub>10</sub>, PM<sub>2.5</sub>, CO, NO<sub>2</sub>, SO<sub>x</sub>, and Ozone. Reference 40 CFR 81.313.

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

Post project facility-wide emissions from this facility have a potential to emit greater than 100 tons per year for PM<sub>10</sub>/PM<sub>2.5</sub> and NO<sub>x</sub>, as demonstrated previously in the Emissions Inventories Section of this analysis. Therefore, this facility is classified as a major facility, as defined in IDAPA 58.01.01.008.10, as is subject to Tier I permitting requirements.

### 7.3 PSD Classification (40 CFR 52.21)

Post project facility-wide emissions from this facility do not have a potential to emit greater than 250 tons per year for NO<sub>x</sub> as demonstrated previously in the Emissions Inventories Section of this analysis. Therefore, this facility is not classified as a major stationary source, as defined in 40 CFR 52.21(b)(1), and is not subject to PSD permitting requirements.

### 7.4 NSPS Applicability (40 CFR 60)

Because the facility has a grain processing operation, three small boilers, and a compression-ignited IC engine the following NSPS requirements may apply to this facility:

- 40 CFR 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
- 40 CFR 60, Subpart DD - Standards of Performance for Grain Elevators
- 40 CFR 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

#### 40 CFR 60, Subpart Dc

#### Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

§60.40c

Applicability and delegation of authority.

(a) Except as provided in paragraphs (d), (e), (f), and (g) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h).

(b) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, §60.48c(a)(4) shall be retained by the Administrator and not transferred to a State.

(c) Steam generating units that meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (SO<sub>2</sub>) or particulate matter (PM) emission limits, performance testing requirements, or monitoring requirements under this subpart (§§60.42c, 60.43c, 60.44c, 60.45c, 60.46c, or 60.47c) during periods of combustion research, as defined in §60.41c.

The three Cleaver-Brooks boilers, Boilers No. 1, 2, and 3, are rated at 30 MMBtu/hr and were constructed after June 9, 1989. Therefore, Boilers No. 1, 2, and 3 are subject to some of the requirements of this subpart.

§60.41c Definitions.

The definitions of Subpart Dc apply to the three natural gas-fired boilers at this facility.

§60.48c Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by §60.7 of this part. This notification shall include:

- (1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.
- (2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §60.42c, or §60.43c.
- (3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

Permit Condition 5.5 includes the requirements of this section.

(g)(1) Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

(2) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in §60.48c(f) to demonstrate compliance with the SO<sub>2</sub> standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

(3) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in §60.42C to use fuel certification to demonstrate compliance with the SO<sub>2</sub> standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.

Permit Condition 5.6 includes the requirements of this section.

(i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

These requirements are assured by Permit Condition 3.21.

**40 CFR 60, Subpart DD Standards of Performance for Grain Elevators**

§ 60.300 Applicability and designation of authority.

Section (a) specifies that the provisions of this subpart apply to each affected facility at any grain terminal elevator or any grain storage elevator, except as provided under §60.304(b). The affected facilities are each truck unloading station, truck loading station, barge and ship unloading station, barge and ship loading station, railcar loading station, railcar unloading station, grain dryer, and all grain handling operations.

Section (b) specifies that any facility under paragraph (a) of this section which commences construction, modification, or reconstruction after August 3, 1978, is subject to the requirements of this part.

This facility handles barley, which is a grain, and it is a grain elevator that was constructed after August 3, 1978. Therefore, the requirements of 40 CFR 60 Subpart DD apply.

§ 60.301 Definitions

Section (a) defines grain as corn, wheat, sorghum, rice, rye, oats, barley, and soybeans.

Section (b) defines a grain elevator as any plant or installation at which grain is unloaded, handled, cleaned, dried, stored, or loaded.

EPA has determined that malt is not considered to be a grain, and equipment which process malt exclusively are not subject to 40 CFR 60 Subpart DD. Therefore, all of the equipment at this facility that processes both malt and barley, not malt exclusively, is subject to 40 CFR 60 Subpart DD because barley is a grain and there is no way to separate the malt part of the emissions from the barley part.

It has been previously determined that at this facility the following sources do not handle barley and are not subject to 40 CFR 60 Subpart DD:

- SO6 – Malt cleaning, storage, and handling
- SO7 – Transfer of dust from baghouse systems
- S11 – Vacuum cleaning system
- S12 – Kiln vacuum
- S13 – Kiln vacuum

Section (l) specifies that grain handling operations include bucket elevators or legs (excluding legs used to unload barges or ships), scale hoppers and surge bins (garners), turn heads, scalpers, cleaners, trippers, and the headhouse and other such structures.

§ 60.302 Standard for particulate matter

Section (b) specifies that on and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility except a grain dryer any process emission which:

- (1) Contains particulate matter in excess of 0.023 g/dscm (ca. 0.01 gr/dscf).
- (2) Exhibits greater than 0 percent opacity.

These requirements are assured by Permit Conditions 6.3 and 6.4.

Section (c) specifies that on and after the 60th day of achieving the maximum production rate at which the affected facility will be operated, but no later than 180 days after initial startup, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere any fugitive emission from:

- (1) Any individual truck unloading station, railcar unloading station, or railcar loading station, which exhibits greater than 5 percent opacity.
- (2) Any grain handling operation which exhibits greater than 0 percent opacity.
- (3) Any truck loading station which exhibits greater than 10 percent opacity.

These requirements are assured by Permit Condition 6.5.

§ 60.303 Test methods and procedures

Section (a) specifies that in conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b). Acceptable alternative methods and procedures are given in paragraph (c) of this section.

(b) The owner or operator shall determine compliance with the particulate matter standards in §60.302 as follows:

(1) Method 5 shall be used to determine the particulate matter concentration and the volumetric flow rate of the effluent gas. The sampling time and sample volume for each run shall be at least 60 minutes and 1.70 dscm (60 dscf). The probe and filter holder shall be operated without heaters.

(2) Method 2 shall be used to determine the ventilation volumetric flow rate.

(3) Method 9 and the procedures in §60.11 shall be used to determine opacity.

(c) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) For Method 5, Method 17 may be used.

These requirements are assured by Permit Condition 6.9.

**40 CFR 60, Subpart IIII Standards of Performance for Stationary Compression Ignition Internal Combustion Engines**

The IC engine at this facility is subject to NESHAP Subpart ZZZZ. Therefore, the requirements of this subpart do not apply.

**7.5 NESHAP Applicability (40 CFR 61)**

The Busch Agricultural Resources, LLC source is not an affected source subject to NESHAP in 40 CFR 61, and this permitting action does not alter the applicability status of existing affected sources at the facility.

**7.6 MACT Applicability (40 CFR 63)**

Because the facility has a grain processing operation, three small boilers, and a compression-ignited IC engine the following MACT requirements may apply to this facility:

- 40 CFR 63, Subpart ZZZZ – National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

The applicable parts are highlighted in yellow.

**40 CFR 63, Subpart ZZZZ National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

§ 63.6580 What is the purpose of subpart ZZZZ?

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

§ 63.6585 Am I subject to this Subpart?

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

(a) A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.

(c) An area source of HAP emissions is a source that is not a major source.

(d) If you are an owner or operator of an area source subject to this subpart, your status as an entity subject to a standard or other requirements under this subpart does not subject you to the obligation to obtain a permit under 40 CFR part 70 or 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.

(e) If you are an owner or operator of a stationary RICE used for national security purposes, you may be eligible to request an exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C.

(f) The emergency stationary RICE listed in paragraphs (f)(1) through (3) of this section are not subject to this subpart. The stationary RICE must meet the definition of an emergency stationary RICE in §63.6675, which includes operating according to the provisions specified in §63.6640(f).

(1) Existing residential emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

(2) Existing commercial emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

(3) Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

The facility is an area source for HAPs. Therefore, the engine at this facility may be subject to the requirements of Subpart ZZZZ.

§ 63.6590

What parts of my plant does this subpart cover?

This subpart applies to each affected source.

(a) Affected source. An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

(1) Existing stationary RICE.

(i) For stationary RICE with a site rating of more than 500 brake horsepower (HP) located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before December 19, 2002.

(ii) For stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iii) For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iv) A change in ownership of an existing stationary RICE does not make that stationary RICE a new or reconstructed stationary RICE.

(2) New stationary RICE.

(i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(3) Reconstructed stationary RICE.

(i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(b) Stationary RICE subject to limited requirements.

(1) An affected source which meets either of the criteria in paragraphs (b)(1)(i) through (ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of §63.6645(f).

(i) The stationary RICE is a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(ii) The stationary RICE is a new or reconstructed limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(2) A new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis must meet the initial notification requirements of §63.6645(f) and the requirements of §§63.6625(c), 63.6650(g), and 63.6655(c). These stationary RICE do not have to meet the emission limitations and operating limitations of this subpart.

(3) The following stationary RICE do not have to meet the requirements of this subpart and of subpart A of this part, including initial notification requirements:

(i) Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(ii) Existing spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(iii) Existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(iv) Existing limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(v) Existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(c) Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

- (1) A new or reconstructed stationary RICE located at an area source;
- (2) A new or reconstructed 2SLB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;
- (3) A new or reconstructed 4SLB stationary RICE with a site rating of less than 250 brake HP located at a major source of HAP emissions;
- (4) A new or reconstructed spark ignition 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;
- (5) A new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;
- (6) A new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;
- (7) A new or reconstructed compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

As presented in the Emissions Units and Control Devices Section previously, the IC engine at the facility is a compression ignition stationary RICE. The IC Engine has a site rating of more than 500 bhp and is located at an area source of HAP emissions. The IC engine at the facility was installed prior to June 12, 2006. The IC Engine is an existing stationary source RICE subject to the requirements of Subpart ZZZZ.

§ 63.6595

When do I have to comply with this subpart?

(a) Affected sources.

- (1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations, operating limitations and other requirements no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than May 3, 2013. If you have an existing stationary SI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary SI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than October 19, 2013.
- (2) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart no later than August 16, 2004.
- (3) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions after August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(4) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(5) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(6) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(7) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(b) Area sources that become major sources. If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the compliance dates in paragraphs (b)(1) and (2) of this section apply to you.

(1) Any stationary RICE for which construction or reconstruction is commenced after the date when your area source becomes a major source of HAP must be in compliance with this subpart upon startup of your affected source.

(2) Any stationary RICE for which construction or reconstruction is commenced before your area source becomes a major source of HAP must be in compliance with the provisions of this subpart that are applicable to RICE located at major sources within 3 years after your area source becomes a major source of HAP.

(c) If you own or operate an affected source, you must meet the applicable notification requirements in §63.6645 and in 40 CFR part 63, subpart A.

The engine is an existing stationary CI RICE located at an area source of HAP emissions. The IC engine must comply with the requirements of this subpart on and after the compliance date of May 3, 2013. This is assured by Permit Condition 7.3.

§ 63.6603

What emission limitations, operating limitations, and other requirements must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart and the operating limitations in Table 2b to this subpart that apply to you.

As stated in §§63.6603 and 63.6640, you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions:

**TABLE 2d TO SUBPART ZZZZ OF PART 63—REQUIREMENTS FOR EXISTING STATIONARY RICE LOCATED AT AREA SOURCES OF HAP EMISSIONS**

For each . . .	You must meet the following requirement, except during periods of startup . . .
4. Emergency stationary CI RICE and black start stationary CI RICE. <sup>2</sup>	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; <sup>1</sup>
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

<sup>1</sup> Sources have the option to utilize an oil analysis program as described in §63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2d of this subpart.

<sup>2</sup> If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

Permit Condition 7.4 includes the requirements of this section.

(b) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meets either paragraph (b)(1) or (2) of this section, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. Existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meet either paragraph (b)(1) or (2) of this section must meet the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart.

(1) The area source is located in an area of Alaska that is not accessible by the Federal Aid Highway System (FAHS).

(2) The stationary RICE is located at an area source that meets paragraphs (b)(2)(i), (ii), and (iii) of this section.

(i) The only connection to the FAHS is through the Alaska Marine Highway System (AMHS), or the stationary RICE operation is within an isolated grid in Alaska that is not connected to the statewide electrical grid referred to as the Alaska Railbelt Grid.

(ii) At least 10 percent of the power generated by the stationary RICE on an annual basis is used for residential purposes.

(iii) The generating capacity of the area source is less than 12 megawatts, or the stationary RICE is used exclusively for backup power for renewable energy.

(c) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located on an offshore vessel that is an area source of HAP and is a nonroad vehicle that is an Outer Continental Shelf (OCS) source as defined in 40 CFR 55.2, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. You must meet all of the following management practices:

(1) Change oil every 1,000 hours of operation or annually, whichever comes first. Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement.

(2) Inspect and clean air filters every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(3) Inspect fuel filters and belts, if installed, every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(4) Inspect all flexible hoses every 1,000 hours of operation or annually, whichever comes first, and replace as necessary.

(d) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and that is subject to an enforceable state or local standard that requires the engine to be replaced no later than June 1, 2018, you may until January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018, choose to comply with the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart instead of the applicable emission limitations in Table 2d, operating limitations in Table 2b, and crankcase ventilation system requirements in §63.6625(g). You must comply with the emission limitations in Table 2d and operating limitations in Table 2b that apply for non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018. You must also comply with the crankcase ventilation system requirements in §63.6625(g) by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018.

(e) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 3 (Tier 2 for engines above 560 kilowatt (kW)) emission standards in Table 1 of 40 CFR 89.112, you may comply with the requirements under this part by meeting the requirements for Tier 3 engines (Tier 2 for engines above 560 kW) in 40 CFR part 60 subpart IIII instead of the emission limitations and other requirements that would otherwise apply under this part for existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions.

(f) An existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP must meet the definition of remote stationary RICE in §63.6675 on the initial compliance date for the engine, October 19, 2013, in order to be considered a remote stationary RICE under this subpart. Owners and operators of existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that meet the definition of remote stationary RICE in §63.6675 of this subpart as of October 19, 2013 must evaluate the status of their stationary RICE every 12 months. Owners and operators must keep records of the initial and annual evaluation of the status of the engine. If the evaluation indicates that the stationary RICE no longer meets the definition of remote stationary RICE in §63.6675 of this subpart, the owner or operator must comply with all of the requirements for existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that are not remote stationary RICE within 1 year of the evaluation.

§ 63.6604

What fuel requirements must I meet if I own or operate a stationary CI RICE?

(a) If you own or operate an existing non-emergency, non-black start CI stationary RICE with a site rating of more than 300 brake HP with a displacement of less than 30 liters per cylinder that uses diesel fuel, you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel.

(b) Beginning January 1, 2015, if you own or operate an existing emergency CI stationary RICE with a site rating of more than 100 brake HP and a displacement of less than 30 liters per cylinder that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in §63.6640(f)(4)(ii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.



Tables 4 and 5 of this subpart do not list requirements for emergency IC engines. Therefore, the source testing requirements of this subpart are not applicable.

§ 63.6625

What are my monitoring, installation, collection, operation, and maintenance requirements?

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either O<sub>2</sub> or CO<sub>2</sub> according to the requirements in paragraphs (a)(1) through (4) of this section. If you are meeting a requirement to reduce CO emissions, the CEMS must be installed at both the inlet and outlet of the control device. If you are meeting a requirement to limit the concentration of CO, the CEMS must be installed at the outlet of the control device.

(1) Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 CFR part 60, appendix B.

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in §63.8 and according to the applicable performance specifications of 40 CFR part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

(3) As specified in §63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.

(4) The CEMS data must be reduced as specified in §63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO<sub>2</sub> concentration.

The facility has not proposed installation of a CEMS. This section is not applicable.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) through (6) of this section. For an affected source that is complying with the emission limitations and operating limitations on March 9, 2011, the requirements in paragraph (b) of this section are applicable September 6, 2011.

(1) You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraphs (b)(1)(i) through (v) of this section and in §63.8(d). As specified in §63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in paragraphs (b)(1) through (5) of this section in your site-specific monitoring plan.

(i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;

(ii) Sampling interface (e.g., thermocouple) location such that the monitoring system will provide representative measurements;

(iii) Equipment performance evaluations, system accuracy audits, or other audit procedures;

(iv) Ongoing operation and maintenance procedures in accordance with provisions in §63.8(c)(1)(ii) and (c)(3); and

(v) Ongoing reporting and recordkeeping procedures in accordance with provisions in §63.10(c), (e)(1), and (e)(2)(i).

(2) You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan.

(3) The CPMS must collect data at least once every 15 minutes (see also §63.6635).

(4) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.

(5) You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.

(6) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.

The Applicant is not required in Table 5 of this subpart to install a CPMS. Therefore, this section does not apply.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must monitor and record your fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel. In addition, you must operate your stationary RICE in a manner which reasonably minimizes HAP emissions.

(d) If you are operating a new or reconstructed emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must install a non-resettable hour meter prior to the startup of the engine.

The facility does not operate a new or reconstructed RICE therefore, these sections are not applicable.

(e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:

(1) An existing stationary RICE with a site rating of less than 100 HP located at a major source of HAP emissions;

(2) An existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions;

(3) An existing emergency or black start stationary RICE located at an area source of HAP emissions;

(4) An existing non-emergency, non-black start stationary CI RICE with a site rating less than or equal to 300 HP located at an area source of HAP emissions;

(5) An existing non-emergency, non-black start 2SLB stationary RICE located at an area source of HAP emissions;

(6) An existing non-emergency, non-black start stationary RICE located at an area source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis.

(7) An existing non-emergency, non-black start 4SLB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(8) An existing non-emergency, non-black start 4SRB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(9) An existing, non-emergency, non-black start 4SLB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year; and

(10) An existing, non-emergency, non-black start 4SRB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year.

The Applicant has proposed an existing or black start stationary RICE located at an area source of HAP emissions. This section is applicable.

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.

The facility operates an existing emergency stationary RICE located at an area source of HAP emissions. Permit condition 7.7 includes the requirements of this section.

(g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska that meet either §63.6603(b)(1) or §63.6603(b)(2) do not have to meet the requirements of this paragraph (g). Existing CI engines located on offshore vessels that meet §63.6603(c) do not have to meet the requirements of this paragraph (g).

- (1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or
- (2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals.

The Applicant has not proposed a non-emergency, non-black start CI engine. This section is not applicable.

(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.

(i) If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

Permit Condition 7.7 includes the requirements of these sections.

(j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to this subpart or in items 5, 6, 7, 9, or 11 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a

minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

The Applicant has not proposed a stationary SI engine. This section does not apply.

§ 63.6630

How do I demonstrate initial compliance with the emission limitations, operating limitations, and other requirements?

- (a) You must demonstrate initial compliance with each emission limitation, operating limitation, and other requirement that applies to you according to Table 5 of this subpart.
- (b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.
- (c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.6645.
- (d) Non-emergency 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more can demonstrate initial compliance with the formaldehyde emission limit by testing for THC instead of formaldehyde. The testing must be conducted according to the requirements in Table 4 of this subpart. The average reduction of emissions of THC determined from the performance test must be equal to or greater than 30 percent.
- (e) The initial compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:
- (1) The compliance demonstration must consist of at least three test runs.
  - (2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.
  - (3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.
  - (4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.
  - (5) You must measure O<sub>2</sub> using one of the O<sub>2</sub> measurement methods specified in Table 4 of this subpart. Measurements to determine O<sub>2</sub> concentration must be made at the same time as the measurements for CO or THC concentration.
  - (6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O<sub>2</sub> emissions simultaneously at the inlet and outlet of the control device.

No requirements in Table 5 of this Subpart apply to emergency IC engines located at an area source of HAP emissions. Therefore, this section does not apply.

How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?

(a) You must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.

**TABLE 6 TO SUBPART ZZZZ OF PART 63—CONTINUOUS COMPLIANCE WITH EMISSION LIMITATIONS, AND OTHER REQUIREMENTS**

For each ...	Complying with the requirement to ...	You must demonstrate continuous compliance by ...
9. Existing emergency and black start stationary RICE located at an area source of HAP	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

(c) The annual compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

- (1) The compliance demonstration must consist of at least one test run.
- (2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.
- (3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.
- (4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.
- (5) You must measure O2 using one of the O2 measurement methods specified in Table 4 of this subpart. Measurements to determine O2 concentration must be made at the same time as the measurements for CO or THC concentration.
- (6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O2 emissions simultaneously at the inlet and outlet of the control device.
- (7) If the results of the annual compliance demonstration show that the emissions exceed the levels specified in Table 6 of this subpart, the stationary RICE must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The stationary RICE must be retested within 7 days of being restarted and the emissions must meet the levels specified in Table 6 of this subpart. If the retest shows that the emissions continue to exceed the specified levels, the stationary RICE must again be shut down as soon as safely possible, and the stationary RICE may not operate, except for purposes of startup and testing, until the owner/operator

demonstrates through testing that the emissions do not exceed the levels specified in Table 6 of this subpart.

(d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary RICE in emergency situations.

(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(4) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraphs (f)(4)(i) and (ii) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution system.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

Permit Conditions 7.8 and 7.9 include the requirements of this section.

§ 63.6645

What notifications must I submit and when?

(a) You must submit all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified if you own or operate any of the following;

(1) An existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

(2) An existing stationary RICE located at an area source of HAP emissions.

(3) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(4) A new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions.

(5) This requirement does not apply if you own or operate an existing stationary RICE less than 100 HP, an existing stationary emergency RICE, or an existing stationary RICE that is not subject to any numerical emission standards.

(b) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart, you must submit an Initial Notification not later than December 13, 2004.

(c) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions on or after August 16, 2004, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(d) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart and you are required to submit an initial notification, you must submit an Initial Notification not later than July 16, 2008.

(e) If you start up your new or reconstructed stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions on or after March 18, 2008 and you are required to submit an initial notification, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(f) If you are required to submit an Initial Notification but are otherwise not affected by the requirements of this subpart, in accordance with §63.6590(b), your notification should include the information in §63.9(b)(2)(i) through (v), and a statement that your stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).

(g) If you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in §63.7(b)(1).

(h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii).

(1) For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

(2) For each initial compliance demonstration required in Table 5 to this subpart that includes a performance test conducted according to the requirements in Table 3 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to §63.10(d)(2).

(i) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and subject to an enforceable state or local standard requiring engine replacement and you intend to meet management practices rather than emission limits, as specified in §63.6603(d), you must submit a notification by March 3, 2013, stating that you intend to use the provision in §63.6603(d) and identifying the state or local regulation that the engine is subject to.

The IC engine is an existing stationary CI RICE located at an area source of HAP emissions that is not subject to any numerical emission standards. Therefore, none of the notification requirements of this subpart apply.

§ 63.6650

What reports must I submit and when?

(a) You must submit each report in Table 7 of this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) through (b)(9) of this section.

(1) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in §63.6595.

(2) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in §63.6595.

(3) For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (b)(4) of this section.

(6) For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on December 31.

(7) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in §63.6595.

(8) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.

(9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

(c) The Compliance report must contain the information in paragraphs (c)(1) through (6) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.6605(b), including actions taken to correct a malfunction.

(5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

(6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

(d) For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in this subpart, the Compliance report must contain the information in paragraphs (c)(1) through (4) of this section and the information in paragraphs (d)(1) and (2) of this section.

(1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

(1) The date and time that each malfunction started and stopped.

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out-of-control, including the information in §63.8(c)(8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

(5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

(8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

(11) The date of the latest CMS certification or audit.

(12) A description of any changes in CMS, processes, or controls since the last reporting period.

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

(g) If you are operating as a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must submit an annual report according to Table 7 of this subpart by the date specified unless the Administrator has approved a different schedule, according to the information described in paragraphs (b)(1) through (b)(5) of this section. You must report the data specified in (g)(1) through (g)(3) of this section.

(1) Fuel flow rate of each fuel and the heating values that were used in your calculations. You must also demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10 percent or more of the total fuel consumption on an annual basis.

(2) The operating limits provided in your federally enforceable permit, and any deviations from these limits.

(3) Any problems or errors suspected with the meters.

(h) If you own or operate an emergency stationary RICE with a site rating of more than 100 brake HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in §63.6640(f)(4)(ii), you must submit an annual report according to the requirements in paragraphs (h)(1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

(ii) Date of the report and beginning and ending dates of the reporting period.

(iii) Engine site rating and model year.

(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(v) Hours operated for the purposes specified in §63.6640(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(vii) Hours spent for operation for the purpose specified in §63.6640(f)(4)(ii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(4)(ii). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(viii) If there were no deviations from the fuel requirements in §63.6604 that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period.

(ix) If there were deviations from the fuel requirements in §63.6604 that apply to the engine (if any), information on the number, duration, and cause of deviations, and the corrective action taken.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) ([www.epa.gov/cdx](http://www.epa.gov/cdx)). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in §63.13.

Permit Condition 7.10 includes the requirements of this section.

(a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(5), (b)(1) through (b)(3) and (c) of this section.

- (1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in §63.10(b)(2)(xiv).
- (2) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.
- (3) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii).
- (4) Records of all required maintenance performed on the air pollution control and monitoring equipment.
- (5) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(b) For each CEMS or CPMS, you must keep the records listed in paragraphs (b)(1) through (3) of this section.

- (1) Records described in §63.10(b)(2)(vi) through (xi).
- (2) Previous (i.e., superseded) versions of the performance evaluation plan as required in §63.8(d)(3).
- (3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in §63.8(f)(6)(i), if applicable.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.

(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.

(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE;

- (1) An existing stationary RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions.
- (2) An existing stationary emergency RICE.
- (3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.

(f) If you own or operate any of the stationary RICE in paragraphs (f)(1) through (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in §63.6640(f)(2)(ii) or (iii) or §63.6640(f)(4)(ii), the owner or operator must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.

- (1) An existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions that does not meet the standards applicable to non-emergency engines.
- (2) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.

Permit Condition 7.11 includes the requirements of this section.

§ 63.6660

In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1).

Permit Condition 7.12 includes the requirements of this section.

§ 63.6665

What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with any of the requirements of the General Provisions specified in Table 8: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing stationary RICE that combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an existing emergency stationary RICE, or an existing limited use stationary RICE. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions specified in Table 8 except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

Permit Condition 7.13 includes the requirements of this section.

## 7.7 CAM Applicability (40 CFR 64)

Individual permit units at facilities that are subject to Title V permitting requirements (Tier I permits) may be subject to the requirements of 40 CFR Part 64, Compliance Assurance Monitoring (CAM). 40 CFR Part 64 requires CAM for units that meet the following three criteria:

1. The unit must have an emission limit for the pollutant;
2. The unit must have add-on controls for the pollutant; these are devices such as flue gas recirculation (FGR), baghouses, and catalytic oxidizers; and
3. The unit must have a pre-control potential to emit of greater than the major source thresholds.

At this facility there are 17 emissions units subject to Tier I permit requirements. In addition, these units have emissions limits and baghouses are used to control PM10 emissions from each of the units. As part of project 61694, permit T1-2016.0016, the facility submitted CAM applicability calculations. These emissions calculation are summarized in the following table:

Table 7.1 CAM APPLICABILITY

Stack	Description	Throughput (T/yr)	Emissions Factor (lb-PM <sub>10</sub> /T)	Emissions Factor Reference	Uncontrolled PM <sub>10</sub> Emissions (T/yr)	Do Emissions Exceed 100 T/yr?
SO1	Barley Unloading/Conveying	520,000	0.059	AP-42, Table 9.9.1-2 Grain Receiving, Uncontrolled	15.34	No
SO1	By-product Loadout	32,730	0.029	AP-42, Table 9.9.1-1 Grain Shipping, truck	0.47	No
SO2	By-product Loadout	32,730	0.029	AP-42, Table 9.9.1-1 Grain Shipping, Truck	0.47	No
SO2	Malt Loadout	404,700	0.029	AP-42, Table 9.9.1-1 Grain Shipping, Truck	5.87	No
SO2	Barley Transfer	520,000	0.034	AP-42, Table 9.9.1-1 Headhouse/Grain Handling	8.84	No
SO2	Malt Transfer	404,700	0.034	AP-42, Table 9.9.1-1 Headhouse/Grain Handling	6.88	No
SO3	In-house Handling of Barley	520,000	0.034	AP-42, Table 9.9.1-1 Headhouse/Grain Handling	8.84	No
SO3	In-house Handling of Malt	404,700	0.034	AP-42, Table 9.9.1-1 Headhouse/Grain Handling	6.88	No
SO4	Barley Cleaning and Handling	520,000	0.095	AP-42, Table 9.9.1-1 Grain Cleaning, Uncontrolled @ 80% Controlled	24.70	No
SO5	Barley Transfer to Malt House	520,000	0.034	AP-42, Table 9.9.1-1 Headhouse/Grain Handling	8.84	No
SO6	Dry Malt Cleaning, Storage, and Handling	404,700	0.095	AP-42, Table 9.9.1-1 Grain Cleaning, Uncontrolled @ 80% Controlled	19.22	No
DS8	Barley Elevator to Daybin	520,000	0.034	AP-42, Table 9.9.1-1 Headhouse/Grain Handling	8.84	No
DS8	Barley Daybin to Washer	520,000	0.034	AP-42, Table 9.9.1-1 Headhouse/Grain Handling	8.84	No
DS8	Malt Kiln to Leg Transfer	404,700	0.034	AP-42, Table 9.9.1-1 Headhouse/Grain Handling	6.88	No
DS8	Malt Kiln Leg	404,700	0.034	AP-42, Table 9.9.1-1 Headhouse/Grain Handling	6.88	No
DS8	Malt Daybin	404,700	0.034	AP-42, Table 9.9.1-1 Headhouse/Grain Handling	6.88	No
DS8	Malt Daybin to Elevator	404,700	0.034	AP-42, Table 9.9.1-1 Headhouse/Grain Handling	6.88	No

As demonstrated in the preceding table none of the emissions units have uncontrolled PM<sub>10</sub> emissions greater than 100 T/yr. Therefore, CAM does not apply to any of the emissions units at this facility.

## 7.8 Acid Rain Permit (40 CFR 72-75)

The Busch Agricultural Resources, LLC source is not an affected source subject to the Acid Rain Permit program in 40 CFR 72-75.

## 7.9 Mandatory Greenhouse Gas Reporting (40 CFR 98)

The Busch Agricultural Resources, LLC facility may be subject to mandatory greenhouse gas (GHG) reporting.

### § 98.1 Purpose and scope

(a) This part establishes mandatory greenhouse gas (GHG) reporting requirements for owners and operators of certain facilities that directly emit GHG as well as for certain suppliers. For suppliers, the GHGs reported are the quantity that would be emitted from combustion or use of the products supplied.

(b) Owners and operators of facilities and suppliers that are subject to this part must follow the requirements of this subpart and all applicable subparts of this part. If a conflict exists between a provision in subpart A and any other applicable subpart, the requirements of the applicable subpart shall take precedence.

(c) For facilities required to report under onshore petroleum and natural gas production under subpart W of this part, the terms Owner and Operator used in subpart A have the same definition as Onshore petroleum and natural gas production owner or operator, as defined in §98.238 of this part.

### § 98.2 Who must report?

(a) The GHG reporting requirements and related monitoring, recordkeeping, and reporting requirements of this part apply to the owners and operators of any facility that is located in the United States or under or attached to the Outer Continental Shelf (as defined in 43 U.S.C. 1331) and that meets the requirements of either paragraph (a)(1), (a)(2), or (a)(3) of this section; and any supplier that meets the requirements of paragraph (a)(4) of this section:

(1) A facility that contains any source category that is listed in Table A-3 of this subpart in any calendar year starting in 2010. For these facilities, the annual GHG report must cover stationary fuel combustion sources (subpart C of this part), miscellaneous use of carbonates (subpart U of this part), and all applicable source categories listed in Table A-3 and Table A-4 of this subpart.

(2) A facility that contains any source category that is listed in Table A-4 of this subpart and that emits 25,000 metric tons CO<sub>2</sub>e or more per year in combined emissions from stationary fuel combustion units, miscellaneous uses of carbonate, and all applicable source categories that are listed in Table A-3 and Table A-4 of this subpart. For these facilities, the annual GHG report must cover stationary fuel combustion sources (subpart C of this part), miscellaneous use of carbonates (subpart U of this part), and all applicable source categories listed in Table A-3 and Table A-4 of this subpart.

Tables A-3 and A-4 establish that the Busch Agricultural Resources, LLC barley malting facility is not a listed source category subject to the requirements of this subpart.

(3) A facility that in any calendar year starting in 2010 meets all three of the conditions listed in this paragraph (a)(3). For these facilities, the annual GHG report must cover emissions from stationary fuel combustion sources only.

(i) The facility does not meet the requirements of either paragraph (a)(1) or (a)(2) of this section.

(ii) The aggregate maximum rated heat input capacity of the stationary fuel combustion units at the facility is 30 mMBtu/hr or greater.

(iii) The facility emits 25,000 metric tons CO<sub>2</sub>e or more per year in combined emissions from all stationary fuel combustion sources.

The Busch Agricultural Resources, LLC barley malting facility does have combustion equipment with a heat input greater than 30 MMBtu/hr (four kilns with a combined heat input of 299.2 MMBtu/hr and

three boilers with a combined heat input of 270.0 MMBtu/hr). Therefore, this facility is subject to the requirements of this subpart.

(i) Except as provided in this paragraph, once a facility or supplier is subject to the requirements of this part, the owner or operator must continue for each year thereafter to comply with all requirements of this part, including the requirement to submit annual GHG reports, even if the facility or supplier does not meet the applicability requirements in paragraph (a) of this section in a future year.

(1) If reported emissions are less than 25,000 metric tons CO<sub>2</sub>e per year for five consecutive years, then the owner or operator may discontinue complying with this part provided that the owner or operator submits a notification to the Administrator that announces the cessation of reporting and explains the reasons for the reduction in emissions. The notification shall be submitted no later than March 31 of the year immediately following the fifth consecutive year of emissions less than 25,000 tons CO<sub>2</sub>e per year. The owner or operator must maintain the corresponding records required under §98.3(g) for each of the five consecutive years and retain such records for three years following the year that reporting was discontinued. The owner or operator must resume reporting if annual emissions in any future calendar year increase to 25,000 metric tons CO<sub>2</sub>e per year or more.

(2) If reported emissions are less than 15,000 metric tons CO<sub>2</sub>e per year for three consecutive years, then the owner or operator may discontinue complying with this part provided that the owner or operator submits a notification to the Administrator that announces the cessation of reporting and explains the reasons for the reduction in emissions. The notification shall be submitted no later than March 31 of the year immediately following the third consecutive year of emissions less than 15,000 tons CO<sub>2</sub>e per year. The owner or operator must maintain the corresponding records required under §98.3(g) for each of the three consecutive years and retain such records for three years following the year that reporting was discontinued. The owner or operator must resume reporting if annual emissions in any future calendar year increase to 25,000 metric tons CO<sub>2</sub>e per year or more.

(3) If the operations of a facility or supplier are changed such that all applicable GHG-emitting processes and operations listed in paragraphs (a)(1) through (a)(4) of this section cease to operate, then the owner or operator is exempt from reporting in the years following the year in which cessation of such operations occurs, provided that the owner or operator submits a notification to the Administrator that announces the cessation of reporting and certifies to the closure of all GHG-emitting processes and operations no later than March 31 of the year following such changes. This paragraph (i)(3) does not apply to seasonal or other temporary cessation of operations. This paragraph (i)(3) does not apply to facilities with municipal solid waste landfills or industrial waste landfills, or to underground coal mines. The owner or operator must resume reporting for any future calendar year during which any of the GHG-emitting processes or operations resume operation.

Busch Agricultural Resources is subject of this subpart and must comply with the applicable parts. As provided above the facility must continue to report even if they do not meet the applicability requirements of paragraph (a). The facility must comply until the requirements outlined in § 98.2(i)(1) through (3) are met.

#### § 98.30

#### Definition of the source category

(a) Stationary fuel combustion sources are devices that combust solid, liquid, or gaseous fuel, generally for the purposes of producing electricity, generating steam, or providing useful heat or energy for industrial, commercial, or institutional use, or reducing the volume of waste by removing combustible matter. Stationary fuel combustion sources include, but are not limited to, boilers, simple and combined-cycle combustion turbines, engines, incinerators, and process heaters.

(b) This source category does not include:

- (1) Portable equipment, as defined in §98.6.
- (2) Emergency generators and emergency equipment, as defined in §98.6.
- (3) Irrigation pumps at agricultural operations.

(4) Flares, unless otherwise required by provisions of another subpart of this part to use methodologies in this subpart.

(5) Electricity generating units that are subject to subpart D of this part.

(c) For a unit that combusts hazardous waste (as defined in §261.3 of this chapter), reporting of GHG emissions is not required unless either of the following conditions apply:

(1) Continuous emission monitors (CEMS) are used to quantify CO<sub>2</sub> mass emissions.

(2) Any fuel listed in Table C-1 of this subpart is also combusted in the unit. In this case, report GHG emissions from combustion of all fuels listed in Table C-1 of this subpart.

(d) You are not required to report GHG emissions from pilot lights. A pilot light is a small auxiliary flame that ignites the burner of a combustion device when the control valve opens.

This section establishes that the Busch Agricultural Resources, LLC barley malting facility is subject to the requirements of this subpart.

§ 98.3 What are the general monitoring, reporting, recordkeeping and verification requirements of this part?

The owner or operator of a facility or supplier that is subject to the requirements of this part must submit GHG reports to the Administrator, as specified in this section.

(a) General. Except as provided in paragraph (d) of this section, follow the procedures for emission calculation, monitoring, quality assurance, missing data, recordkeeping, and reporting that are specified in each relevant subpart of this part.

(b) Schedule. The annual GHG report for reporting year 2010 must be submitted no later than September 30, 2011. The annual report for reporting years 2011 and beyond must be submitted no later than March 31 of each calendar year for GHG emissions in the previous calendar year, except as provided in paragraph (b)(1) of this section.

(c) Content of the annual report. Except as provided in paragraph (d) of this section, each annual GHG report shall contain the following information:

(1) Facility name or supplier name (as appropriate), and physical street address of the facility or supplier, including the city, State, and zip code. If the facility does not have a physical street address, then the facility must provide the latitude and longitude representing the geographic centroid or center point of facility operations in decimal degree format. This must be provided in a comma-delimited "latitude, longitude" coordinate pair reported in decimal degrees to at least four digits to the right of the decimal point.

(2) Year and months covered by the report.

(3) Date of submittal.

(4) For facilities, except as otherwise provided in paragraph (c)(12) of this section, report annual emissions of CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, each fluorinated GHG (as defined in §98.6), and each fluorinated heat transfer fluid (as defined in §98.98) as follows.

§ 98.5 How is the report submitted?

(a) Each GHG report and certificate of representation for a facility or supplier must be submitted electronically in accordance with the requirements of §98.4 and in a format specified by the Administrator.

(b) For reporting year 2014 and thereafter, unless a later year is specified in the applicable recordkeeping section, you must enter into verification software specified by the Administrator the data specified in the verification software records provision in each applicable recordkeeping section. For each data element entered into the verification software, if the software produces a warning message for the data value and

you elect not to revise the data value, you may provide an explanation in the verification software of why the data value is not being revised.

This facility is subject to 40 CFR Part 98 Subpart W. The facility meets the industry segment description of stationary fuel combustion sources and in addition the aggregate maximum rated heat input capacity of the stationary fuel combustion units is greater than 30 MMBtu/hr. In accordance with 40 CFR Part 98, the facility is required to submit an annual GHG report to the Administrator (EPA).

## **8. PUBLIC COMMENT**

As required by IDAPA 58.01.01.364, a public comment period was made available to the public from October 25, 2016 to November 25, 2016. During this time, comments were not submitted in response to DEQ's proposed action.

## **9. EPA REVIEW OF PROPOSED PERMIT**

As required by IDAPA 58.01.01.366, DEQ provided the proposed permit to EPA Region 10 for its review and comment on November 28, 2016 via e-mail. On November 28, 2016, EPA Region 10 responded to DEQ via e-mail indicating the permit was ready for issuance.

## Appendix A - Emissions Inventory

Source Type	Emission Unit #	Source Name	Description	Permitted Limits		Potential Emissions (tons/year)								
				Annual Throughput	Throughput Units	PM	PM <sub>10</sub>	NOx	CO	SOx	VOC			
Grain Handling	S01	Dust System #1	Barley Unloading/Conveying	520,000	tons	18.0								
Grain Handling	S01	Dust System #1	By-Product Load-out	32,730	tons									
Grain Handling	S02	Dust System #2	By-Product Load-out	32,730	tons									
Grain Handling	S02	Dust System #2	Malt Load-out	404,700	tons	14.8								
Grain Handling	S02	Dust System #2	Barley Transfer	520,000	tons									
Grain Handling	S02	Dust System #2	Malt Transfer	404,700	tons									
Grain Handling	S03	Dust System #3	In-house Handling of Barley	520,000	tons	0.48	0.27							
Grain Handling	S03	Dust System #3	In-house Handling of Malt	404,700	tons	0.37	0.21							
Grain Handling	S04	Dust System #4	Barley Cleaning, Grading and Associated Handling	520,000	tons	10.89	0.74							
Grain Handling	S05	Dust System #5	Graded Barley Transfer to Malt House	520,000	tons	0.48	0.27							
Grain Handling	S06	Dust System #6	Dry Malt Cleaning, Storage and Associated Handling	404,700	tons	15.26	0.58							
Grain Handling	S07	Dust System #7	Transfer of Dust from Dust Systems Nos. 1, 2, 4, 5 & 6	21,900	tons	0.20	0.02							
Grain Handling	DS8	Dust System #8	Barley Handling	520,000	tons	2.6	2.6							
Grain Handling	DS8	Dust System #8	Malt Handling	404,700	tons									
Fuel Burning	S08	Kiln #1	Kiln #1	510	MMscf	1.94	1.94	25.50	21.42	0.15	1.40			
Process	S08	Kiln #1	Drying of Malt	101,175	tons	18.72	16.75							
Process	S08	Kiln #1	Sulfuring (introduction of SO <sub>2</sub> to malt)	47,500	lbs							23.75		
Fuel Burning	S09	Kiln #2	Kiln #2	510	MMscf	1.94	1.94	25.50	21.42	0.15	1.40			
Process	S09	Kiln #2	Drying of Malt	101,175	tons	18.72	16.75							
Process	S09	Kiln #2	Sulfuring (introduction of SO <sub>2</sub> to malt)	47,500	lbs							23.75		
Fuel Burning	S10	Boilers	3 Boilers @ 30 MMBtu/hr (Natural Gas fired)	283	MMscf	1.08	1.08	14.15	11.89	0.08	0.78			
Grain Handling	S11	Head House Vacuum	Vacuum system for head house	17,520	tons	0.05	0.004							

Source Type	Emission Unit #	Source Name	Description	Permitted Limits		Potential Emissions (tons/year)								
				Annual Throughput	Throughput Units	PM	PM <sub>10</sub>	NOx	CO	SOx	VOC			
Grain Handling	S12	Kiln Vacuum	Vacuum system for kiln house	17,520	tons	0.05	0.004							
Grain Handling	S13	Kiln 3 Vacuum	Vacuum system for Kiln 3	17,520	tons	0.05	0.004							
Fuel Burning	S21	Kiln #3	Kiln #3	510	MMscf	1.94	1.94	25.50	21.42	0.15	1.40			
Process	S21	Kiln #3	Drying of Malt	101,175	tons	18.72	16.75	0.00	0.00	0.00	0.00			
Process	S21	Kiln #3	Sulfuring (introduction of SO <sub>2</sub> to malt)	47,500	lbs	0.00	0.00	0.00	0.00	23.75	0.00			
Fuel Burning	S22	Kiln #4	Kiln #4	510	MMscf	1.94	1.94	25.50	21.42	0.15	1.40			
Process	S22	Kiln #4	Drying of Malt	101,175	tons	18.72	16.75	0.00	0.00	0.00	0.00			
Process	S22	Kiln #4	Sulfuring (introduction of SO <sub>2</sub> to malt)	47,500	lbs	0.00	0.00	0.00	0.00	23.75	0.00			
Process		Malt Houses	Germination of Malt/Addition of Alcohol	500	gal									1.65
Fuel Burning		Fire Pump	Fire Pump Engine	100	Hours	0.03	0.03	0.49	0.11	0.03	0.04			
<b>Totals</b>						<b>147.0</b>	<b>113.4</b>	<b>116.6</b>	<b>97.7</b>	<b>95.7</b>	<b>8.1</b>			







Pollutant	Cas #	EMISSIONS (TPY)							TOTAL
		Kiln 1	Kiln 2	Kiln 3	Kiln 4	Boiler 1	Boiler 2	Boiler 3	TOTAL
Vinyl chloride	75-01-4								-
Vinylidene chloride (1,1-Dichloroethy	75-35-4								-
Xylenes	1330-20-7								-
o-Xylene	95-47-6								-
m-Xylenes	108-38-3								-
p-Xylenes	106-42-3								-
Antimony Compounds	7440-36-0								-
Arsenic Compounds	7440-38-2	5.84E-05	5.84E-05	7.01E-05	7.01E-05	2.58E-05	2.58E-05	2.58E-05	0.000
Beryllium Compounds	7440-41-7	3.50E-06	3.50E-06	4.20E-06	4.20E-06	1.55E-06	1.55E-06	1.55E-06	0.000
Cadmium Compounds	7440-43-9	3.21E-04	3.21E-04	3.85E-04	3.85E-04	1.42E-04	1.42E-04	1.42E-04	0.002
Chromium Compounds	7440-47-3	4.09E-04	4.09E-04	4.91E-04	4.91E-04	1.80E-04	1.80E-04	1.80E-04	0.002
Cobalt Compounds	7440-48-4	2.45E-05	2.45E-05	2.94E-05	2.94E-05	1.08E-05	1.08E-05	1.08E-05	0.000
Cyanide Compounds	57-12-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
Glycol ethers	Glycol Ethe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
Lead Compounds	0								-
Manganese Compounds	7439-96-5								-
Mercury Compounds	7439-97-6	7.59E-05	7.59E-05	9.11E-05	9.11E-05	3.35E-05	3.35E-05	3.35E-05	0.000
Nickel Compounds	7440-02-0	6.13E-04	6.13E-04	7.36E-04	7.36E-04	2.71E-04	2.71E-04	2.71E-04	0.004
Selenium Compounds	7782-49-2	7.01E-06	7.01E-06	8.41E-06	8.41E-06	3.09E-06	3.09E-06	3.09E-06	0.000
Polycyclic Organic Matter (POM)		1.30E-05	1.30E-05	1.56E-05	1.56E-05	5.75E-06	5.75E-06	5.75E-06	0.000
TOTAL HAPS		0.55	0.55	0.66	0.66	0.24	0.24	0.24	3.15

Emission Source		
Description		Unit ID
Kiln 1		

Fuel		Natural Gas
Maximum Heat Input		68.00 MMBtu/hr
Hourly Rate		0.066667 MMft <sup>3</sup> /hr
Annual Rate		584.0 MMft <sup>3</sup> /yr
Heating Value		1,020 Btu/ft <sup>3</sup>
Annual Operation		8,760 hr/yr

2

HAP Pollutant	Cas #	Kiln 1		
		Factor lb/10 <sup>6</sup> ft <sup>3</sup>	Potential Emissions lbs/hr	TPY
Acenaphthene	83-32-9	1.80E-06	1.20E-07	5.26E-07
Acenaphthylene	208-96-8	1.80E-06	1.20E-07	5.26E-07
Acetaldehyde	75-07-0			
Acetamide	60-35-5			
Acetonitrile	75-05-8			
Acetophenone	98-86-2			
2-Acetylaminofluorene	53-96-3			
Acrolein	107-02-8			
Acrylamide	79-06-1			
Acrylic acid	79-10-7			
Acrylonitrile	107-13-1			
Allyl chloride	107-05-1			
4-Aminobiphenyl	92-67-1			
Aniline	62-53-3			
o-Anisidine (2-Methoxyaniline)	90-04-0			
Anthracene	120-12-7	2.40E-06	1.60E-07	7.01E-07
Asbestos	1332-21-4			
Benz(a)anthracene	56-55-3	1.80E-06	1.20E-07	5.26E-07
Benzene	71-43-2	2.10E-03	1.40E-04	6.13E-04
Benzidine	92-87-5			
Benzo(a)anthracene	56-55-3			
benzo(a) pyrene	50-32-8	1.20E-06	8.00E-08	3.50E-07
Benzo(b) flouranthene	205-911-9	1.80E-06	1.20E-07	5.26E-07
Benzo(b,k)fluoranthene	207-08-9	1.80E-06	1.20E-07	5.26E-07
Benzo(g,h,l)perylene	191-24-2	1.20E-06	8.00E-08	3.50E-07
Benzotrichloride	98-07-7			
Benzyl chloride	100-44-7			
Biphenyl	92-52-4			
Bis(2-ethylhexyl)phthalate (DEHP)	117-81-7			
Bis(chloromethyl)ether	542-88-1			
Bromoform	75-25-2			
Bromomethane	74-83-9			
1,3-Butadiene	106-99-0			
Calcium cyanamide	156-62-7			
Caprolactam	105-60-2			
Captan	133-06-2			
Carbaryl	63-25-2			
Carbon disulfide	75-15-0			
Carbon tetrachloride	56-23-5			
Carbonyl sulfide	463-58-1			
Catechol	120-80-9			

Chloramben	133-90-4			
Chlordane	57-74-9			
Chlorine	7782-50-5			
Chloroacetic acid	79-11-8			
2-Chloroacetophenone	532-27-4			
Chlorobenzene	108-90-7			
Chlorobenzilate	510-15-6			
Chloroform	67-66-3			
Chloromethane	74-87-3			
Chloromethyl methyl ether	107-30-2			
Chloroprene	126-99-8			
Chrysene	218-01-9	1.80E-06	1.20E-07	5.26E-07
Cresols/Cresylic acid (isomers and m	1319-77-3			
o-Cresol	95-48-7			
m-Cresol	108-39-4			
p-Cresol	106-44-5			
Cumene	98-82-8			
Cyanide	74-90-8			
2,4-D, salts and esters	94-75-7			
DDE (1,1-Dichloro-2,2-bis(p-chloroph	72-55-9			
DDE	72-55-9			
Decachlorobiphenyl	2051-24-3			
Diazomethane	334-88-3			
Dibenzo(a,h)anthracene	53-70-3	1.20E-06	8.00E-08	3.50E-07
Dibenzofurans	132-64-9			
1,2-Dibromo-3-chloropropane	96-12-8			
Dibutylphthalate	84-74-9			
Dichlorobenzene	95-50-1	1.20E-03	8.00E-05	3.50E-04
1,4-Dichlorobenzene(p)	106-46-7			
3,3-Dichlorobenzidene	91-94-1			
Dichlorobiphenyl	2050-68-2			
1,2-Dichloroethane	107-06-2			
Dichloroethyl ether (Bis(2-chloroethyl	111-44-4			
1,2-Dichloropropane	78-87-5			
1,3-Dichloropropene	542-75-6			
Dichlorvos	62-73-7			
Diethanolamine	111-42-2			
Diethyl sulfate	64-67-5			
3,3-Dimethoxybenzidine	119-90-4			
Dimethyl aminoazobenzene	60-11-7			
3,3'-Dimethyl benzidine	119-93-7			
Dimethyl phthalate	131-11-3			
Dimethyl carbamoyl chloride	79-44-7			
Dimethyl formamide	68-12-2			
1,1-Dimethyl hydrazine	57-14-7			
Dimethyl phthalate	131-11-3			
Dimethyl sulfate	77-78-1			
N,N-Dimethylaniline	121-69-7			
7,12-Dimethylbenz(a)anthracene	57-97-6	1.60E-05	1.07E-06	4.67E-06
N,N-Dimethylformamide	68-12-2			
4,6-Dinitro-o-cresol, and salts	534-52-1			
2,4-Dinitrophenol	51-28-5			
2,4-Dinitrotoluene	121-14-2			
1,4-Dioxane (1,4-Diethyleneoxide)	123-91-1			
1,2-Diphenylhydrazine	122-66-7			
Epichlorohydrin (1-Chloro-2,3-epoxypr	106-89-8			
1,2-Epoxybutane	106-88-7			
Ethyl acrylate	140-88-5			
Ethylbenzene	100-41-4			
Ethyl carbamate (Urethane)	51-79-6			
Ethyl chloride	75-00-3			
Ethylene dibromide	106-93-4			
Ethylene dichloride	107-06-2			

Ethylene imine (Aziridine)	151-56-4			
Ethylene glycol	107-21-1			
Ethylene oxide	75-21-8			
Ethylene thiourea	96-45-7			
Ethylidene dichloride (1,1-Dichloroeth	75-34-3			
Fluoranthene	206-44-0	3.00E-06	2.00E-07	8.76E-07
Fluorene	86-73-7	2.80E-06	1.87E-07	8.18E-07
Formaldehyde	50-00-0	7.50E-02	5.00E-03	2.19E-02
Formaldehyde (HCOH)	50-00-0			
Heptachlor	76-44-8			
Heptachlorobiphenyl	88655-71-2			
Hexachlorobenzene	118-74-1			
Hexachlorobutadiene	87-68-3			
Hexachlorocyclopentadiene	77-47-4			
Hexachloroethane	67-72-1			
Hexamethylene-1,6-diisocyanate	822-06-0			
Hexamethylphosphoramide	680-31-9			
Hexane	110-54-3	1.80E+00	1.20E-01	5.26E-01
Hydrazine	302-01-2			
Hydrochloric acid (Hydrogen chloride)	7647-01-0			
Hydrogen fluoride (Hydrofluoric acid)	7664-39-3			
Hydrogen sulfide	7783-06-4			
Hydroquinone	123-31-9			
Indo(1,2,3-cd)pyrene	193-39-5	1.80E-06	1.20E-07	5.26E-07
Isophorone	78-59-1			
Lindane (all isomers)	58-89-9			
Maleic anhydride	108-31-6			
Methanol	67-56-1			
Methoxychlor	72-43-5			
Methyl bromide (Bromomethane)	74-83-9			
Methyl chloride (Chloromethane)	74-87-3			
Methyl chloroform (1,1,1-Trichloroeth	71-55-6			
Methyl ethyl ketone (2-Butanone)	78-93-3			
Methyl iodide (Iodomethane)	74-88-4			
Methyl isobutyl ketone (Hexone)	108-10-1			
Methyl isocyanate	624-83-9			
Methyl hydrazine	60-34-4			
Methyl methacrylate	80-62-6			
Methyl tert butyl ether	1634-04-4			
4,4'-Methylene bis(2-chloroaniline)	101-14-4			
Methylene chloride	75-09-2			
4,4'-Methylenedianiline	101-77-9			
Methylene diphenyl diisocyanate (MDI)	101-68-8			
3-Methylchloranthrene	56-49-5	1.80E-06	1.20E-07	5.26E-07
2-Methylnaphthylene	91-57-6	2.40E-05	1.60E-06	7.01E-06
Naphthalene	91-20-3	6.10E-04	4.07E-05	1.78E-04
Nitrobenzene	98-95-3			
4-Nitrobiphenyl	92-93-3			
4-Nitrophenol	100-02-7			
2-Nitropropane	79-46-9			
N-Nitroso-N-methylurea	684-93-5			
N-Nitrosodimethylamine	62-75-9			
N-Nitrosomorpholine	59-89-2			
Parathion	56-38-2			
Pentachloronitrobenzene (Quintoben	82-68-8			
Pentachlorophenol	87-86-5			
Perylene	198-55-0			
Phenanathrene	85-01-8	1.70E-05	1.13E-06	4.96E-06
Phenol	108-95-2			
p-Phenylenediamine	106-50-3			
Phosgene	75-44-5			
Phosphine	7803-51-2			
Phosphorus	7723-14-0			

Phthalic anhydride	85-44-9			
Polychlorinated biphenyls (Aroclors)	1336-36-3			
1,3-Propane sultone	1120-71-4			
beta-Propiolactone	57-57-8			
Propionaldehyde	123-38-6			
Propoxur (Baygon)	114-26-1			
Propylene dichloride (1,2-Dichloropropane)	78-87-5			
Propylene oxide	75-56-9			
1,2-Propylenimine (2-Methyl aziridine)	75-55-8			
Pyrene	129-00-0	5.00E-06	3.33E-07	1.46E-06
Quinoline	91-22-5			
Quinone (p-Benzoquinone)	106-51-4			
Styrene	100-42-5			
Styrene oxide	96-09-3			
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6			
1,1,1,2-Tetrachloroethane	79-34-5			
Tetrachloroethylene (Perchloroethylene)	127-18-4			
Titanium tetrachloride	7550-45-0			
Toluene	108-88-3	3.40E-03	2.27E-04	9.93E-04
2,4-Toluene diamine	95-80-7			
2,4-Toluene diisocyanate	584-84-9			
o-Toluidine (2-Methylaniline)	95-53-4			
Toxaphene (chlorinated camphene)	8001-35-2			
1,2,4-Trichlorobenzene	120-82-1			
1,1,2-Trichloroethane	79-00-5			
Trichloroethylene	79-01-6			
2,4,5-Trichlorophenol	95-95-4			
2,4,6-Trichlorophenol	88-06-2			
Triethylamine	121-44-8			
Trifluralin	1582-09-8			
2,2,4-Trimethylpentane	540-84-1			
Vinyl acetate	108-05-4			
Vinyl bromide	593-60-2			
Vinyl chloride	75-01-4			
Vinylidene chloride (1,1-Dichloroethylene)	75-35-4			
Xylenes	1330-20-7			
o-Xylene	95-47-6			
m-Xylenes	108-38-3			
p-Xylenes	106-42-3			
HAPs - Metals				
Antimony Compounds	7440-36-0			
Arsenic Compounds	7440-38-2	2.00E-04	1.33E-05	5.84E-05
Beryllium Compounds	7440-41-7	1.20E-05	8.00E-07	3.50E-06
Cadmium Compounds	7440-43-9	1.10E-03	7.33E-05	3.21E-04
Chromium Compounds	7440-47-3	1.40E-03	9.33E-05	4.09E-04
Cobalt Compounds	7440-48-4	8.40E-05	5.60E-06	2.45E-05
Cyanide Compounds	57-12-5	0.00E+00	0.00E+00	0.00E+00
Glycol ethers	Glycol Ethers	0.00E+00	0.00E+00	0.00E+00
Lead Compounds	74-82-8			
Manganese Compounds	7439-96-5			
Mercury Compounds	7439-97-6	2.60E-04	1.73E-05	7.59E-05
Nickel Compounds	7440-02-0	2.10E-03	1.40E-04	6.13E-04
Selenium Compounds	7782-49-2	2.40E-05	1.60E-06	7.01E-06
Polycyclic Organic Matter (POM)	POM	4.46E-05	2.97E-06	1.30E-05
HAPS SUMMARY				
TOTAL HAPS	-		0.13	0.55
Largest Single HAP:				
		Hexane	1.20E-01	5.26E-01

Notes:

[1] Emission factors for natural gas are from AP-42 Section 1.4, Tables 1.4-3 and 1.4-4 (07/98).

Emission Source		
Description		Unit ID
Kiln 2		

Fuel		Natural Gas
Maximum Heat Input		68.00 MMBtu/hr
Hourly Rate		0.066667 MMft <sup>3</sup> /hr
Annual Rate		584.0 MMft <sup>3</sup> /yr
Heating Value		1,020 Btu/ft <sup>3</sup>
Annual Operation		8,760 hr/yr

2

HAP Pollutant	Cas #	Kiln 2		
		Factor lb/10 <sup>3</sup> ft <sup>3</sup>	Potential Emissions lbs/hr	TPY
Acenaphthene	83-32-9	1.80E-06	1.20E-07	5.26E-07
Acenaphthylene	208-96-8	1.80E-06	1.20E-07	5.26E-07
Acetaldehyde	75-07-0			
Acetamide	60-35-5			
Acetonitrile	75-05-8			
Acetophenone	98-86-2			
2-Acetylaminofluorene	53-96-3			
Acrolein	107-02-8			
Acrylamide	79-06-1			
Acrylic acid	79-10-7			
Acrylonitrile	107-13-1			
Allyl chloride	107-05-1			
4-Aminobiphenyl	92-67-1			
Aniline	62-53-3			
o-Anisidine (2-Methoxyaniline)	90-04-0			
Anthracene	120-12-7	2.40E-06	1.60E-07	7.01E-07
Asbestos	1332-21-4			
Benz(a)anthracene	56-55-3	1.80E-06	1.20E-07	5.26E-07
Benzene	71-43-2	2.10E-03	1.40E-04	6.13E-04
Benzidine	92-87-5			
Benzo(a)anthracene	56-55-3			
benzo(a) pyrene	50-32-8	1.20E-06	8.00E-08	3.50E-07
Benzo(b) fluoranthene	205-911-9	1.80E-06	1.20E-07	5.26E-07
Benzo(b,k)fluoranthene	207-08-9	1.80E-06	1.20E-07	5.26E-07
Benzo(g,h,i)perylene	191-24-2	1.20E-06	8.00E-08	3.50E-07
Benzotrichloride	98-07-7			
Benzyl chloride	100-44-7			
Biphenyl	92-52-4			
Bis(2-ethylhexyl)phthalate (DEHP)	117-81-7			
Bis(chloromethyl)ether	542-88-1			
Bromoform	75-25-2			
Bromomethane	74-83-9			
1,3-Butadiene	106-99-0			
Calcium cyanamide	156-62-7			
Caprolactam	105-60-2			
Captan	133-06-2			
Carbaryl	63-25-2			
Carbon disulfide	75-15-0			
Carbon tetrachloride	56-23-5			
Carbonyl sulfide	463-58-1			
Catechol	120-80-9			

Chloramben	133-90-4			
Chlordane	57-74-9			
Chlorine	7782-50-5			
Chloroacetic acid	79-11-8			
2-Chloroacetophenone	532-27-4			
Chlorobenzene	108-90-7			
Chlorobenzilate	510-15-6			
Chloroform	67-66-3			
Chloromethane	74-87-3			
Chloromethyl methyl ether	107-30-2			
Chloroprene	126-99-8			
Chrysene	218-01-9	1.80E-06	1.20E-07	5.26E-07
Cresols/Cresylic acid (isomers and m	1319-77-3			
o-Cresol	95-48-7			
m-Cresol	108-39-4			
p-Cresol	106-44-5			
Cumene	98-82-8			
Cyanide	74-90-8			
2,4-D, salts and esters	94-75-7			
DDE (1,1-Dichloro-2,2-bis(p-chloroph	72-55-9			
DDE	72-55-9			
Decachlorobiphenyl	2051-24-3			
Diazomethane	334-88-3			
Dibenzo(a,h)anthracene	53-70-3	1.20E-06	8.00E-08	3.50E-07
Dibenzofurans	132-64-9			
1,2-Dibromo-3-chloropropane	96-12-8			
Dibutylphthalate	84-74-9			
Dichlorobenzene	95-50-1	1.20E-03	8.00E-05	3.50E-04
1,4-Dichlorobenzene(p)	106-46-7			
3,3-Dichlorobenzidene	91-94-1			
Dichlorobiphenyl	2050-68-2			
1,2-Dichloroethane	107-06-2			
Dichloroethyl ether (Bis(2-chloroethyl	111-44-4			
1,2-Dichloropropane	78-87-5			
1,3-Dichloropropene	542-75-6			
Dichlorvos	62-73-7			
Diethanolamine	111-42-2			
Diethyl sulfate	64-67-5			
3,3-Dimethoxybenzidine	119-90-4			
Dimethyl aminoazobenzene	60-11-7			
3,3'-Dimethyl benzidine	119-93-7			
Dimethyl phthalate	131-11-3			
Dimethyl carbamoyl chloride	79-44-7			
Dimethyl formamide	68-12-2			
1,1-Dimethyl hydrazine	57-14-7			
Dimethyl phthalate	131-11-3			
Dimethyl sulfate	77-78-1			
N,N-Dimethylaniline	121-69-7			
7,12-Dimethylbenz(a)anthracene	57-97-6	1.60E-05	1.07E-06	4.67E-06
N,N-Dimethylformamide	68-12-2			
4,6-Dinitro-o-cresol, and salts	534-52-1			
2,4-Dinitrophenol	51-28-5			
2,4-Dinitrotoluene	121-14-2			
1,4-Dioxane (1,4-Diethyleneoxide)	123-91-1			
1,2-Diphenylhydrazine	122-66-7			
Epichlorohydrin (1-Chloro-2,3-epoxy	106-89-8			
1,2-Epoxybutane	106-88-7			
Ethyl acrylate	140-88-5			
Ethylbenzene	100-41-4			
Ethyl carbamate (Urethane)	51-79-6			
Ethyl chloride	75-00-3			
Ethylene dibromide	106-93-4			
Ethylene dichloride	107-06-2			

Ethylene imine (Aziridine)	151-56-4			
Ethylene glycol	107-21-1			
Ethylene oxide	75-21-8			
Ethylene thiourea	96-45-7			
Ethylidene dichloride (1,1-Dichloroethane)	75-34-3			
Fluoranthene	206-44-0	3.00E-06	2.00E-07	8.76E-07
Fluorene	86-73-7	2.80E-06	1.87E-07	8.18E-07
Formaldehyde	50-00-0	7.50E-02	5.00E-03	2.19E-02
Formaldehyde (HCOH)	50-00-0			
Heptachlor	76-44-8			
Heptachlorobiphenyl	88655-71-2			
Hexachlorobenzene	118-74-1			
Hexachlorobutadiene	87-68-3			
Hexachlorocyclopentadiene	77-47-4			
Hexachloroethane	67-72-1			
Hexamethylene-1,6-diisocyanate	822-06-0			
Hexamethylphosphoramide	680-31-9			
Hexane	110-54-3	1.80E+00	1.20E-01	5.26E-01
Hydrazine	302-01-2			
Hydrochloric acid (Hydrogen chloride)	7647-01-0			
Hydrogen fluoride (Hydrofluoric acid)	7664-39-3			
Hydrogen sulfide	7783-06-4			
Hydroquinone	123-31-9			
Indo(1,2,3-cd)pyrene	193-39-5	1.80E-06	1.20E-07	5.26E-07
Isophorone	78-59-1			
Lindane (all isomers)	58-89-9			
Maleic anhydride	108-31-6			
Methanol	67-56-1			
Methoxychlor	72-43-5			
Methyl bromide (Bromomethane)	74-83-9			
Methyl chloride (Chloromethane)	74-87-3			
Methyl chloroform (1,1,1-Trichloroethane)	71-55-6			
Methyl ethyl ketone (2-Butanone)	78-93-3			
Methyl iodide (Iodomethane)	74-88-4			
Methyl isobutyl ketone (Hexone)	108-10-1			
Methyl isocyanate	624-83-9			
Methyl hydrazine	60-34-4			
Methyl methacrylate	80-62-6			
Methyl tert butyl ether	1634-04-4			
4,4'-Methylene bis(2-chloroaniline)	101-14-4			
Methylene chloride	75-09-2			
4,4'-Methylenedianiline	101-77-9			
Methylene diphenyl diisocyanate (MDI)	101-68-8			
3-Methylchloranthrene	56-49-5	1.80E-06	1.20E-07	5.26E-07
2-Methylnaphthylene	91-57-6	2.40E-05	1.60E-06	7.01E-06
Naphthalene	91-20-3	6.10E-04	4.07E-05	1.78E-04
Nitrobenzene	98-95-3			
4-Nitrobiphenyl	92-93-3			
4-Nitrophenol	100-02-7			
2-Nitropropane	79-46-9			
N-Nitroso-N-methylurea	684-93-5			
N-Nitrosodimethylamine	62-75-9			
N-Nitrosomorpholine	59-89-2			
Parathion	56-38-2			
Pentachloronitrobenzene (Quintobenzene)	82-68-8			
Pentachlorophenol	87-86-5			
Perylene	198-55-0			
Phenanathrene	85-01-8	1.70E-05	1.13E-06	4.96E-06
Phenol	108-95-2			
p-Phenylenediamine	106-50-3			
Phosgene	75-44-5			
Phosphine	7803-51-2			
Phosphorus	7723-14-0			

Phthalic anhydride	85-44-9			
Polychlorinated biphenyls (Aroclors)	1336-36-3			
1,3-Propane sultone	1120-71-4			
beta-Propiolactone	57-57-8			
Propionaldehyde	123-38-6			
Propoxur (Baygon)	114-26-1			
Propylene dichloride (1,2-Dichloropropane)	78-87-5			
Propylene oxide	75-56-9			
1,2-Propylenimine (2-Methyl aziridine)	75-55-8			
Pyrene	129-00-0	5.00E-06	3.33E-07	1.46E-06
Quinoline	91-22-5			
Quinone (p-Benzoquinone)	106-51-4			
Styrene	100-42-5			
Styrene oxide	96-09-3			
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6			
1,1,2,2-Tetrachloroethane	79-34-5			
Tetrachloroethylene (Perchloroethylene)	127-18-4			
Titanium tetrachloride	7550-45-0			
Toluene	108-88-3	3.40E-03	2.27E-04	9.93E-04
2,4-Toluene diamine	95-80-7			
2,4-Toluene diisocyanate	584-84-9			
o-Toluidine (2-Methylaniline)	95-53-4			
Toxaphene (chlorinated camphene)	8001-35-2			
1,2,4-Trichlorobenzene	120-82-1			
1,1,2-Trichloroethane	79-00-5			
Trichloroethylene	79-01-6			
2,4,5-Trichlorophenol	95-95-4			
2,4,6-Trichlorophenol	88-06-2			
Triethylamine	121-44-8			
Trifluralin	1582-09-8			
2,2,4-Trimethylpentane	540-84-1			
Vinyl acetate	108-05-4			
Vinyl bromide	593-60-2			
Vinyl chloride	75-01-4			
Vinylidene chloride (1,1-Dichloroethylene)	75-35-4			
Xylenes	1330-20-7			
o-Xylene	95-47-6			
m-Xylenes	108-38-3			
p-Xylenes	106-42-3			
HAPs - Metals				
Antimony Compounds	7440-36-0			
Arsenic Compounds	7440-38-2	2.00E-04	1.33E-05	5.84E-05
Beryllium Compounds	7440-41-7	1.20E-05	8.00E-07	3.50E-06
Cadmium Compounds	7440-43-9	1.10E-03	7.33E-05	3.21E-04
Chromium Compounds	7440-47-3	1.40E-03	9.33E-05	4.09E-04
Cobalt Compounds	7440-48-4	8.40E-05	5.60E-06	2.45E-05
Cyanide Compounds	57-12-5	0.00E+00	0.00E+00	0.00E+00
Glycol ethers	Glycol Ethers	0.00E+00	0.00E+00	0.00E+00
Lead Compounds	74-82-8			
Manganese Compounds	7439-96-5			
Mercury Compounds	7439-97-6	2.60E-04	1.73E-05	7.59E-05
Nickel Compounds	7440-02-0	2.10E-03	1.40E-04	6.13E-04
Selenium Compounds	7782-49-2	2.40E-05	1.60E-06	7.01E-06
Polycyclic Organic Matter (POM)				
Polycyclic Organic Matter (POM)	POM	4.46E-05	2.97E-06	1.30E-05
HAPS SUMMARY				
TOTAL HAPS				
			0.13	0.55
Largest Single HAP:				
		Hexane	1.20E-01	5.26E-01

Notes:

[1] Emission factors for natural gas are from AP-42 Section 1.4, Tables 1.4-3 and 1.4-4 (07/98).

Emission Source		
Description		Unit ID
Kiln 3		

Fuel		Natural Gas
Maximum Heat Input		81.60 MMBtu/hr
Hourly Rate		0.080000 MMft <sup>3</sup> /hr
Annual Rate		700.8 MMft <sup>3</sup> /yr
Heating Value		1,020 Btu/ft <sup>3</sup>
Annual Operation		8,760 hr/yr

2

HAP Pollutant	Cas #	Kiln 3		
		Factor lb/10 <sup>9</sup> ft <sup>3</sup>	Potential Emissions lbs/hr	TPY
Acenaphthene	83-32-9	1.80E-06	1.44E-07	6.31E-07
Acenaphthylene	208-96-8	1.80E-06	1.44E-07	6.31E-07
Acetaldehyde	75-07-0			
Acetamide	60-35-5			
Acetonitrile	75-05-8			
Acetophenone	98-86-2			
2-Acetylaminofluorene	53-96-3			
Acrolein	107-02-8			
Acrylamide	79-06-1			
Acrylic acid	79-10-7			
Acrylonitrile	107-13-1			
Allyl chloride	107-05-1			
4-Aminobiphenyl	92-67-1			
Aniline	62-53-3			
o-Anisidine (2-Methoxyaniline)	90-04-0			
Anthracene	120-12-7	2.40E-06	1.92E-07	8.41E-07
Asbestos	1332-21-4			
Benz(a)anthracene	56-55-3	1.80E-06	1.44E-07	6.31E-07
Benzene	71-43-2	2.10E-03	1.68E-04	7.36E-04
Benzo(a)anthracene	56-55-3			
benzo(a) pyrene	50-32-8	1.20E-06	9.60E-08	4.20E-07
Benzo(b) flouranthene	205-911-9	1.80E-06	1.44E-07	6.31E-07
Benzo(b,k)fluoranthene	207-08-9	1.80E-06	1.44E-07	6.31E-07
Benzo(g,h,i)perylene	191-24-2	1.20E-06	9.60E-08	4.20E-07
Benzotrichloride	98-07-7			
Benzyl chloride	100-44-7			
Biphenyl	92-52-4			
Bis(2-ethylhexyl)phthalate (DEHP)	117-81-7			
Bis(chloromethyl)ether	542-88-1			
Bromoform	75-25-2			
Bromomethane	74-83-9			
1,3-Butadiene	106-99-0			
Calcium cyanamide	156-62-7			
Caprolactam	105-60-2			
Captan	133-06-2			
Carbaryl	63-25-2			
Carbon disulfide	75-15-0			
Carbon tetrachloride	56-23-5			
Carbonyl sulfide	463-58-1			
Catechol	120-80-9			

Chloramben	133-90-4			
Chlordane	57-74-9			
Chlorine	7782-50-5			
Chloroacetic acid	79-11-8			
2-Chloroacetophenone	532-27-4			
Chlorobenzene	108-90-7			
Chlorobenzilate	510-15-6			
Chloroform	67-66-3			
Chloromethane	74-87-3			
Chloromethyl methyl ether	107-30-2			
Chloroprene	126-99-8			
Chrysene	218-01-9	1.80E-06	1.44E-07	6.31E-07
Cresols/Cresylic acid (isomers and n	1319-77-3			
o-Cresol	95-48-7			
m-Cresol	108-39-4			
p-Cresol	106-44-5			
Cumene	98-82-8			
Cyanide	74-90-8			
2,4-D, salts and esters	94-75-7			
DDE (1,1-Dichloro-2,2-bis(p-chloroph	72-55-9			
DDE	72-55-9			
Decachlorobiphenyl	2051-24-3			
Diazomethane	334-88-3			
Dibenzo(a,h)anthracene	53-70-3	1.20E-06	9.60E-08	4.20E-07
Dibenzofurans	132-64-9			
1,2-Dibromo-3-chloropropane	96-12-8			
Dibutylphthalate	84-74-9			
Dichlorobenzene	95-50-1	1.20E-03	9.60E-05	4.20E-04
1,4-Dichlorobenzene(p)	106-46-7			
3,3-Dichlorobenzidene	91-94-1			
Dichlorobiphenyl	2050-68-2			
1,2-Dichloroethane	107-06-2			
Dichloroethyl ether (Bis(2-chloroethyl	111-44-4			
1,2-Dichloropropane	78-87-5			
1,3-Dichloropropene	542-75-6			
Dichlorvos	62-73-7			
Diethanolamine	111-42-2			
Diethyl sulfate	64-67-5			
3,3-Dimethoxybenzidine	119-90-4			
Dimethyl aminoazobenzene	60-11-7			
3,3'-Dimethyl benzidine	119-93-7			
Dimethyl phthalate	131-11-3			
Dimethyl carbamoyl chloride	79-44-7			
Dimethyl formamide	68-12-2			
1,1-Dimethyl hydrazine	57-14-7			
Dimethyl phthalate	131-11-3			
Dimethyl sulfate	77-78-1			
N,N-Dimethylaniline	121-69-7			
7,12-Dimethylbenz(a)anthracene	57-97-6	1.60E-05	1.28E-06	5.61E-06
N,N-Dimethylformamide	68-12-2			
4,6-Dinitro-o-cresol, and salts	534-52-1			
2,4-Dinitrophenol	51-28-5			
2,4-Dinitrotoluene	121-14-2			
1,4-Dioxane (1,4-Diethyleneoxide)	123-91-1			
1,2-Diphenylhydrazine	122-66-7			
Epichlorohydrin (1-Chloro-2,3-epoxypr	106-89-8			
1,2-Epoxybutane	106-88-7			
Ethyl acrylate	140-88-5			
Ethylbenzene	100-41-4			
Ethyl carbamate (Urethane)	51-79-6			
Ethyl chloride	75-00-3			
Ethylene dibromide	106-93-4			
Ethylene dichloride	107-06-2			

Ethylene imine (Aziridine)	151-56-4			
Ethylene glycol	107-21-1			
Ethylene oxide	75-21-8			
Ethylene thiourea	96-45-7			
Ethylidene dichloride (1,1-Dichloroethane)	75-34-3			
Fluoranthene	206-44-0	3.00E-06	2.40E-07	1.05E-06
Fluorene	86-73-7	2.80E-06	2.24E-07	9.81E-07
Formaldehyde	50-00-0	7.50E-02	6.00E-03	2.63E-02
Formaldehyde (HCOH)	50-00-0			
Heptachlor	76-44-8			
Heptachlorobiphenyl	88655-71-2			
Hexachlorobenzene	118-74-1			
Hexachlorobutadiene	87-68-3			
Hexachlorocyclopentadiene	77-47-4			
Hexachloroethane	67-72-1			
Hexamethylene-1,6-diisocyanate	822-06-0			
Hexamethylphosphoramide	680-31-9			
Hexane	110-54-3	1.80E+00	1.44E-01	6.31E-01
Hydrazine	302-01-2			
Hydrochloric acid (Hydrogen chloride)	7647-01-0			
Hydrogen fluoride (Hydrofluoric acid)	7664-39-3			
Hydrogen sulfide	7783-06-4			
Hydroquinone	123-31-9			
Indo(1,2,3-cd)pyrene	193-39-5	1.80E-06	1.44E-07	6.31E-07
Isophorone	78-59-1			
Lindane (all isomers)	58-89-9			
Maleic anhydride	108-31-6			
Methanol	67-56-1			
Methoxychlor	72-43-5			
Methyl bromide (Bromomethane)	74-83-9			
Methyl chloride (Chloromethane)	74-87-3			
Methyl chloroform (1,1,1-Trichloroethane)	71-55-6			
Methyl ethyl ketone (2-Butanone)	78-93-3			
Methyl iodide (Iodomethane)	74-88-4			
Methyl isobutyl ketone (Hexone)	108-10-1			
Methyl isocyanate	624-83-9			
Methyl hydrazine	60-34-4			
Methyl methacrylate	80-62-6			
Methyl tert butyl ether	1634-04-4			
4,4'-Methylene bis(2-chloroaniline)	101-14-4			
Methylene chloride	75-09-2			
4,4'-Methylenedianiline	101-77-9			
Methylene diphenyl diisocyanate (MDI)	101-68-8			
3-Methylchloranthrene	56-49-5	1.80E-06	1.44E-07	6.31E-07
2-Methylnaphthylene	91-57-6	2.40E-05	1.92E-06	8.41E-06
Naphthalene	91-20-3	6.10E-04	4.88E-05	2.14E-04
Nitrobenzene	98-95-3			
4-Nitrobiphenyl	92-93-3			
4-Nitrophenol	100-02-7			
2-Nitropropane	79-46-9			
N-Nitroso-N-methylurea	684-93-5			
N-Nitrosodimethylamine	62-75-9			
N-Nitrosomorpholine	59-89-2			
Parathion	56-38-2			
Pentachloronitrobenzene (Quintobenzene)	82-68-8			
Pentachlorophenol	87-86-5			
Perylene	198-55-0			
Phenanathrene	85-01-8	1.70E-05	1.36E-06	5.96E-06
Phenol	108-95-2			
p-Phenylenediamine	106-50-3			
Phosgene	75-44-5			
Phosphine	7803-51-2			
Phosphorus	7723-14-0			

Phthalic anhydride	85-44-9			
Polychlorinated biphenyls (Aroclors)	1336-36-3			
1,3-Propane sultone	1120-71-4			
beta-Propiolactone	57-57-8			
Propionaldehyde	123-38-6			
Propoxur (Baygon)	114-26-1			
Propylene dichloride (1,2-Dichloropropane)	78-87-5			
Propylene oxide	75-56-9			
1,2-Propylenimine (2-Methyl aziridine)	75-55-8			
Pyrene	129-00-0	5.00E-06	4.00E-07	1.75E-06
Quinoline	91-22-5			
Quinone (p-Benzoquinone)	106-51-4			
Styrene	100-42-5			
Styrene oxide	96-09-3			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6			
1,1,2,2-Tetrachloroethane	79-34-5			
Tetrachloroethylene (Perchloroethylene)	127-18-4			
Titanium tetrachloride	7550-45-0			
Toluene	108-88-3	3.40E-03	2.72E-04	1.19E-03
2,4-Toluene diamine	95-80-7			
2,4-Toluene diisocyanate	584-84-9			
o-Toluidine (2-Methylaniline)	95-53-4			
Toxaphene (chlorinated camphene)	8001-35-2			
1,2,4-Trichlorobenzene	120-82-1			
1,1,2-Trichloroethane	79-00-5			
Trichloroethylene	79-01-6			
2,4,5-Trichlorophenol	95-95-4			
2,4,6-Trichlorophenol	88-06-2			
Triethylamine	121-44-8			
Trifluralin	1582-09-8			
2,2,4-Trimethylpentane	540-84-1			
Vinyl acetate	108-05-4			
Vinyl bromide	593-60-2			
Vinyl chloride	75-01-4			
Vinylidene chloride (1,1-Dichloroethylene)	75-35-4			
Xylenes	1330-20-7			
o-Xylene	95-47-6			
m-Xylenes	108-38-3			
p-Xylenes	106-42-3			
HAPs - Metals				
Antimony Compounds	7440-36-0			
Arsenic Compounds	7440-38-2	2.00E-04	1.60E-05	7.01E-05
Beryllium Compounds	7440-41-7	1.20E-05	9.60E-07	4.20E-06
Cadmium Compounds	7440-43-9	1.10E-03	8.80E-05	3.85E-04
Chromium Compounds	7440-47-3	1.40E-03	1.12E-04	4.91E-04
Cobalt Compounds	7440-48-4	8.40E-05	6.72E-06	2.94E-05
Cyanide Compounds	57-12-5	0.00E+00	0.00E+00	0.00E+00
Glycol ethers	Glycol Ethers	0.00E+00	0.00E+00	0.00E+00
Lead Compounds	74-82-8			
Manganese Compounds	7439-96-5			
Mercury Compounds	7439-97-6	2.60E-04	2.08E-05	9.11E-05
Nickel Compounds	7440-02-0	2.10E-03	1.68E-04	7.36E-04
Selenium Compounds	7782-49-2	2.40E-05	1.92E-06	8.41E-06
Polycyclic Organic Matter (POM)	POM	4.46E-05	3.57E-06	1.56E-05
HAPS SUMMARY				
TOTAL HAPS	-		0.15	0.66
Largest Single HAP:				
		Hexane	1.44E-01	6.31E-01

Notes:

[1] Emission factors for natural gas are from AP-42 Section 1.4, Tables 1.4-3 and 1.4-4 (07/98).

Emission Source		
Description		Unit ID
Kiln 4		

Fuel		Natural Gas
Maximum Heat Input		81.60 MMBtu/hr
Hourly Rate		0.080000 MMft <sup>3</sup> /hr
Annual Rate		700.8 MMft <sup>3</sup> /yr
Heating Value		1,020 Btu/ft <sup>3</sup>
Annual Operation		8,760 hr/yr

2

HAP Pollutant	Cas #	Kiln 4		
		Factor lb/10 <sup>3</sup> ft <sup>3</sup>	Potential Emissions lbs/hr	TPY
Acenaphthene	83-32-9	1.80E-06	1.44E-07	6.31E-07
Acenaphthylene	208-96-8	1.80E-06	1.44E-07	6.31E-07
Acetaldehyde	75-07-0			
Acetamide	60-35-5			
Acetonitrile	75-05-8			
Acetophenone	98-86-2			
2-Acetylaminofluorene	53-96-3			
Acrolein	107-02-8			
Acrylamide	79-06-1			
Acrylic acid	79-10-7			
Acrylonitrile	107-13-1			
Allyl chloride	107-05-1			
4-Aminobiphenyl	92-67-1			
Aniline	62-53-3			
o-Anisidine (2-Methoxyaniline)	90-04-0			
Anthracene	120-12-7	2.40E-06	1.92E-07	8.41E-07
Asbestos	1332-21-4			
Benz(a)anthracene	56-55-3	1.80E-06	1.44E-07	6.31E-07
Benzene	71-43-2	2.10E-03	1.68E-04	7.36E-04
Benzidine	92-87-5			
Benzo(a)anthracene	56-55-3			
benzo(a) pyrene	50-32-8	1.20E-06	9.60E-08	4.20E-07
Benzo(b) flouranthene	205-911-9	1.80E-06	1.44E-07	6.31E-07
Benzo(b,k)fluoranthene	207-08-9	1.80E-06	1.44E-07	6.31E-07
Benzo(g,h,l)perylene	191-24-2	1.20E-06	9.60E-08	4.20E-07
Benzotrichloride	98-07-7			
Benzyl chloride	100-44-7			
Biphenyl	92-52-4			
Bis(2-ethylhexyl)phthalate (DEHP)	117-81-7			
Bis(chloromethyl)ether	542-88-1			
Bromoform	75-25-2			
Bromomethane	74-83-9			
1,3-Butadiene	106-99-0			
Calcium cyanamide	156-62-7			
Caprolactam	105-60-2			
Captan	133-06-2			
Carbaryl	63-25-2			
Carbon disulfide	75-15-0			
Carbon tetrachloride	56-23-5			
Carbonyl sulfide	463-58-1			
Catechol	120-80-9			

Chloramben	133-90-4			
Chlordane	57-74-9			
Chlorine	7782-50-5			
Chloroacetic acid	79-11-8			
2-Chloroacetophenone	532-27-4			
Chlorobenzene	108-90-7			
Chlorobenzilate	510-15-6			
Chloroform	67-66-3			
Chloromethane	74-87-3			
Chloromethyl methyl ether	107-30-2			
Chloroprene	126-99-8			
Chrysene	218-01-9	1.80E-06	1.44E-07	6.31E-07
Cresols/Cresylic acid (isomers and m	1319-77-3			
o-Cresol	95-48-7			
m-Cresol	108-39-4			
p-Cresol	106-44-5			
Cumene	98-82-8			
Cyanide	74-90-8			
2,4-D, salts and esters	94-75-7			
DDE (1,1-Dichloro-2,2-bis(p-chloroph	72-55-9			
DDE	72-55-9			
Decachlorobiphenyl	2051-24-3			
Diazomethane	334-88-3			
Dibenzo(a,h)anthracene	53-70-3	1.20E-06	9.60E-08	4.20E-07
Dibenzofurans	132-64-9			
1,2-Dibromo-3-chloropropane	96-12-8			
Dibutylphthalate	84-74-9			
Dichlorobenzene	95-50-1	1.20E-03	9.60E-05	4.20E-04
1,4-Dichlorobenzene(p)	106-46-7			
3,3-Dichlorobenzidene	91-94-1			
Dichlorobiphenyl	2050-68-2			
1,2-Dichloroethane	107-06-2			
Dichloroethyl ether (Bis(2-chloroethyl	111-44-4			
1,2-Dichloropropane	78-87-5			
1,3-Dichloropropene	542-75-6			
Dichlorvos	62-73-7			
Diethanolamine	111-42-2			
Diethyl sulfate	64-67-5			
3,3-Dimethoxybenzidine	119-90-4			
Dimethyl aminoazobenzene	60-11-7			
3,3'-Dimethyl benzidine	119-93-7			
Dimethyl phthalate	131-11-3			
Dimethyl carbamoyl chloride	79-44-7			
Dimethyl formamide	68-12-2			
1,1-Dimethyl hydrazine	57-14-7			
Dimethyl phthalate	131-11-3			
Dimethyl sulfate	77-78-1			
N,N-Dimethylaniline	121-69-7			
7,12-Dimethylbenz(a)anthracene	57-97-6	1.60E-05	1.28E-06	5.61E-06
N,N-Dimethylformamide	68-12-2			
4,6-Dinitro-o-cresol, and salts	534-52-1			
2,4-Dinitrophenol	51-28-5			
2,4-Dinitrotoluene	121-14-2			
1,4-Dioxane (1,4-Diethyleneoxide)	123-91-1			
1,2-Diphenylhydrazine	122-66-7			
Epichlorohydrin (l-Chloro-2,3-epoxypr	106-89-8			
1,2-Epoxybutane	106-88-7			
Ethyl acrylate	140-88-5			
Ethylbenzene	100-41-4			
Ethyl carbamate (Urethane)	51-79-6			
Ethyl chloride	75-00-3			
Ethylene dibromide	106-93-4			
Ethylene dichloride	107-06-2			

Ethylene imine (Aziridine)	151-56-4			
Ethylene glycol	107-21-1			
Ethylene oxide	75-21-8			
Ethylene thiourea	96-45-7			
Ethylidene dichloride (1,1-Dichloroethane)	75-34-3			
Fluoranthene	206-44-0	3.00E-06	2.40E-07	1.05E-06
Fluorene	86-73-7	2.80E-06	2.24E-07	9.81E-07
Formaldehyde	50-00-0	7.50E-02	6.00E-03	2.63E-02
Formaldehyde (HCOH)	50-00-0			
Heptachlor	76-44-8			
Heptachlorobiphenyl	88655-71-2			
Hexachlorobenzene	118-74-1			
Hexachlorobutadiene	87-68-3			
Hexachlorocyclopentadiene	77-47-4			
Hexachloroethane	67-72-1			
Hexamethylene-1,6-diisocyanate	822-06-0			
Hexamethylphosphoramide	680-31-9			
Hexane	110-54-3	1.80E+00	1.44E-01	6.31E-01
Hydrazine	302-01-2			
Hydrochloric acid (Hydrogen chloride)	7647-01-0			
Hydrogen fluoride (Hydrofluoric acid)	7664-39-3			
Hydrogen sulfide	7783-06-4			
Hydroquinone	123-31-9			
Indo(1,2,3-cd)pyrene	193-39-5	1.80E-06	1.44E-07	6.31E-07
Isophorone	78-59-1			
Lindane (all isomers)	58-89-9			
Maleic anhydride	108-31-6			
Methanol	67-56-1			
Methoxychlor	72-43-5			
Methyl bromide (Bromomethane)	74-83-9			
Methyl chloride (Chloromethane)	74-87-3			
Methyl chloroform (1,1,1-Trichloroethane)	71-55-6			
Methyl ethyl ketone (2-Butanone)	78-93-3			
Methyl iodide (Iodomethane)	74-88-4			
Methyl isobutyl ketone (Hexone)	108-10-1			
Methyl isocyanate	624-83-9			
Methyl hydrazine	60-34-4			
Methyl methacrylate	80-62-6			
Methyl tert butyl ether	1634-04-4			
4,4'-Methylene bis(2-chloroaniline)	101-14-4			
Methylene chloride	75-09-2			
4,4'-Methylenedianiline	101-77-9			
Methylene diphenyl diisocyanate (MDI)	101-68-8			
3-Methylchloranthrene	56-49-5	1.80E-06	1.44E-07	6.31E-07
2-Methylnaphthylene	91-57-6	2.40E-05	1.92E-06	8.41E-06
Naphthalene	91-20-3	6.10E-04	4.88E-05	2.14E-04
Nitrobenzene	98-95-3			
4-Nitrobiphenyl	92-93-3			
4-Nitrophenol	100-02-7			
2-Nitropropane	79-46-9			
N-Nitroso-N-methylurea	684-93-5			
N-Nitrosodimethylamine	62-75-9			
N-Nitrosomorpholine	59-89-2			
Parathion	56-38-2			
Pentachloronitrobenzene (Quintobenzene)	82-68-8			
Pentachlorophenol	87-86-5			
Perylene	198-55-0			
Phenanthrene	85-01-8	1.70E-05	1.36E-06	5.96E-06
Phenol	108-95-2			
p-Phenylenediamine	106-50-3			
Phosgene	75-44-5			
Phosphine	7803-51-2			
Phosphorus	7723-14-0			

Phthalic anhydride	85-44-9			
Polychlorinated biphenyls (Aroclors)	1336-36-3			
1,3-Propane sultone	1120-71-4			
beta-Propiolactone	57-57-8			
Propionaldehyde	123-38-6			
Propoxur (Baygon)	114-26-1			
Propylene dichloride (1,2-Dichloropropane)	78-87-5			
Propylene oxide	75-56-9			
1,2-Propylenimine (2-Methyl aziridine)	75-55-8			
Pyrene	129-00-0	5.00E-06	4.00E-07	1.75E-06
Quinoline	91-22-5			
Quinone (p-Benzoquinone)	106-51-4			
Styrene	100-42-5			
Styrene oxide	96-09-3			
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDF)	1746-01-6			
1,1,2,2-Tetrachloroethane	79-34-5			
Tetrachloroethylene (Perchloroethylene)	127-18-4			
Titanium tetrachloride	7550-45-0			
Toluene	108-88-3	3.40E-03	2.72E-04	1.19E-03
2,4-Toluene diamine	95-80-7			
2,4-Toluene diisocyanate	584-84-9			
o-Toluidine (2-Methylaniline)	95-53-4			
Toxaphene (chlorinated camphene)	8001-35-2			
1,2,4-Trichlorobenzene	120-82-1			
1,1,2-Trichloroethane	79-00-5			
Trichloroethylene	79-01-6			
2,4,5-Trichlorophenol	95-95-4			
2,4,6-Trichlorophenol	88-06-2			
Triethylamine	121-44-8			
Trifluralin	1582-09-8			
2,2,4-Trimethylpentane	540-84-1			
Vinyl acetate	108-05-4			
Vinyl bromide	593-60-2			
Vinyl chloride	75-01-4			
Vinylidene chloride (1,1-Dichloroethylene)	75-35-4			
Xylenes	1330-20-7			
o-Xylene	95-47-6			
m-Xylenes	108-38-3			
p-Xylenes	106-42-3			
HAPs - Metals				
Antimony Compounds	7440-36-0			
Arsenic Compounds	7440-38-2	2.00E-04	1.60E-05	7.01E-05
Beryllium Compounds	7440-41-7	1.20E-05	9.60E-07	4.20E-06
Cadmium Compounds	7440-43-9	1.10E-03	8.80E-05	3.85E-04
Chromium Compounds	7440-47-3	1.40E-03	1.12E-04	4.91E-04
Cobalt Compounds	7440-48-4	8.40E-05	6.72E-06	2.94E-05
Cyanide Compounds	57-12-5	0.00E+00	0.00E+00	0.00E+00
Glycol ethers	Glycol Ethers	0.00E+00	0.00E+00	0.00E+00
Lead Compounds	74-82-8			
Manganese Compounds	7439-96-5			
Mercury Compounds	7439-97-6	2.60E-04	2.08E-05	9.11E-05
Nickel Compounds	7440-02-0	2.10E-03	1.68E-04	7.36E-04
Selenium Compounds	7782-49-2	2.40E-05	1.92E-06	8.41E-06
Polycyclic Organic Matter (POM)				
Polycyclic Organic Matter (POM)	POM	4.46E-05	3.57E-06	1.56E-05
HAPS SUMMARY				
TOTAL HAPS	-		0.15	0.66
Largest Single HAP:		Hexane	1.44E-01	6.31E-01

Notes:

---

[1] Emission factors for natural gas are from AP-42 Section 1.4, Tables 1.4-3 and 1.4-4 (07/98).

Emission Source		
Description		Unit ID
Boiler 1		

Fuel		Natural Gas
Maximum Heat Input		30.00 MMBtu/hr
Hourly Rate		0.029412 MMft <sup>3</sup> /hr
Annual Rate		257.6 MMft <sup>3</sup> /yr
Heating Value		1,020 Btu/ft <sup>3</sup>
Annual Operation		8,760 hr/yr

2

HAP Pollutant	Cas #	Boiler 1		
		Factor lb/10 <sup>6</sup> ft <sup>3</sup>	Potential Emissions lbs/hr	TPY
Acenaphthene	83-32-9	1.80E-06	5.29E-08	2.32E-07
Acenaphthylene	208-96-8	1.80E-06	5.29E-08	2.32E-07
Acetaldehyde	75-07-0			
Acetamide	60-35-5			
Acetonitrile	75-05-8			
Acetophenone	98-86-2			
2-Acetylaminofluorene	53-96-3			
Acrolein	107-02-8			
Acrylamide	79-06-1			
Acrylic acid	79-10-7			
Acrylonitrile	107-13-1			
Allyl chloride	107-05-1			
4-Aminobiphenyl	92-67-1			
Aniline	62-53-3			
o-Anisidine (2-Methoxyaniline)	90-04-0			
Anthracene	120-12-7	2.40E-06	7.06E-08	3.09E-07
Asbestos	1332-21-4			
Benz(a)anthracene	56-55-3	1.80E-06	5.29E-08	2.32E-07
Benzene	71-43-2	2.10E-03	6.18E-05	2.71E-04
Benzidine	92-87-5			
Benzo(a)anthracene	56-55-3			
benzo(a) pyrene	50-32-8	1.20E-06	3.53E-08	1.55E-07
Benzo(b) flouranthene	205-911-9	1.80E-06	5.29E-08	2.32E-07
Benzo(b,k)fluoranthene	207-08-9	1.80E-06	5.29E-08	2.32E-07
Benzo(g,h,i)perylene	191-24-2	1.20E-06	3.53E-08	1.55E-07
Benzotrichloride	98-07-7			
Benzyl chloride	100-44-7			
Biphenyl	92-52-4			
Bis(2-ethylhexyl)phthalate (DEHP)	117-81-7			
Bis(chloromethyl)ether	542-88-1			
Bromoform	75-25-2			
Bromomethane	74-83-9			
1,3-Butadiene	106-99-0			
Calcium cyanamide	156-62-7			
Caprolactam	105-60-2			
Captan	133-06-2			
Carbaryl	63-25-2			
Carbon disulfide	75-15-0			
Carbon tetrachloride	56-23-5			
Carbonyl sulfide	463-58-1			
Catechol	120-80-9			

Chloramben	133-90-4			
Chlordane	57-74-9			
Chlorine	7782-50-5			
Chloroacetic acid	79-11-8			
2-Chloroacetophenone	532-27-4			
Chlorobenzene	108-90-7			
Chlorobenzilate	510-15-6			
Chloroform	67-66-3			
Chloromethane	74-87-3			
Chloromethyl methyl ether	107-30-2			
Chloroprene	126-99-8			
Chrysene	218-01-9	1.80E-06	5.29E-08	2.32E-07
Cresols/Cresylic acid (isomers and n	1319-77-3			
o-Cresol	95-48-7			
m-Cresol	108-39-4			
p-Cresol	106-44-5			
Cumene	98-82-8			
Cyanide	74-90-8			
2,4-D, salts and esters	94-75-7			
DDE (1,1-Dichloro-2,2-bis(p-chloroph	72-55-9			
DDE	72-55-9			
Decachlorobiphenyl	2051-24-3			
Diazomethane	334-88-3			
Dibenzo(a,h)anthracene	53-70-3	1.20E-06	3.53E-08	1.55E-07
Dibenzofurans	132-64-9			
1,2-Dibromo-3-chloropropane	96-12-8			
Dibutylphthalate	84-74-9			
Dichlorobenzene	95-50-1	1.20E-03	3.53E-05	1.55E-04
1,4-Dichlorobenzene(p)	106-46-7			
3,3-Dichlorobenzidene	91-94-1			
Dichlorobiphenyl	2050-68-2			
1,2-Dichloroethane	107-06-2			
Dichloroethyl ether (Bis(2-chloroethyl	111-44-4			
1,2-Dichloropropane	78-87-5			
1,3-Dichloropropene	542-75-6			
Dichlorvos	62-73-7			
Diethanolamine	111-42-2			
Diethyl sulfate	64-67-5			
3,3-Dimethoxybenzidine	119-90-4			
Dimethyl aminoazobenzene	60-11-7			
3,3'-Dimethyl benzidine	119-93-7			
Dimethyl phthalate	131-11-3			
Dimethyl carbamoyl chloride	79-44-7			
Dimethyl formamide	68-12-2			
1,1-Dimethyl hydrazine	57-14-7			
Dimethyl phthalate	131-11-3			
Dimethyl sulfate	77-78-1			
N,N-Dimethylaniline	121-69-7			
7,12-Dimethylbenz(a)anthracene	57-97-6	1.60E-05	4.71E-07	2.06E-06
N,N-Dimethylformamide	68-12-2			
4,6-Dinitro-o-cresol, and salts	534-52-1			
2,4-Dinitrophenol	51-28-5			
2,4-Dinitrotoluene	121-14-2			
1,4-Dioxane (1,4-Diethyleneoxide)	123-91-1			
1,2-Diphenylhydrazine	122-66-7			
Epichlorohydrin (1-Chloro-2,3-epoxy	106-89-8			
1,2-Epoxybutane	106-88-7			
Ethyl acrylate	140-88-5			
Ethylbenzene	100-41-4			
Ethyl carbamate (Urethane)	51-79-6			
Ethyl chloride	75-00-3			
Ethylene dibromide	106-93-4			
Ethylene dichloride	107-06-2			

Ethylene imine (Aziridine)	151-56-4			
Ethylene glycol	107-21-1			
Ethylene oxide	75-21-8			
Ethylene thiourea	96-45-7			
Ethylidene dichloride (1,1-Dichloroethane)	75-34-3			
Fluoranthene	206-44-0	3.00E-06	8.82E-08	3.86E-07
Fluorene	86-73-7	2.80E-06	8.24E-08	3.61E-07
Formaldehyde	50-00-0	7.50E-02	2.21E-03	9.66E-03
Formaldehyde (HCOH)	50-00-0			
Heptachlor	76-44-8			
Heptachlorobiphenyl	88655-71-2			
Hexachlorobenzene	118-74-1			
Hexachlorobutadiene	87-68-3			
Hexachlorocyclopentadiene	77-47-4			
Hexachloroethane	67-72-1			
Hexamethylene-1,6-diisocyanate	822-06-0			
Hexamethylphosphoramide	680-31-9			
Hexane	110-54-3	1.80E+00	5.29E-02	2.32E-01
Hydrazine	302-01-2			
Hydrochloric acid (Hydrogen chloride)	7647-01-0			
Hydrogen fluoride (Hydrofluoric acid)	7664-39-3			
Hydrogen sulfide	7783-06-4			
Hydroquinone	123-31-9			
Indo(1,2,3-cd)pyrene	193-39-5	1.80E-06	5.29E-08	2.32E-07
Isophorone	78-59-1			
Lindane (all isomers)	58-89-9			
Maleic anhydride	108-31-6			
Methanol	67-56-1			
Methoxychlor	72-43-5			
Methyl bromide (Bromomethane)	74-83-9			
Methyl chloride (Chloromethane)	74-87-3			
Methyl chloroform (1,1,1-Trichloroethane)	71-55-6			
Methyl ethyl ketone (2-Butanone)	78-93-3			
Methyl iodide (Iodomethane)	74-88-4			
Methyl isobutyl ketone (Hexone)	108-10-1			
Methyl isocyanate	624-83-9			
Methyl hydrazine	60-34-4			
Methyl methacrylate	80-62-6			
Methyl tert butyl ether	1634-04-4			
4,4'-Methylene bis(2-chloroaniline)	101-14-4			
Methylene chloride	75-09-2			
4,4'-Methylenedianiline	101-77-9			
Methylene diphenyl diisocyanate (MDI)	101-68-8			
3-Methylchloranthrene	56-49-5	1.80E-06	5.29E-08	2.32E-07
2-Methylnaphthylene	91-57-6	2.40E-05	7.06E-07	3.09E-06
Naphthalene	91-20-3	6.10E-04	1.79E-05	7.86E-05
Nitrobenzene	98-95-3			
4-Nitrobiphenyl	92-93-3			
4-Nitrophenol	100-02-7			
2-Nitropropane	79-46-9			
N-Nitroso-N-methylurea	684-93-5			
N-Nitrosodimethylamine	62-75-9			
N-Nitrosomorpholine	59-89-2			
Parathion	56-38-2			
Pentachloronitrobenzene (Quintobenzene)	82-68-8			
Pentachlorophenol	87-86-5			
Perylene	198-55-0			
Phenanathrene	85-01-8	1.70E-05	5.00E-07	2.19E-06
Phenol	108-95-2			
p-Phenylenediamine	106-50-3			
Phosgene	75-44-5			
Phosphine	7803-51-2			
Phosphorus	7723-14-0			

Phthalic anhydride	85-44-9			
Polychlorinated biphenyls (Aroclors)	1336-36-3			
1,3-Propane sultone	1120-71-4			
beta-Propiolactone	57-57-8			
Propionaldehyde	123-38-6			
Propoxur (Baygon)	114-26-1			
Propylene dichloride (1,2-Dichloropropane)	78-87-5			
Propylene oxide	75-56-9			
1,2-Propylenimine (2-Methyl aziridine)	75-55-8			
Pyrene	129-00-0	5.00E-06	1.47E-07	6.44E-07
Quinoline	91-22-5			
Quinone (p-Benzoquinone)	106-51-4			
Styrene	100-42-5			
Styrene oxide	96-09-3			
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDF)	1746-01-6			
1,1,2,2-Tetrachloroethane	79-34-5			
Tetrachloroethylene (Perchloroethylene)	127-18-4			
Titanium tetrachloride	7550-45-0			
Toluene	108-88-3	3.40E-03	1.00E-04	4.38E-04
2,4-Toluene diamine	95-80-7			
2,4-Toluene diisocyanate	584-84-9			
o-Toluidine (2-Methylaniline)	95-53-4			
Toxaphene (chlorinated camphene)	8001-35-2			
1,2,4-Trichlorobenzene	120-82-1			
1,1,2-Trichloroethane	79-00-5			
Trichloroethylene	79-01-6			
2,4,5-Trichlorophenol	95-95-4			
2,4,6-Trichlorophenol	88-06-2			
Triethylamine	121-44-8			
Trifluralin	1582-09-8			
2,2,4-Trimethylpentane	540-84-1			
Vinyl acetate	108-05-4			
Vinyl bromide	593-60-2			
Vinyl chloride	75-01-4			
Vinylidene chloride (1,1-Dichloroethylene)	75-35-4			
Xylenes	1330-20-7			
o-Xylene	95-47-6			
m-Xylenes	108-38-3			
p-Xylenes	106-42-3			
HAPs - Metals				
Antimony Compounds	7440-36-0			
Arsenic Compounds	7440-38-2	2.00E-04	5.88E-06	2.58E-05
Beryllium Compounds	7440-41-7	1.20E-05	3.53E-07	1.55E-06
Cadmium Compounds	7440-43-9	1.10E-03	3.24E-05	1.42E-04
Chromium Compounds	7440-47-3	1.40E-03	4.12E-05	1.80E-04
Cobalt Compounds	7440-48-4	8.40E-05	2.47E-06	1.08E-05
Cyanide Compounds	57-12-5	0.00E+00	0.00E+00	0.00E+00
Glycol ethers	Glycol Ethers	0.00E+00	0.00E+00	0.00E+00
Lead Compounds	74-82-8			
Manganese Compounds	7439-96-5			
Mercury Compounds	7439-97-6	2.60E-04	7.65E-06	3.35E-05
Nickel Compounds	7440-02-0	2.10E-03	6.18E-05	2.71E-04
Selenium Compounds	7782-49-2	2.40E-05	7.06E-07	3.09E-06
Polycyclic Organic Matter (POM)	POM	4.46E-05	1.31E-06	5.75E-06
HAPS SUMMARY				
TOTAL HAPS	-		0.06	0.24
Largest Single HAP:				
		Hexane	5.29E-02	2.32E-01

Notes:

[1] Emission factors for natural gas are from AP-42 Section 1.4, Tables 1.4-3 and 1.4-4 (07/98).

Emission Source		
Description		Unit ID
Boiler 2		

Fuel		Natural Gas
Maximum Heat Input		30.00 MMBtu/hr
Hourly Rate		0.029412 MMft <sup>3</sup> /hr
Annual Rate		257.6 MMft <sup>3</sup> /yr
Heating Value		1,020 Btu/ft <sup>3</sup>
Annual Operation		8,760 hr/yr

2

HAP Pollutant	Cas #	Boiler 2		
		Factor lb/10 <sup>6</sup> ft <sup>3</sup>	Potential Emissions lbs/hr	TPY
Acenaphthene	83-32-9	1.80E-06	5.29E-08	2.32E-07
Acenaphthylene	208-96-8	1.80E-06	5.29E-08	2.32E-07
Acetaldehyde	75-07-0			
Acetamide	60-35-5			
Acetonitrile	75-05-8			
Acetophenone	98-86-2			
2-Acetylaminofluorene	53-96-3			
Acrolein	107-02-8			
Acrylamide	79-06-1			
Acrylic acid	79-10-7			
Acrylonitrile	107-13-1			
Allyl chloride	107-05-1			
4-Aminobiphenyl	92-67-1			
Aniline	62-53-3			
o-Anisidine (2-Methoxyaniline)	90-04-0			
Anthracene	120-12-7	2.40E-06	7.06E-08	3.09E-07
Asbestos	1332-21-4			
Benz(a)anthracene	56-55-3	1.80E-06	5.29E-08	2.32E-07
Benzene	71-43-2	2.10E-03	6.18E-05	2.71E-04
Benzidine	92-87-5			
Benzo(a)anthracene	56-55-3			
benzo(a) pyrene	50-32-8	1.20E-06	3.53E-08	1.55E-07
Benzo(b) flouranthene	205-911-9	1.80E-06	5.29E-08	2.32E-07
Benzo(b,k)fluoranthene	207-08-9	1.80E-06	5.29E-08	2.32E-07
Benzo(g,h,l)perylene	191-24-2	1.20E-06	3.53E-08	1.55E-07
Benzotrichloride	98-07-7			
Benzyl chloride	100-44-7			
Biphenyl	92-52-4			
Bis(2-ethylhexyl)phthalate (DEHP)	117-81-7			
Bis(chloromethyl)ether	542-88-1			
Bromoform	75-25-2			
Bromomethane	74-83-9			
1,3-Butadiene	106-99-0			
Calcium cyanamide	156-62-7			
Caprolactam	105-60-2			
Captan	133-06-2			
Carbaryl	63-25-2			
Carbon disulfide	75-15-0			
Carbon tetrachloride	56-23-5			
Carbonyl sulfide	463-58-1			
Catechol	120-80-9			

Chloramben	133-90-4			
Chlordane	57-74-9			
Chlorine	7782-50-5			
Chloroacetic acid	79-11-8			
2-Chloroacetophenone	532-27-4			
Chlorobenzene	108-90-7			
Chlorobenzilate	510-15-6			
Chloroform	67-66-3			
Chloromethane	74-87-3			
Chloromethyl methyl ether	107-30-2			
Chloroprene	126-99-8			
Chrysene	218-01-9	1.80E-06	5.29E-08	2.32E-07
Cresols/Cresylic acid (isomers and m	1319-77-3			
o-Cresol	95-48-7			
m-Cresol	108-39-4			
p-Cresol	106-44-5			
Cumene	98-82-8			
Cyanide	74-90-8			
2,4-D, salts and esters	94-75-7			
DDE (1,1-Dichloro-2,2-bis(p-chloroph	72-55-9			
DDE	72-55-9			
Decachlorobiphenyl	2051-24-3			
Diazomethane	334-88-3			
Dibenzo(a,h)anthracene	53-70-3	1.20E-06	3.53E-08	1.55E-07
Dibenzofurans	132-64-9			
1,2-Dibromo-3-chloropropane	96-12-8			
Dibutylphthalate	84-74-9			
Dichlorobenzene	95-50-1	1.20E-03	3.53E-05	1.55E-04
1,4-Dichlorobenzene(p)	106-46-7			
3,3-Dichlorobenzidene	91-94-1			
Dichlorobiphenyl	2050-68-2			
1,2-Dichloroethane	107-06-2			
Dichloroethyl ether (Bis(2-chloroethyl	111-44-4			
1,2-Dichloropropane	78-87-5			
1,3-Dichloropropene	542-75-6			
Dichlorvos	62-73-7			
Diethanolamine	111-42-2			
Diethyl sulfate	64-67-5			
3,3-Dimethoxybenzidine	119-90-4			
Dimethyl aminoazobenzene	60-11-7			
3,3'-Dimethyl benzidine	119-93-7			
Dimethyl phthalate	131-11-3			
Dimethyl carbamoyl chloride	79-44-7			
Dimethyl formamide	68-12-2			
1,1-Dimethyl hydrazine	57-14-7			
Dimethyl phthalate	131-11-3			
Dimethyl sulfate	77-78-1			
N,N-Dimethylaniline	121-69-7			
7,12-Dimethylbenz(a)anthracene	57-97-6	1.60E-05	4.71E-07	2.06E-06
N,N-Dimethylformamide	68-12-2			
4,6-Dinitro-o-cresol, and salts	534-52-1			
2,4-Dinitrophenol	51-28-5			
2,4-Dinitrotoluene	121-14-2			
1,4-Dioxane (1,4-Diethyleneoxide)	123-91-1			
1,2-Diphenylhydrazine	122-66-7			
Epichlorohydrin (l-Chloro-2,3-epoxy	106-89-8			
1,2-Epoxybutane	106-88-7			
Ethyl acrylate	140-88-5			
Ethylbenzene	100-41-4			
Ethyl carbamate (Urethane)	51-79-6			
Ethyl chloride	75-00-3			
Ethylene dibromide	106-93-4			
Ethylene dichloride	107-06-2			

Ethylene imine (Aziridine)	151-56-4			
Ethylene glycol	107-21-1			
Ethylene oxide	75-21-8			
Ethylene thiourea	96-45-7			
Ethylidene dichloride (1,1-Dichloroethane)	75-34-3			
Fluoranthene	206-44-0	3.00E-06	8.82E-08	3.86E-07
Fluorene	86-73-7	2.80E-06	8.24E-08	3.61E-07
Formaldehyde	50-00-0	7.50E-02	2.21E-03	9.66E-03
Formaldehyde (HCOH)	50-00-0			
Heptachlor	76-44-8			
Heptachlorobiphenyl	88655-71-2			
Hexachlorobenzene	118-74-1			
Hexachlorobutadiene	87-68-3			
Hexachlorocyclopentadiene	77-47-4			
Hexachloroethane	67-72-1			
Hexamethylene-1,6-diisocyanate	822-06-0			
Hexamethylphosphoramide	680-31-9			
Hexane	110-54-3	1.80E+00	5.29E-02	2.32E-01
Hydrazine	302-01-2			
Hydrochloric acid (Hydrogen chloride)	7647-01-0			
Hydrogen fluoride (Hydrofluoric acid)	7664-39-3			
Hydrogen sulfide	7783-06-4			
Hydroquinone	123-31-9			
Indo(1,2,3-cd)pyrene	193-39-5	1.80E-06	5.29E-08	2.32E-07
Isophorone	78-59-1			
Lindane (all isomers)	58-89-9			
Maleic anhydride	108-31-6			
Methanol	67-56-1			
Methoxychlor	72-43-5			
Methyl bromide (Bromomethane)	74-83-9			
Methyl chloride (Chloromethane)	74-87-3			
Methyl chloroform (1,1,1-Trichloroethane)	71-55-6			
Methyl ethyl ketone (2-Butanone)	78-93-3			
Methyl iodide (Iodomethane)	74-88-4			
Methyl isobutyl ketone (Hexone)	108-10-1			
Methyl isocyanate	624-83-9			
Methyl hydrazine	60-34-4			
Methyl methacrylate	80-62-6			
Methyl tert butyl ether	1634-04-4			
4,4'-Methylene bis(2-chloroaniline)	101-14-4			
Methylene chloride	75-09-2			
4,4'-Methylenedianiline	101-77-9			
Methylene diphenyl diisocyanate (MDI)	101-68-8			
3-Methylchloranthrene	56-49-5	1.80E-06	5.29E-08	2.32E-07
2-Methylnaphthylene	91-57-6	2.40E-05	7.06E-07	3.09E-06
Naphthalene	91-20-3	6.10E-04	1.79E-05	7.86E-05
Nitrobenzene	98-95-3			
4-Nitrobiphenyl	92-93-3			
4-Nitrophenol	100-02-7			
2-Nitropropane	79-46-9			
N-Nitroso-N-methylurea	684-93-5			
N-Nitrosodimethylamine	62-75-9			
N-Nitrosomorpholine	59-89-2			
Parathion	56-38-2			
Pentachloronitrobenzene (Quintobenzene)	82-68-8			
Pentachlorophenol	87-86-5			
Perylene	198-55-0			
Phenanthrene	85-01-8	1.70E-05	5.00E-07	2.19E-06
Phenol	108-95-2			
p-Phenylenediamine	106-50-3			
Phosgene	75-44-5			
Phosphine	7803-51-2			
Phosphorus	7723-14-0			

Phthalic anhydride	85-44-9			
Polychlorinated biphenyls (Aroclors)	1336-36-3			
1,3-Propane sultone	1120-71-4			
beta-Propiolactone	57-57-8			
Propionaldehyde	123-38-6			
Propoxur (Baygon)	114-26-1			
Propylene dichloride (1,2-Dichloropropane)	78-87-5			
Propylene oxide	75-56-9			
1,2-Propylenimine (2-Methyl aziridine)	75-55-8			
Pyrene	129-00-0	5.00E-06	1.47E-07	6.44E-07
Quinoline	91-22-5			
Quinone (p-Benzoquinone)	106-51-4			
Styrene	100-42-5			
Styrene oxide	96-09-3			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6			
1,1,2,2-Tetrachloroethane	79-34-5			
Tetrachloroethylene (Perchloroethylene)	127-18-4			
Titanium tetrachloride	7550-45-0			
Toluene	108-88-3	3.40E-03	1.00E-04	4.38E-04
2,4-Toluene diamine	95-80-7			
2,4-Toluene diisocyanate	584-84-9			
o-Toluidine (2-Methylaniline)	95-53-4			
Toxaphene (chlorinated camphene)	8001-35-2			
1,2,4-Trichlorobenzene	120-82-1			
1,1,2-Trichloroethane	79-00-5			
Trichloroethylene	79-01-6			
2,4,5-Trichlorophenol	95-95-4			
2,4,6-Trichlorophenol	88-06-2			
Triethylamine	121-44-8			
Trifluralin	1582-09-8			
2,2,4-Trimethylpentane	540-84-1			
Vinyl acetate	108-05-4			
Vinyl bromide	593-60-2			
Vinyl chloride	75-01-4			
Vinylidene chloride (1,1-Dichloroethylene)	75-35-4			
Xylenes	1330-20-7			
o-Xylene	95-47-6			
m-Xylenes	108-38-3			
p-Xylenes	106-42-3			
HAPs - Metals				
Antimony Compounds	7440-36-0			
Arsenic Compounds	7440-38-2	2.00E-04	5.88E-06	2.58E-05
Beryllium Compounds	7440-41-7	1.20E-05	3.53E-07	1.55E-06
Cadmium Compounds	7440-43-9	1.10E-03	3.24E-05	1.42E-04
Chromium Compounds	7440-47-3	1.40E-03	4.12E-05	1.80E-04
Cobalt Compounds	7440-48-4	8.40E-05	2.47E-06	1.08E-05
Cyanide Compounds	57-12-5	0.00E+00	0.00E+00	0.00E+00
Glycol ethers	Glycol Ethers	0.00E+00	0.00E+00	0.00E+00
Lead Compounds	74-82-8			
Manganese Compounds	7439-96-5			
Mercury Compounds	7439-97-6	2.60E-04	7.65E-06	3.35E-05
Nickel Compounds	7440-02-0	2.10E-03	6.18E-05	2.71E-04
Selenium Compounds	7782-49-2	2.40E-05	7.06E-07	3.09E-06
Polycyclic Organic Matter (POM)	POM	4.46E-05	1.31E-06	5.75E-06
HAPS SUMMARY				
TOTAL HAPS	-		0.06	0.24
Largest Single HAP:		Hexane	5.29E-02	2.32E-01

Notes:

---

[1] Emission factors for natural gas are from AP-42 Section 1.4, Tables 1.4-3 and 1.4-4 (07/98).

Emission Source		
Description		Unit ID
Boiler 3		

Fuel		Natural Gas
Maximum Heat Input		30.00 MMBtu/hr
Hourly Rate		0.029412 MMft <sup>3</sup> /hr
Annual Rate		257.6 MMft <sup>3</sup> /yr
Heating Value		1,020 Btu/ft <sup>3</sup>
Annual Operation		8,760 hr/yr

2

HAP Pollutant	Cas #	Boiler 3		
		Factor lb/10 <sup>6</sup> ft <sup>3</sup>	Potential Emissions lbs/hr	TPY
Acenaphthene	83-32-9	1.80E-06	5.29E-08	2.32E-07
Acenaphthylene	208-96-8	1.80E-06	5.29E-08	2.32E-07
Acetaldehyde	75-07-0			
Acetamide	60-35-5			
Acetonitrile	75-05-8			
Acetophenone	98-86-2			
2-Acetylaminofluorene	53-96-3			
Acrolein	107-02-8			
Acrylamide	79-06-1			
Acrylic acid	79-10-7			
Acrylonitrile	107-13-1			
Allyl chloride	107-05-1			
4-Aminobiphenyl	92-67-1			
Aniline	62-53-3			
o-Anisidine (2-Methoxyaniline)	90-04-0			
Anthracene	120-12-7	2.40E-06	7.06E-08	3.09E-07
Asbestos	1332-21-4			
Benz(a)anthracene	56-55-3	1.80E-06	5.29E-08	2.32E-07
Benzene	71-43-2	2.10E-03	6.18E-05	2.71E-04
Benzidine	92-87-5			
Benzo(a)anthracene	56-55-3			
benzo(a) pyrene	50-32-8	1.20E-06	3.53E-08	1.55E-07
Benzo(b) flouranthene	205-911-9	1.80E-06	5.29E-08	2.32E-07
Benzo(b,k)fluoranthene	207-08-9	1.80E-06	5.29E-08	2.32E-07
Benzo(g,h,i)perylene	191-24-2	1.20E-06	3.53E-08	1.55E-07
Benzotrichloride	98-07-7			
Benzyl chloride	100-44-7			
Biphenyl	92-52-4			
Bis(2-ethylhexyl)phthalate (DEHP)	117-81-7			
Bis(chloromethyl)ether	542-88-1			
Bromoform	75-25-2			
Bromomethane	74-83-9			
1,3-Butadiene	106-99-0			
Calcium cyanamide	156-62-7			
Caprolactam	105-60-2			
Captan	133-06-2			
Carbaryl	63-25-2			
Carbon disulfide	75-15-0			
Carbon tetrachloride	56-23-5			
Carbonyl sulfide	463-58-1			
Catechol	120-80-9			

Chloramben	133-90-4			
Chlordane	57-74-9			
Chlorine	7782-50-5			
Chloroacetic acid	79-11-8			
2-Chloroacetophenone	532-27-4			
Chlorobenzene	108-90-7			
Chlorobenzilate	510-15-6			
Chloroform	67-66-3			
Chloromethane	74-87-3			
Chloromethyl methyl ether	107-30-2			
Chloroprene	126-99-8			
Chrysene	218-01-9	1.80E-06	5.29E-08	2.32E-07
Cresols/Cresylic acid (isomers and n	1319-77-3			
o-Cresol	95-48-7			
m-Cresol	108-39-4			
p-Cresol	106-44-5			
Cumene	98-82-8			
Cyanide	74-90-8			
2,4-D, salts and esters	94-75-7			
DDE (1,1-Dichloro-2,2-bis(p-chloroph	72-55-9			
DDE	72-55-9			
Decachlorobiphenyl	2051-24-3			
Diazomethane	334-88-3			
Dibenzo(a,h)anthracene	53-70-3	1.20E-06	3.53E-08	1.55E-07
Dibenzofurans	132-64-9			
1,2-Dibromo-3-chloropropane	96-12-8			
Dibutylphthalate	84-74-9			
Dichlorobenzene	95-50-1	1.20E-03	3.53E-05	1.55E-04
1,4-Dichlorobenzene(p)	106-46-7			
3,3-Dichlorobenzidene	91-94-1			
Dichlorobiphenyl	2050-68-2			
1,2-Dichloroethane	107-06-2			
Dichloroethyl ether (Bis(2-chloroethyl	111-44-4			
1,2-Dichloropropane	78-87-5			
1,3-Dichloropropene	542-75-6			
Dichlorvos	62-73-7			
Diethanolamine	111-42-2			
Diethyl sulfate	64-67-5			
3,3-Dimethoxybenzidine	119-90-4			
Dimethyl aminoazobenzene	60-11-7			
3,3'-Dimethyl benzidine	119-93-7			
Dimethyl phthalate	131-11-3			
Dimethyl carbamoyl chloride	79-44-7			
Dimethyl formamide	68-12-2			
1,1-Dimethyl hydrazine	57-14-7			
Dimethyl phthalate	131-11-3			
Dimethyl sulfate	77-78-1			
N,N-Dimethylaniline	121-69-7			
7,12-Dimethylbenz(a)anthracene	57-97-6	1.60E-05	4.71E-07	2.06E-06
N,N-Dimethylformamide	68-12-2			
4,6-Dinitro-o-cresol, and salts	534-52-1			
2,4-Dinitrophenol	51-28-5			
2,4-Dinitrotoluene	121-14-2			
1,4-Dioxane (1,4-Diethyleneoxide)	123-91-1			
1,2-Diphenylhydrazine	122-66-7			
Epichlorohydrin (l-Chloro-2,3-epoxy	106-89-8			
1,2-Epoxybutane	106-88-7			
Ethyl acrylate	140-88-5			
Ethylbenzene	100-41-4			
Ethyl carbamate (Urethane)	51-79-6			
Ethyl chloride	75-00-3			
Ethylene dibromide	106-93-4			
Ethylene dichloride	107-06-2			

Ethylene imine (Aziridine)	151-56-4			
Ethylene glycol	107-21-1			
Ethylene oxide	75-21-8			
Ethylene thiourea	96-45-7			
Ethylidene dichloride (1,1-Dichloroeth	75-34-3			
Fluoranthene	206-44-0	3.00E-06	8.82E-08	3.86E-07
Fluorene	86-73-7	2.80E-06	8.24E-08	3.61E-07
Formaldehyde	50-00-0	7.50E-02	2.21E-03	9.66E-03
Formaldehyde (HCOH)	50-00-0			
Heptachlor	76-44-8			
Heptachlorobiphenyl	88655-71-2			
Hexachlorobenzene	118-74-1			
Hexachlorobutadiene	87-68-3			
Hexachlorocyclopentadiene	77-47-4			
Hexachloroethane	67-72-1			
Hexamethylene-1,6-diisocyanate	822-06-0			
Hexamethylphosphoramide	680-31-9			
Hexane	110-54-3	1.80E+00	5.29E-02	2.32E-01
Hydrazine	302-01-2			
Hydrochloric acid (Hydrogen chloride)	7647-01-0			
Hydrogen fluoride (Hydrofluoric acid)	7664-39-3			
Hydrogen sulfide	7783-06-4			
Hydroquinone	123-31-9			
Indo(1,2,3-cd)pyrene	193-39-5	1.80E-06	5.29E-08	2.32E-07
Isophorone	78-59-1			
Lindane (all isomers)	58-89-9			
Maleic anhydride	108-31-6			
Methanol	67-56-1			
Methoxychlor	72-43-5			
Methyl bromide (Bromomethane)	74-83-9			
Methyl chloride (Chloromethane)	74-87-3			
Methyl chloroform (1,1,1-Trichloroeth	71-55-6			
Methyl ethyl ketone (2-Butanone)	78-93-3			
Methyl iodide (Iodomethane)	74-88-4			
Methyl isobutyl ketone (Hexone)	108-10-1			
Methyl isocyanate	624-83-9			
Methyl hydrazine	60-34-4			
Methyl methacrylate	80-62-6			
Methyl tert butyl ether	1634-04-4			
4,4'-Methylene bis(2-chloroaniline)	101-14-4			
Methylene chloride	75-09-2			
4,4'-Methylenedianiline	101-77-9			
Methylene diphenyl diisocyanate (MDI)	101-68-8			
3-Methylchloranthrene	56-49-5	1.80E-06	5.29E-08	2.32E-07
2-Methylnaphthylene	91-57-6	2.40E-05	7.06E-07	3.09E-06
Naphthalene	91-20-3	6.10E-04	1.79E-05	7.86E-05
Nitrobenzene	98-95-3			
4-Nitrobiphenyl	92-93-3			
4-Nitrophenol	100-02-7			
2-Nitropropane	79-46-9			
N-Nitroso-N-methylurea	684-93-5			
N-Nitrosodimethylamine	62-75-9			
N-Nitrosomorpholine	59-89-2			
Parathion	56-38-2			
Pentachloronitrobenzene (Quintoben	82-68-8			
Pentachlorophenol	87-86-5			
Perylene	198-55-0			
Phenanathrene	85-01-8	1.70E-05	5.00E-07	2.19E-06
Phenol	108-95-2			
p-Phenylenediamine	106-50-3			
Phosgene	75-44-5			
Phosphine	7803-51-2			
Phosphorus	7723-14-0			

Phthalic anhydride	85-44-9			
Polychlorinated biphenyls (Aroclors)	1336-36-3			
1,3-Propane sultone	1120-71-4			
beta-Propiolactone	57-57-8			
Propionaldehyde	123-38-6			
Propoxur (Baygon)	114-26-1			
Propylene dichloride (1,2-Dichloropropane)	78-87-5			
Propylene oxide	75-56-9			
1,2-Propylenimine (2-Methyl aziridine)	75-55-8			
Pyrene	129-00-0	5.00E-06	1.47E-07	6.44E-07
Quinoline	91-22-5			
Quinone (p-Benzoquinone)	106-51-4			
Styrene	100-42-5			
Styrene oxide	96-09-3			
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6			
1,1,2,2-Tetrachloroethane	79-34-5			
Tetrachloroethylene (Perchloroethylene)	127-18-4			
Titanium tetrachloride	7550-45-0			
Toluene	108-88-3	3.40E-03	1.00E-04	4.38E-04
2,4-Toluene diamine	95-80-7			
2,4-Toluene diisocyanate	584-84-9			
o-Toluidine (2-Methylaniline)	95-53-4			
Toxaphene (chlorinated camphene)	8001-35-2			
1,2,4-Trichlorobenzene	120-82-1			
1,1,2-Trichloroethane	79-00-5			
Trichloroethylene	79-01-6			
2,4,5-Trichlorophenol	95-95-4			
2,4,6-Trichlorophenol	88-06-2			
Triethylamine	121-44-8			
Trifluralin	1582-09-8			
2,2,4-Trimethylpentane	540-84-1			
Vinyl acetate	108-05-4			
Vinyl bromide	593-60-2			
Vinyl chloride	75-01-4			
Vinylidene chloride (1,1-Dichloroethylene)	75-35-4			
Xylenes	1330-20-7			
o-Xylene	95-47-6			
m-Xylenes	108-38-3			
p-Xylenes	106-42-3			
HAPs - Metals				
Antimony Compounds	7440-36-0			
Arsenic Compounds	7440-38-2	2.00E-04	5.88E-06	2.58E-05
Beryllium Compounds	7440-41-7	1.20E-05	3.53E-07	1.55E-06
Cadmium Compounds	7440-43-9	1.10E-03	3.24E-05	1.42E-04
Chromium Compounds	7440-47-3	1.40E-03	4.12E-05	1.80E-04
Cobalt Compounds	7440-48-4	8.40E-05	2.47E-06	1.08E-05
Cyanide Compounds	57-12-5	0.00E+00	0.00E+00	0.00E+00
Glycol ethers	Glycol Ethers	0.00E+00	0.00E+00	0.00E+00
Lead Compounds	74-82-8			
Manganese Compounds	7439-96-5			
Mercury Compounds	7439-97-6	2.60E-04	7.65E-06	3.35E-05
Nickel Compounds	7440-02-0	2.10E-03	6.18E-05	2.71E-04
Selenium Compounds	7782-49-2	2.40E-05	7.06E-07	3.09E-06
Polycyclic Organic Matter (POM)	POM	4.46E-05	1.31E-06	5.75E-06
HAPS SUMMARY				
TOTAL HAPS	-		0.06	0.24
Largest Single HAP:		Hexane	5.29E-02	2.32E-01

Notes:

[1] Emission factors for natural gas are from AP-42 Section 1.4, Tables 1.4-3 and 1.4-4 (07/98).

## Appendix B - Facility Comments for Draft Permit

**The facility did not have any comments on the draft permit.**