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DEPARTMENT OF ENVIRONMENTAL QUALITY
STATE A Q PROGRAM

February 1, 2016

Mr. Michael Simon
DEQ State Office – Air Quality Division
1410 N. Hilton
Boise, ID 83706

RE: Title V Renewal Application

Mr. Simon:

Busch Agricultural Resources, LLC's Idaho Falls Malt Plant (Facility ID = 019-00025) is submitting a Tier I Title V permit renewal application. The Tier 1 Permit is set to expire August 3, 2016, unless a complete application for renewal is submitted to the Idaho Department of Environmental Quality (IDEQ) between 6 and 18 months prior to the Permit's expiration date. In compliance with the permit renewal requirements of IDEQ's Air Permit program, BARI is submitting the required Tier 1 Permit Forms, the Responsible Official's certification and signature, and certification of compliance status with all applicable requirements (IDAPA 58.01.01.314.09).

The only physical modification the Facility has made is adding a 4.9 MMBTU/hr natural gas fired dryer. While the new dryer is exempt from construction permitting, the dryer must be included as an insignificant emission unit in the permit. There have not been any changes to production rates, emission rates or operating equipment that would require changing or modifying the current Tier 1 Permit.

Thank you for your consideration. If you have any questions, please contact Kirby Kraft at (314) 577-4572.

Sincerely,

John Drake

Plant Manager

Idaho Falls Malt Plant
5755 S. Yellowstone Hwy.
Idaho Falls, ID 83405
(208) 522-5501



**Busch Agricultural
Resources, Inc.**

ONE OF THE ANHEUSER-BUSCH COMPANIES

CERTIFICATION BY A RESPONSIBLE OFFICIAL

I hereby certify that the Idaho Falls Malt Plant is currently in compliance with all applicable air quality requirements, the facility determines compliance by ensuring compliance with the Title V permit, the facility will submit compliance certifications in accordance with the Title V permit, and the facility is in compliance with the applicable enhanced monitoring and compliance certification requirements of the clean air act.

I hereby certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Mr. Drake

2/1/2016

Date



Busch Agricultural Resources, LLC
Idaho Falls Malt Facility

Tier 1 Permit
Renewal Application

Submitted to:
Air Quality Program Office – Application Processing
Department of Environmental Quality
1410 North Hilton
Boise, ID 83706-1255

January 2016

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- Appendix B: IDEQ Renewal Application Forms

GLOSSARY

ACFM	actual cubic feet per minute
BACT	Best Available Control Technology
Btu/gal	fuel heating value for liquid fuels in British Thermal Units per gallon
Btu/kW-hr	gas turbine heat rate in British Thermal Units per kilowatt hour
Btu/lb	fuel heating value for fuels in British Thermal Units per pound
Btu/SCF	fuel heating value for gaseous fuels in British Thermal Units per standard cubic feet
CO	carbon monoxide
gr/dscf	grains per dry standard cubic feet
HAP	hazardous air pollutants
HHV	higher heating value of fuel
HRSG	heat recovery steam generator
lb/hr	pounds per hour
lb/MMBtu	pounds per million British Thermal Units
lb/MWe	pounds per Megawatt – electric
lb-mol/hr	pound moles per hour
LHV	lower heating value of fuel
MACT	Maximum Achievable Control Technology
MW	megawatts
NAAQS	National Ambient Air Quality Standards
NO_x	nitrogen oxides referenced as nitrogen dioxide
NSPS	New Source Performance Standards
°F	degrees Fahrenheit
PM₁₀	particulate matter with an aerodynamic diameter less than or equal to 10 microns in diameter
ppmdv @15% O₂	parts per million dry volume, referenced to 15 percent oxygen
ppmdv @7% O₂	parts per million dry volume, referenced to 7 percent oxygen
ppmdv	parts per million dry volume
ppmwv	parts per million wet volume
PSD	Prevention of Significant Deterioration
RACT	Reasonably Available Control Technology
SCFM	standard cubic feet per minute
SOTA	State-of-the Art
SO_x	sulfur oxides referenced as sulfur dioxide
ton/yr	tons per year
TSP	total suspended particulate
VOC	volatile organic compounds

1.0 EXECUTIVE SUMMARY

1.1. PURPOSE OF APPLICATION

Busch Agricultural Resources, LLC (BARI) operates a malt facility (i.e., Facility) in Idaho Falls, Idaho. The Facility's ID number is 019-00025 and air emission sources at the Idaho Falls Malt Facility are authorized under Tier 1 Permit No. T1-2010.0127 (i.e., Permit). 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 PM10/PM2.5 and NOX above the major source threshold of 100 tons-per-year. The Facility is not a major source of HAP emissions.

The Tier 1 Permit is set to expire August 3, 2016, unless a complete application for renewal is submitted to the Idaho Department of Environmental Quality (IDEQ) between 6 and 18 months prior to the Permit's expiration date. In compliance with the permit renewal requirements of IDEQ's Air Permit program, BARI is submitting the required Tier 1 Permit Forms, the Responsible Official's certification and signature, and certification of compliance status with all applicable requirements (IDAPA 58.01.01.314.09).

1.2. FACILITY DESCRIPTION

The Idaho Falls Malt Facility is located at 5755 South Yellowstone Highway (Bonneville County) Idaho Falls, Idaho 83402. The Facility's general location is south of Idaho Falls in a commercial/agricultural area located northeast of the intersection of State Highways 91 and 26. The Facility manufactures malt for use in malt products and beverages throughout North America. Primary operations at the Facility include raw material (i.e., barley) receiving and storage, malting operations (i.e., barley germination, drying and sulfuring), product storage and shipping, maintenance activities and utilities. The Facility is classified under SIC Code 2083 and NAICS code 311213 for Malt Products.

1.3. PROPOSED PROJECT

The Idaho Falls Malt Facility is requesting to renew the Title V Operating Permit (Permit #: T1-2010.0127). The current permit (Permit Number = T1-2010.0127) was issued on August 3, 2011, became effective immediately, and expires on August 3, 2016. A renewal application will be considered timely if it is submitted no earlier than 18 months (540 days) and no later than 6 months (180 days) prior to the expiration date (IDAPA 58.01.01.313.03). Receipt of a timely and complete application will allow the Facility to operate under the terms and conditions of the current Title V Permit to Control Air Pollution until final issuance of the renewed permit. Therefore, a renewal application must be submitted to the Idaho Department of Environmental Protection on or before February 5, 2016

to be considered timely.

1.4. SCOPE OF AIR PERMIT APPLICATION

This Title V Operating Permit renewal package covers:

- Federal Rule Applicability
 - CAA Title I §112(r) Risk Management Plan Applicability – Clean Air Act Title I, Part A, §112 Hazardous Air Pollutants, Subsection (r) – Prevention of Accidental Releases – (§112(r)(7)(ii))
 - 40 CFR 60 - New Source Performance Standards (NSPS)
 - 40 CFR 61 - National Emission Standards for Hazardous Air Pollutants (NESHAPs)
 - 40 CFR 63 - Maximum Achievable Control Technology (MACT) Applicability
 - 40 CFR 64 - Compliance Assurance Monitoring (CAM) Applicability Analysis
 - 40 CFR 72 - Acid Rain Applicability
- Greenhouse Gas
- Proposed Changes

1.4.1. 40 CFR 60 – NSPS APPLICABILITY

The Facility is subject to the following NSPS standards:

- Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
- Subpart DD – Standards of Performance for Grain Elevators

1.4.2. 40 CFR 61 – NESHAP APPLICABILITY

The Facility is not subject to any NESHAP standard.

1.4.3. 40 CFR 63 – MACT APPLICABILITY

The Facility is an area (i.e., minor) source of HAP emissions. The Facility is subject to the following MACT standards:

- Subpart ZZZZ – Reciprocating Internal Combustion Engines (RICE) – 40 CFR 63.6580

1.4.4. 40 CFR 64 – CAM APPLICABILITY

None of the emission units at the Facility have a pre-control emission rate greater than the Title V major source threshold. Thus, these emission units are not subject to further CAM analysis or requirements.

1.4.5. 40 CFR 68 - CAA §112(R) - RISK MANAGEMENT PLAN APPLICABILITY

The Facility does not utilize materials that are considered an extremely hazardous substance and a regulated substance. Thus, the Facility is not subject to either the RMP and/or General Duty Clause.

1.4.6. 40 CFR 72 - ACID RAIN APPLICABILITY

The Facility is not a utility, nor are any emission units listed in either Table 1, 2, or 3 of 40 CFR 73.10(a), and they do not sell any electricity to a utility distribution system. Therefore, the Facility is not subject to this rule.

1.4.7. GREENHOUSE GAS EMISSIONS

The only potentially applicable GHG requirement is that GHGs emissions be incorporated into the Title V permit.

1.5. SUMMARY

The proposed project's emissions will comply with all applicable Idaho rules and Federal regulations.

2.0 PERMIT CHANGES

The only physical modification the Facility has made is adding a 4.9 MMBTU/hr natural gas fired dryer. While the new dryer is exempt from construction permitting, the dryer must be included as an insignificant emission unit in the permit. Specifically, the table in Section 7 - "Insignificant Activities" - of the Title V Permit must be amended to include citation (5). This citation - IDAPA 58.01.01.317.01(b)(I)(5) - stipulates that combustion sources that are less than 5 MMBTU/hr burning natural gas are considered insignificant activities based upon size of the emission unit.

2.1. IDEQ PERMIT RENEWAL FORMS

This application includes the following IDEQ Tier 1 Permit renewal forms included in Appendix B:

- Form CSTI – Cover Sheet for Air Permit Application – Tier 1
- Form GI – Facility Information
- Form FRA – Federal Regulation Applicability
- Form CAM – Compliance Assurance Monitoring
- Forms EI-CP1 – EI-CP4 – Emissions Inventory – Criteria Pollutants

2.2. APPLICABLE REGULATIONS

There have not been any changes to production rates, emission rates or operating equipment that would require changing or modifying the current Tier 1 Permit. The regulatory reviews contained within the Permit are accurate and represent Facility operations.

2.3. SUMMARY

The proposed renewal will comply with all applicable Federal and State of Idaho regulations.

3.0 PROCESS DESCRIPTION

The Facility produces barley malt from barley grains. The Facility has three process unit areas; grains handling, malt production and utilities operations. Regulated pollutants are emitted from the grains handling areas, the malt production areas (malt drying) and utilities operations.

3.1. GRAINS HANDLING

The grains handling area includes equipment for loading and unloading grain, malt and by-product materials, equipment for cleaning grain and malt, and equipment for conveying and storing grain and malt. The grain received by the facility is unloaded and conveyed to cleaners and storage bins prior to being conveyed to the malting process areas. All grain handling equipment at the facility has been carefully designed to limit damage to the grain. This is accomplished by limiting the size and number of transfer points, the number of times grain is handled and fall distances for grain.

Malt produced at the plant is conveyed to cleaners and storage bins prior to being loaded for shipment. By-products handling at the plant includes the conveying, storage and loadout of grain which does not meet BARI specifications, malt, sprouts, and grain dust.

The handling and storage of the grains, malts and by-products generates particulate matter (PM). All grains handling at the facility includes the use of baghouse control devices to minimize PM emissions. The baghouse control devices are identified as System 100 through System 800. The descriptions of the processes each system controls are provided below.

3.1.1. SYSTEM 100 (S01)

Barley is delivered to the plant by truck or railcar. For truck deliveries, the truck is driven into the shipping and receiving building, and the grain is dumped into the truck-receiving hopper. During and after dumping the grain, a drag conveyor removes the grain from the truck-receiving hopper to an elevator from which it is transferred to the storage silos. For rail receiving, the car is moved into position over the rail receiving hopper and the grain is discharged into the hopper. Drag conveyors transport the grain to an elevator system, which ties into the silo loading system.

The majority of the malt is loaded into closed-hopper railcars using system 100 (emissions point S01), and the remaining malt is loaded into trucks using system 200 (emissions point S02.) Byproducts are transported from storage silos to the load-out conveyors. Most of the byproducts are loaded onto trucks using a large hood to control emissions. A small amount of byproducts are loaded into closed hopper railcars.

3.1.2. SYSTEM 200 (S02)

System 200 includes the malt and barley conveyors, elevators and spouts. Clean malt and by-products are transported by conveyor from the storage silos to the railcar and truck loading conveyors. The majority of the malt is loaded into closed hopper railcars, and the remaining malt is loaded into trucks. This system also serves several elevators, elevator boots and drag conveyors.

3.1.3. SYSTEM 300 (S03)

System 300 controls emissions from the malt and barley conveyance within the facility by a series of enclosed conveyors, elevators and spouts. This includes the storage silo loading system, the silos, the kiln malt storage bins and the shipping malt storage bin.

3.1.4. SYSTEM 400 (S04)

System 400 controls emissions from the barley cleaning system and associated handling. The barley cleaning system receives barley from storage silos via an enclosed elevator. The cleaning and grading system is headed by a garner grain bin, which is filled from the elevator leg. From the garner bin the grain drops to a grain cleaner. The cleaner screens off shorts that are discharged to a portable open container. The cleaner also aspirates dusts and separates chaff and other materials. From the grain cleaner, the grain is directed to cylinder separators for length grading. The barley is elevated to steeping or to storage. The by-products are routed to the feed bins and are removed from the facility via the malt load-out system.

3.1.5. SYSTEM 500 (S05)

System 500 controls emissions from the graded barley transfer to germination where steeping and germination processes occur. Barley transfer to steeping is accomplished by one of two elevators. From the garner, barley is discharged through aspirators to one of two conveyors, which feed grain to the steep tanks. A manually operated diverter determines which tank will receive the barley.

3.1.6. SYSTEM 600 (S06)

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

3.1.7. SYSTEM 700 (S07)

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.

3.1.8. SYSTEM 800 (DS08)

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.

3.1.1. VACUUM SYSTEMS (S11, S12, S13)

The facility has three vacuum systems at the plant used for cleaning of grain handling area. The first is for cleaning the head house and the second is located in the Kiln House (1 and 2) building. The third vacuum system was installed in the Kiln 3 (east and west) building for use there. The Kiln 3 (east and west) vacuum is a new system and application for a permit for this system is being made herein. The vacuum systems are controlled using baghouses similar to the other dust control systems used at the IDM facility.

3.2. MALT PRODUCTION

3.2.1. STEEPING

The malting process begins with the transfer of cleaned barley grains to steeping tanks. In the steeping process, the water content of the grain is increased using a controlled heated water soak. The soak is accomplished through a carefully controlled process of filling, skimming and aeration. The steeping process takes approximately two days and consists of repeatedly submerging the barley in controlled temperature water. During the steeping process the volume of barley increases with increasing moisture content. When the barley moisture content reaches specifications, steeping is complete and the grain becomes green malt and is transferred to germination beds.

3.2.2. GERMINATION

During the germinating process, the barley is turned and sprayed with water. The moisture content of the barley is maintained at specified levels. In the germination beds, the green malt is allowed to germinate (grow) while cool, humid air is drawn through the beds. The air is used to insure proper moisture levels and temperatures are maintained in the beds during the germination process. Upon completion of the germination process, the green malt is transferred to a kiln.

3.2.3. KILN DRYING (S08, S09, S21, S22)

In the kiln, the green malt is dried. The four kilns are heated using indirect fired natural gas burners. Heated 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 kernel. Sulfuring is accomplished by burning sulfur and allowing the SO₂ formed to contact the malt during the drying process.

Emissions from the steeping, germination and drying process include particulate from malt handling, all criteria pollutants from burning natural gas and SO₂ from sulfuring.

3.3. UTILITIES (S10 & F02)

Utility operations include the operation of three natural gas fired boilers (S10). The boilers provide steam for the malting process equipment.

Additionally, the facility has an emergency internal combustion engine powering a fire pump (F02).

4.0 APPLICABLE REGULATIONS

This section presents a review of some of the applicable and non-applicable Federal regulations. There are numerous administrative regulations (e.g., permit posting, fees, etc.) or other statewide regulations (e.g. open burning, odor) that apply to the Facility, but these are not summarized herein.

4.1. 40 CFR 60 – NSPS APPLICABILITY

CAA §111 "Standards of Performance of New Stationary Sources," requires EPA to establish federal emission standards for source categories which cause or contribute significantly to air pollution. These standards are:

- Referred to as New Source Performance Standards (NSPS).
- Aimed at a specific industry and/or emission unit.
- Intended to promote use of the best air pollution control technologies, taking into account the cost of such technology and any other non-air quality, health, and environmental impact and energy requirements.
- Technology based standards which apply to specific categories of stationary sources.
- Apply to new, modified and reconstructed affected facilities since the proposal of the standard.
- Include emission limitations (may include requirements for control equipment), monitoring, testing, reporting, and recordkeeping requirements.

The pollutants regulated by the NSPS program are:

- Particulate Matter (PM)
- Sulfur Dioxide (SO₂)
- Nitrogen Oxide (NO_x)
- Carbon Monoxide (CO)
- Volatile Organic Compounds (VOC)
- Opacity
- Dioxins/Furans
- Fluorides
- Sulfuric Acid Mist
- Cadmium
- Lead
- Mercury
- Total Reduced Sulfur
- Municipal Solid Waste Landfill Emissions
- Municipal Waste Combustor Metals

- Municipal Waste Combustor Acid Gases (SO₂ and Hydrochloric Acid – HCl)

Generally, state and local air pollution control agencies are responsible for implementation, compliance assistance, and enforcement of the new source performance standards (NSPS). EPA retains concurrent enforcement authority and is also available to provide technical assistance when a state or local agency seeks help. EPA also retains a few of the NSPS responsibilities -- such as the ability to approve alternative monitoring methods -- to maintain a minimum level of national consistency.

Also, EPA is required to review each NSPS subpart every 8 years (5 years for solid waste combustion units - incinerators) to determine if the emission limits, controls, and other requirements need to be revised. When EPA is reviewing requirements, they must consider the emission limitations and reductions that are currently achieved in practice.

The Facility is potentially subject to the NSPS rules. Below is a summary of the potentially applicable subparts and the facilities applicability and compliance status to those subparts.

4.1.1. 40 CFR 60 – SUBPART A - GENERAL PROVISIONS

The Facility becomes applicable to Subpart A - General Provisions upon becoming subject to an NSPS standard

4.1.2. 40 CFR 60.40 – SUBPART D – FOSSIL-FUEL-FIRED STEAM GENERATOR PROVISIONS

This subpart applies to each fossil-fuel-fired steam generating unit of more than 73 megawatts (MW) heat input rate (250 million British thermal units per hour (MMBtu/hr)) and/or each fossil-fuel and wood-residue-fired steam generating unit capable of firing fossil fuel at a heat input rate of more than 73 MW (250 MMBtu/hr).

A fossil-fuel-fired steam generating unit is a furnace or boiler used that burns fossil fuels to produce steam by heat transfer. A fossil fuel and wood residue-fired steam generating unit is a furnace or boiler that burns fossil fuel and wood residue to produce steam by heat transfer. Fossil fuels are natural gas, petroleum, coal, and any form of solid, liquid, or gaseous fuel derived from such materials for the purpose of creating useful heat (vs. solid waste reduction). Wood residue is bark, sawdust, slabs, chips, shavings, mill trim, and other wood products derived from wood processing and forest management operations.

The Facility has 3 boilers – each boiler is rated at 30 MMBTU/hr and were installed after June 9, 1989. Since the boilers are rated below the 250 MMBTU/hr heat input rate threshold, the Facility is not subject to this NSPS Standard.

4.1.3.40 CFR 60.40A – SUBPART DA – ELECTRIC UTILITY STEAM GENERATING UNITS

This subpart applies to each electric steam generating unit that commences construction, modification, or reconstruction after September 18, 1978, and has a heat input capacity greater than 73 megawatts (MW) (250 million British thermal units per hour - MMBtu/hr) from combusting fossil fuels.

An electric utility steam-generating unit is any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW net-electrical output to any utility power distribution system for sale. Also, any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is considered in determining the electrical energy output capacity of the affected Facility. Fossil fuel are natural gas, petroleum, coal, and any form of solid, liquid, or gaseous fuel derived from such material for the purpose of creating useful heat.

The Facility has 3 boilers – each boiler is rated at 30 MMBTU/hr and were installed after June 9, 1989. Therefore, this rule is not applicable.

4.1.4.40 CFR 60.40B – SUBPART DB - INDUSTRIAL-COMMERCIAL-INSTITUTIONAL STEAM GENERATING UNITS

This subpart applies to each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr).

A steam generating unit is a device that combusts any fuel or byproduct/waste and produces steam or heats water or heats any heat transfer medium. This term includes any municipal-type solid waste incinerator with a heat recovery steam generating unit or any steam generating unit that combusts fuel and is part of a cogeneration system or a combined cycle system. This term does not include process heaters.

The Facility has 3 boilers – each boiler is rated at 30 MMBTU/hr and were installed after June 9, 1989. Since the boilers are rated below the 100 MMBTU/hr heat input rate threshold, the Facility is not subject to this NSPS Standard.

4.1.5.40 CFR 60.40C – SUBPART DC – SMALL INDUSTRIAL-COMMERCIAL-INSTITUTIONAL STEAM GENERATING UNITS

This subpart applies to each steam generating unit that commences construction,

modification, or reconstruction after June 9, 1989, and that has a heat input capacity from fuels combusted in the steam generating unit of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr) or less, but more than 2.9 MW (10 MMBTU/hr).

A steam generating unit is a device that combusts any fuel and produces steam or heats water or heats any heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart.

The Facility has 3 boilers – each boiler is rated at 30 MMBTU/hr and were installed after June 9, 1989. Thus, the Facility is subject to this NSPS Standard.

4.1.6. 40 CFR 60.300 – SUBPART DD – GRAIN ELEVATORS

This rule applies to 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 at a grain terminal elevator or any grain storage elevator which commences construction, modification, or reconstruction after August 3, 1978.

A grain terminal elevator is a grain elevator which has a permanent storage capacity of more than 88,100 m³ (ca. 2.5 million U.S. bushels), except those located at, amongst others, a brewery. A grain storage elevator is any grain elevator located at any wheat flour mill, wet corn mill, dry corn mill (human consumption), rice mill, or soybean oil extraction plant.

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.

4.1.7. SUBPART IIII – 40 CFR 60.4200 – COMPRESSION IGNITION INTERNAL COMBUSTION ENGINES

This rule is applicable to owners and operators of stationary compression ignition (CI) internal combustion engines (ICE) and other persons who construct, reconstruct, or modify an engine after July 11, 2005. A compression ignition is a type of stationary internal combustion engine that is not a spark ignition engine.

The Facility has not installed, reconstructed, or modified a compression ignition internal combustion engines (e.g., fire pump) since July 11, 2005. Therefore, this rule does not apply to the Facility.

4.1.8. SUBPART JJJJ – 40 CFR 60.4230 – SPARK IGNITION INTERNAL

COMBUSTION ENGINES

This rule is applicable to owners and operators of stationary spark ignition (SI) internal combustion engines (ICE) who construct, reconstruct, or modify an engine after July 12, 2006. A stationary internal combustion engine is any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE include reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

The Facility has not installed, reconstructed, or modified a spark ignition internal combustion engines since July 12, 2006. Therefore, this rule does not apply to the Facility.

4.1.9. NSPS APPLICABILITY SUMMARY

The Facility is subject to the following NSPS standards:

- Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
- Subpart DD – Standards of Performance for Grain Elevators

4.2. 40 CFR 61 – NESHAP APPLICABILITY

National Emission Standards for Hazardous Air Pollutants (NESHAPS) are stationary source standards for hazardous air pollutants. NESHAPS were originally required by the 1970 Clean Air Act (CAA). These standards were developed for sources and source categories that were determined to pose adverse risk to human health by the emission of HAPs. The Part 61 NESHAPs regulate only 7 hazardous air pollutants – Asbestos, Beryllium, Mercury, Vinyl Chloride, Benzene, Arsenic, Radon/Radionuclides. Prior to 1990, the Clean Air Act required EPA to set standards for each toxic air pollutant individually, based on its particular health risks. Thus, NESHAPs are risk based standards that apply to all existing and new/modified sources regardless if they are a minor or major HAP Facility.

4.2.1. ASBESTOS

Asbestos – 40 CFR 61 Subpart M regulates asbestos emissions from the following operations:

Asbestos Mills – 40 CFR 61.142

An Asbestos Mill is any Facility engaged in converting, or in any intermediate step in converting, asbestos ore into commercial asbestos. The Facility is not an Asbestos Mill. Therefore, this rule does not apply.

Roadways – 40 CFR 61.143

A Roadway is any surface on which vehicles travel. This term includes public and private highways, roads, streets, parking areas, and driveways. The Facility is not a Roadway. Therefore, this rule does not apply.

Manufacturing – 40 CFR 61.144

This standard pertains to certain manufacturing operations (e.g., cloth, wick, tape, cement products, paper, floor tile, paints, etc...) using asbestos. The Facility does not manufacture any of the products listed nor does the Facility utilize asbestos in the manufacturing of the final product. Therefore, this rule does not apply.

Demolition and Renovation – 40 CFR 61.145

Facilities are subject to this standard if they demolish or renovate a building containing asbestos. The Facility did not conduct any demolition or renovation projects. If they do, they must determine applicability at that time.

Spraying – 40 CFR 61.146

Facilities are subject to this standard if they spray asbestos-containing material. The Facility does not spray any asbestos-containing materials. Therefore, this rule does not apply.

Fabricating – 40 CFR 61.147

This standard pertains to certain fabricating operations (e.g., cement building products, friction products, electrical panels, etc...) using asbestos. The Facility does not fabricate any of the products listed, nor does the Facility utilize asbestos in the fabrication of the final product. Therefore, this rule does not apply.

Insulating Materials – 40 CFR 61.148

Facilities are not allowed to install any insulating material that contain asbestos if the materials are either molded and friable or wet-applied and friable after drying. The Facility does not utilize asbestos containing materials as noted. Therefore, this rule does not apply.

Waste Disposal for Asbestos Mills – 40 CFR 61.149

This standard applies to facilities that are subject to 40 CFR 61.142 – Asbestos Mills. The Facility is not an Asbestos Mill. Therefore, this rule does not apply.

Waste Disposal for Manufacturing, Fabricating, Demolition, Renovation, and Spraying – 40 CFR 61.150

This standard applies to facilities that are subject to 40 CFR 61.144 - Manufacturing, 61.145 – Demolition and Renovation, 61.146 - Spraying, 61.147 – Fabricating. If the Facility were to become subject to the Demolition and Renovation standard, they would also become subject to this standard.

Inactive Waste Disposal Sites for Asbestos Mills and Manufacturing and Fabricating – 40 CFR 61.151

This standard applies to facilities that are subject to 40 CFR 61.142 – Asbestos Mill, 61.144 – Manufacturing, 61.147 – Fabricating. The Facility is not subject to any of the listed subparts. Therefore, this rule does not apply.

Active Waste Disposal Sites – 40 CFR 61.154

This standard applies to facilities that own and operate an active waste disposal site that receives asbestos containing material. The Facility is not an active waste disposal site. Therefore, this rule does not apply.

Asbestos Converting Operations – 40 CFR 61.155

This standard applies to facilities that that converts RACM and asbestos-containing waste material into non-asbestos (asbestos-free) material. The Facility is not convert RACM nor asbestos-containing materials. Therefore, this rule does not apply.

4.2.2. BERYLLIUM

Beryllium - 40 CFR 61 Subpart C

This standard applies to:

- Extraction plants, ceramic plants, foundries, incinerators, and propellant plants which process beryllium ore, beryllium, beryllium oxide, beryllium alloys, or beryllium-containing waste.
- Machine shops which process beryllium, beryllium oxides, or any alloy when such alloy contains more than 5 percent beryllium by weight.

The Facility does not utilize beryllium. Therefore, this rule does not apply.

Beryllium Rocket Motor Firing - 40 CFR 61 Subpart C

This standard applies to rocket motor testing sites. The Facility is not a rocket motor testing site. Therefore, this rule does not apply.

4.2.3. MERCURY

Mercury - 40 CFR 61 Subpart E

This standard applies to stationary sources which process mercury ore to recover mercury, use mercury chlor-alkali cells to produce chlorine gas and alkali metal hydroxide, and incinerate or dry wastewater treatment plant sludge. The Facility does not process and/or utilize mercury as noted. Therefore, this rule does not apply.

4.2.4. VINYL CHLORIDE

Vinyl Chloride - 40 CFR 61 Subpart F

This standard applies to facilities that produce Ethylene Dichloride, Vinyl Chloride, and/or polymers containing polymerized Vinyl Chloride. The Facility does not produce any of the listed materials. Therefore, this rule does not apply.

4.2.5. BENZENE

Benzene – Equipment Leaks - 40 CFR 61 Subpart J

This standard applies to certain sources that are intended to operate in the benzene service. In benzene service means that a piece of equipment that either contains or contacts a fluid (Liquid or gas) that is at least 10 percent benzene by weight. Benzene is contained in natural gas, fuel oil, and gasoline. The EPA limits the amount of Benzene that can be contained in these raw materials. The Facility does not have control over the amount of Benzene contained in the natural gas, fuel oil, and/or gasoline. If the Facility should receive a raw material containing more than 10% wt Benzene, the Facility will become subject to this subpart.

Benzene from Coke By-Product Recovery Plants - 40 CFR 61 Subpart L

This standard applies to facilities that that convert RACM and asbestos-containing waste material into non-asbestos (asbestos-free) material. The Facility does not convert RACM nor asbestos-containing materials. Therefore, this rule does not apply.

Benzene – Storage Vessels - 40 CFR 61 Subpart Y

This standard applies to each storage vessel that stores either Industrial Grade Benzene or Refined Benzene. The Facility does not store either types of benzene. Therefore, this rule does not apply.

Benzene – Transfer Operations - 40 CFR 61 Subpart BB

This subpart applies to loading racks at which benzene is loaded into tank trucks, railcars, or marine vessels at each benzene production Facility and each bulk terminal. This does not include gasoline, natural gas, and/or petroleum distillates (e.g., fuel oil, kerosene, or diesel). Additionally, a bulk terminal is a Facility which receives liquid product containing benzene by pipelines, marine vessels, tank trucks, or railcars, and loads the product for further distribution into tank trucks, railcars, or marine vessels. The Facility is not considered a bulk terminal. Therefore, this rule does not apply.

Benzene – Waste Operations - 40 CFR 61 Subpart FF

This subpart applies to chemical manufacturing plants, coke by-products recovery plants, and petroleum refineries. The Facility is not any of the listed subject facilities. Therefore, this rule does not apply.

4.2.6. ARSENIC

Arsenic – Glass Manufacturing Plants - 40 CFR 61 Subpart N

This standard applies to each glass melting furnace that uses arsenic as a raw material. The Facility does not have a glass melting furnace. Therefore, this rule does not apply.

Arsenic – Primary Copper Smelters - 40 CFR 61 Subpart O

This standard applies to each copper converter at a primary copper smelter. The Facility is not a copper smelter. Therefore, this rule does not apply.

Arsenic – Arsenic Trioxide and Metallic Arsenic Production - 40 CFR 61 Subpart P

This standard applies to each metallic arsenic production plant and each arsenic trioxide plant. The Facility does not produce arsenic. Therefore, this rule does not apply.

4.2.7. RADON / RADIONUCLIDES

Radon – Underground Uranium Mines – 40 CFR 61 Subpart B

This subpart applies to active underground uranium mines. The Facility is not an active underground uranium mine. Therefore, this rule does not apply.

Radionuclides – DOE Facilities – 40 CFR 61 Subpart H

This subpart applies to operations at any Facility owned or operated by the Department of Energy that emits any radionuclide other than radon-222 and radon-220 into the air. The Facility is not a DOE Facility. Therefore, this rule does not apply.

Radionuclides – Federal Facilities – 40 CFR 61 Subpart I

This subpart applies to facilities owned or operated by any Federal agency other than the Department of Energy and not licensed by the Nuclear Regulatory Commission. The Facility is not owned by the Federal Government. Therefore, this rule does not apply.

Radionuclides – Elemental Phosphorus Plants – 40 CFR 61 Subpart K

This subpart is applicable to owners or operators of calciners and nodulizing kilns at elemental phosphorus plants. The Facility is not a phosphorus plant. Therefore, this rule does not apply.

Radon – DOE Facilities – 40 CFR 61 Subpart Q

This subpart applies to the design and operation of all storage and disposal facilities for radium-containing material (i.e., byproduct material as defined under section 11.e(2) of the Atomic Energy Act of 1954 (as amended)) that are owned or operated by the Department of Energy that emit radon-222 into air. The Facility is not owned or operated by the DOE. Therefore, this rule does not apply.

Radon – Phosphogypsum Stacks – 40 CFR 61 Subpart R

This subpart applies to each owner or operator of a phosphogypsum stack, and to each person who owns, sells, distributes, or otherwise uses any quantity of phosphogypsum which is produced as a result of wet acid phosphorus production or is removed from any existing phosphogypsum stack. The Facility does not own or operate a phosphogypsum stack nor do they own, sell, distribute or use phosphogypsum. Therefore, this rule does not apply.

Radon – Disposal of Uranium Mill Tailings – 40 CFR 61 Subpart T

This subpart applies to owners and operators of all sites that are used for the disposal of tailings, and that managed residual radioactive material during and following the processing of uranium ores, commonly referred to as uranium mills and their associated tailings. The Facility is not involved in any of the listed activities. Therefore, this rule does not apply.

Radon – Operating Mill Tailings – 40 CFR 61 Subpart W

This subpart applies to owners or operators of facilities licensed to manage uranium byproduct materials during and following the processing of uranium ores, commonly referred to as uranium mills and their associated tailings. The Facility is not licensed to manage uranium byproduct materials, nor do they manage uranium byproducts. Therefore, this rule does not apply.

4.2.8. NESHAP APPLICABILITY SUMMARY

The Facility is not subject to any NESHAP standard.

4.3. 40 CFR 63 – MACT APPLICABILITY

The NESHAPs promulgated after the 1990 Clean Air Act Amendments are found in 40 CFR Part 63. The 1990 Clean Air Act Amendments, significantly expanded EPA's authority to regulate hazardous air pollutants. These standards require application of technology based emissions standards referred to as Maximum Achievable Control Technology (MACT). Consequently, these post-1990 NESHAPs are also referred to as MACT standards. MACT is a technology-based standard, as opposed to the original conception of NESHAPs as a risk-based standard.

Section 112 of the Clean Air Act lists 187 hazardous air pollutants to be regulated by source category. EPA has identified "source categories" that must meet technology requirements to control HAP emissions and is required to develop standards for all industries that emit one or more of the HAPs in significant quantities. The standards are based on emissions levels already achieved by best-performing similar facilities.

Industries subject to MACT standards are classified as either major sources or area sources.

- Major sources are sources that emit 10 tons per year of any of the listed HAPs, or 25 tons per year of a mixture of HAPs. These sources may release HAPs from equipment leaks, when materials are transferred from one location to another, or during discharge through emission stacks or vents.
- Area sources consist of smaller-size facilities that release lesser quantities of HAPs into the air. Area sources are sources that emit less than 10 tons per year of a single HAP or less than 25 tons per year of a combination of HAPs. Though emissions from individual area sources are often relatively small, collectively their emissions can be of concern, particularly where large numbers of sources are located in heavily populated areas. Area sources must employ Generally Available Control Technology (GACT) which is based on appropriate practices/techniques commercially available and taking into account economic and technical considerations.

MACT standards are applicable to major sources, while Generally Available Control Technology (GACT) standards are applicable to area sources.

The Facility is considered an area source (i.e., minor) for HAPs.

MACT standards are only applicable to major stationary sources. Therefore, the Facility is not subject to any MACT Standards.

GACT standards are potentially applicable to area sources. Therefore, the Facility may be subject to

various area source GACT standards. 40 CFR 63.1(b)(3) requires that facilities subject to or potentially subject to any MACT/GACT standard keep certain records.

Based upon a comparison of Facility operations to each area source MACT/GACT Standard, the Facility is potentially subject to the following MACT/GACT standards: (NOTE, this is not an analysis of each MACT/GACT standard to the Facility's operations, it is an analysis of the MACT/GACT standards that are potentially applicable to the Facility.)

4.3.1. SUBPART ZZZZ – RECIPROCATING INTERNAL COMBUSTION ENGINES (RICE) – 40 CFR 63.6580

The Subpart ZZZZ standards are applicable to Reciprocating Internal Combustion Engines (RICE) located at area sources of hazardous air pollutants (HAP) and RICE with a site rating of less than or equal to 500 brake horsepower (bhp) located at major sources of HAP. In addition, the standards for existing non-emergency compression ignition (CI) engines with a site rating of greater than 500 bhp at major sources and revised provisions related to Startup, Shutdown, and Malfunction (SSM) events for engines previously regulated under the rule.

The Facility has one 300 horsepower fire pump/emergency generator. Per 40 CFR 63.6585, with a few exceptions, any Facility that owns a reciprocating internal combustion engine is subject to this rule. The Facility is subject to this rule.

4.3.2. SUBPART JJJJJJ – INDUSTRIAL BOILERS AT AREA SOURCES - 40 CFR 63.11193

This rule applies to each new, reconstructed, or existing, amongst others, oil fired boiler. The boiler is considered an existing source if it was constructed or reconstructed on or before June 4, 2010.

The Facility has 3 existing boilers – each boiler can burn natural gas. Therefore, the Facility is exempt from Subpart JJJJJJ (40 CFR 63.11193) – area source boiler MACT.

4.3.3. MACT APPLICABILITY SUMMARY

The Facility is an area (i.e., minor) source of HAP emissions. Therefore, the Facility is not subject to any major source MACT standard, but is potentially subject to various minor source MACT Standards (i.e., GACT). Based upon a comparison of the Facility operations to each area source MACT Standard, the Facility is subject to the following MACT standards:

- Subpart ZZZZ – Reciprocating Internal Combustion Engines (RICE) – 40 CFR 63.6580

4.4. 40 CFR 64 – CAM APPLICABILITY

4.4.1. INTRODUCTION

In accordance with 40 CFR 64 requirements, Compliance Assurance Monitoring (CAM) applicability analyses are required for all Title V facilities upon renewing their Title V Operating Permit.

Compliance assurance monitoring is intended to provide a reasonable assurance of compliance with applicable requirements under the Clean Air Act (CAA) for large emission units that rely on pollution control device equipment to achieve compliance. Monitoring is conducted to determine that control measures, once installed or otherwise employed, are properly operated and maintained so that they continue to achieve a level of control that complies with applicable requirements. The CAM approach establishes monitoring for the purpose of:

1. Documenting continued operation of the control measures within ranges of specified indicators of performance (such as emissions, control device parameters, and process parameters) that are designed to provide a reasonable assurance of compliance with applicable requirements;
2. Indicating any excursions from these ranges; and
3. Responding to the data so that the cause or causes of the excursions are corrected.

4.4.2. APPLICABILITY ANALYSIS METHODOLOGY

Part 64 of 40 CFR defines “Compliance Assurance Monitoring” sources as those that require monitoring, compliance certification, periodic reporting, and recordkeeping information collections by owners and operators of Title V sources with controlled pollutant specific emission units that have a pre-control potential to emit major amounts of regulated pollutants.

The CAM requirements as outlined in Code of Federal Regulations, Title 40, Part 64 (40 CFR 64) apply to individual sources at Part 70 facilities which have a potential to emit greater than major source levels.

According to 40 CFR Section 64.2 the CAM rule applies to Title V sources with one or more pollutant-specific emission units (PSEU) that:

- Is subject to an emission limitation or standard;
- Uses an emission control device to achieve compliance; and
- Has the precontrol potential to emit equal to or greater than the Title V major source threshold.

A “pollutant-specific emissions unit” is an emissions unit considered separately with respect to each regulated air pollutant. CAM applicability is to be determined on a pollutant-by-pollutant basis for each emissions unit.

Determining the applicability of CAM can be broken down into a five-step process as follows:

1. Determine if the facility is a Title V source. CAM does not apply to smaller sources or sources exempt from the Title V program.
2. Determine which emission units use an “active” control device to meet an emission limit. CAM applies only to units that use a control device to meet an emission limit. All units that are not controlled with air pollution control devices are not included.
3. Determine if the emission limit or standard was promulgated after 1990 Clean Air Act Amendments. The CAM rule does not apply to emission standards promulgated after the 1990 CAAA, since these standards should have adequate monitoring. Thus, NSPS or NESHAPs that were final after November 15, 1990, are exempt.
4. Calculate the uncontrolled potential to emit (PTE) from the identified emission units for each pollutant limit identified.
5. Identify all of the units with a PTE of a regulated pollutant at or above the Title V major source thresholds.

Therefore, CAM only applies to an emission unit if it is subject to an emission limit or standard (#3 above), uses an active control device to meet the emission limit or standard (#2 above), and has precontrol potential emissions of the regulated pollutant equal to or greater than the Title V major source threshold (#4 above).

If an emission unit has an uncontrolled PTE at or greater than the Title V thresholds (i.e., those identified in Step 5), the facility must prepare and submit a CAM Plan.

If required, a CAM plan must be prepared for each PSEU. The objectives of the CAM plan are to identify the monitoring that will be used for the PSEU, the necessary indicator ranges, and the rationale for these selections. The CAM Plan must identify general criteria that specify the performance indicator(s) and indicator ranges to show the control equipment is functioning properly. It also must outline performance criteria for each control device, including data collection procedures, monitoring frequency, quality assurance and quality control procedures, and verification methods. Special criteria for continuous emission monitors, opacity monitors, and parametric monitoring systems also need to be included. The CAM plan is extensive and must be complete enough so the permitting agency can determine if the monitoring is sufficient to show the unit is in compliance with the applicable emission

standards. The elements of a CAM plan are identified in 40 CFR 64.3 and 64.4.

4.4.3. APPLICABILITY

Using the applicability methodology outlined above, the following is the CAM applicability analysis for the Facility.

Step 1: Determine if source is a Title V source.

The Facility is a major stationary source and thus, subject to Title V.

Step 2: Determine which emission units use an “active” control device to meet an emission limit.

As previously noted, CAM applies only to emission units that use a control device to meet an emission limit. This critical step results in identifying those emission units that are potentially subject to the CAM requirements. In order to properly determine the potentially applicable sources, each component of the applicability criteria must be evaluated as follows:

2a. Determine all of the emission units at the facility.

2b. Based upon results of 2a, determine which emission units use “active” control devices.

2c. Based upon results of 2b, determine which are using those control devices to meet an emission limit.

Thus, in order to determine which emission units are subject to CAM requirements, one must first identify all of the emission units at the facility. Once the emission units are identified, one must determine which emission units use “active” control devices. The final step is to determine of the emission units using “active” control devices, which are using those control devices to meet an emission limit.

2a. Determine all of the emission units at the facility.

The CAM rule defines an “emissions unit” in 40 CFR 64.1 as having the same meaning provided under 40 CFR Part 70. 40 CFR 70.2 defines “Emissions Unit” as any part or activity of a stationary source that emits or has the potential to emit any regulated air pollutant or any pollutant listed under section 112(b) of the Act. Therefore, the term “emissions unit” as defined for CAM applicability pertains to each piece of equipment or process that may emit a pollutant.

Based upon this definition, if several emission units were permitted under one identification number, these units may be split apart for CAM applicability. For example, if a source has two Storage Silos identified by a single Emission Unit ID, but the permit limits the maximum

process rate on a per silo basis (vs. total for both). Additionally, the units operate independently of one other and each silo has a separate independent control device. Thus, for CAM applicability purposes each silo is viewed as an emission unit.

On the other hand, if the emissions from the collection of woodworking processes (e.g., saws, planers, shapers, sanders) are subject to a single facility emissions limit, then the collection of processes (e.g., an entire room or building) is the Emission Unit whether the emissions are routed to a common control device or to separate control devices.

2b. Based upon results of 2a, determine which emission units use "active" control devices.

Once the emission units were determined, the Facility identified those emission units using "active control devices".

The CAM rule defines "control devices" to mean equipment that actively removes or destroys emissions (see § 64.1), as opposed to other passive control measures that are inherent to the process equipment. The term "control devices" excludes "inherent process equipment". The CAM rule defines "inherent process equipment" as equipment that is necessary for the proper operation of the process or equipment that is installed for purposes other than compliance with air pollution regulations. Therefore, emission units that use passive control devices/measures and/or are inherent process equipment are not subject to CAM.

As noted in USEPA's response to comments on the draft CAM rule, the USEPA recognizes that in some situations, equipment that in some cases would be considered a control device is more akin to an inherent part of the process. This situation could apply to the Filter Receivers reviewed in this analysis. For example, a Filter Receiver is used to unload grain from a railcar and place it into a storage silo. The receiver is physically located on top of the silo. The grain is conveyed from the railcar into the receiver and then gravity fed into the silo. While the Filter Receivers act much like a cyclone, they also contain baghouse-type bags within the unit to minimize product loss. The Receivers cannot be operated without the bags, nor can the bags be by-passed. Numerous air pollution regulatory agencies consider these bags an inherent part of the Receiver's design. Thus, the Filter Receivers are typically not considered an "active" control device.

Nonetheless, for purposes of CAM applicability, the Facility did not consider the Filter Receivers an inherent part of the design. Thus, the Filter Receivers on all of the units that are being reviewed are conservatively assumed to be an "active" control device.

2c. Based upon results of 2b, determine which are using those control devices to meet an emission limit.

The emission units using active control devices identified in Step 2b were then evaluated to determine, which control devices were being used to meet an emission limit or standard. CAM

applies only if an applicable emission limitation or standard applies because the purpose of CAM is to provide a reasonable assurance of compliance with such requirements.

The term “emission limit or standard” is defined in 40 CFR §64.1 to mean any applicable requirement that constitutes an emission limitation, emission standard, standard of performance, or means of emission limitation as defined under the Act. Part 64 states that the term “applicable requirement,” shall have the same meaning as provided under Part 70. Therefore, Part 64 establishes that only those emission limitations or standards that are applicable requirements as defined in Part 70 and included as Federally enforceable permit conditions in a Part 70 permit are subject to the requirements of Part 64.

Additionally, the definition of “emission limitation or standard” clarifies that, for the purposes of Part 64, the definition of “emission limitation or standard” does not include general operation requirements that an owner or operator may be required to meet, such as requirements to obtain a permit, to operate and maintain sources in accordance with good air pollution control practices, to develop and maintain a malfunction abatement plan, or to conduct monitoring, submit reports or keep records.

The applicability provisions in Part 64 include a "surrogate" of a regulated air pollutant to address situations in which the emission limitation or standard is expressed in terms of a pollutant (or other surrogate) that is different from the regulated air pollutant that is being controlled. A common example would be emission limits expressed in terms of particulate matter and opacity rather than PM-10.

For purposes of CAM applicability, the Facility assumed that all control devices were used to meet an emission limit.

Summary of Step 2:

The Table below identifies all significant emission units at the Facility.

Step 3: Determine if the emission limit or standard was promulgated after 1990 Clean Air Act Amendments.

The CAM rule does not apply to emission standards promulgated after the 1990 CAAA, since these standards should have adequate monitoring. Thus, NSPS or NESHAPs that were final after November 15, 1990, are exempt.

For purposes of this review, the Facility assumed all emission limits or standards were promulgated prior to 1990, thus, all emission limits are subject to CAM applicability.

Step 4: Calculate the uncontrolled potential to emit (PTE) from the identified emission units

for each pollutant limit identified.

The CAM rule stipulates applicability based upon “potential pre-control device emissions”. The term “potential pre-control device emissions” has the same meaning as the term “potential to emit”, except that any emission reductions achieved by the control device are not taken into account, even if the owner or operator generally is allowed to do so under the regulatory definition of “potential to emit”.

Emission Estimating Methodology

In determining an emission unit’s PTE, the most appropriate emission estimating methodology must first be determined. The most accurate method to determine the emissions from a source is to measure the emissions (i.e., stack test). Unfortunately, none of the potentially CAM applicable emission units identified in Step 2 have conducted stack testing.

The next best emission estimating methodology is mass balance. In order for mass balance to be an effective methodology, detailed records of the various input/output streams are required. These records are not available for the majority of the Facility’s emission units.

USEPA’s AP-42 emission factors provide another method to estimate the emissions. The Facility utilized AP-42 emission factors in estimating the potential pre-control device emissions from all emission units listed in the Table below.

The Table below shows the emission factors used, maximum process rates, and pre-control device emissions per emission unit. The Facility determined that AP-42 emission factors are the most appropriate emissions estimate for all emission units.

Step 5: Identify all of the units with a PTE of a regulated pollutant at or above the Title V major source thresholds.

The final step in the CAM applicability process is comparing the pre-control device emission rate (as determined in Step 4) to the applicable Title V threshold. The pollutant emitted from the potentially CAM applicable emission units is Particulate Matter 10 (PM10). The Title V major source threshold for PM10 is 100 tons per year.

As outlined in 40 CFR 64.2(a)(3), the final step in the CAM applicability process is comparing the pre-control device “regulated air pollutant” emission rate to the applicable Title V major source threshold.

Regulated Pollutant

40 CFR 64.1 defines a “regulated air pollutant” as having “the same meaning as provided under part 70 and 71 of this chapter”. 40 CFR 71 (and OAC 3745-77-01(FF)) defines a

“regulated air pollutant” as, amongst other things, “any pollutant for which a national ambient air quality standard has been promulgated”. Title I Part A Section 109 of the Clean Air Act requires the administrator to develop national ambient air quality standards (NAAQS). The NAAQS are published in 40 CFR 50 (PM-10 = 40 CFR 50.6 and PM-2.5 = 40 CFR 50.7 & 50.13).

NAAQS for total suspended particulate matter (TSP) were first established in 1971. However, since July 1, 1987 the EPA has used PM-10 in lieu of TSP. Additionally, in July 1997 EPA established a second particulate matter NAAQS via PM-2.5. Therefore, there are two NAAQS for particulate matter; PM-10 and PM-2.5. This is supported by OAQPS’s October 16, 1995 memo (“Definition of Regulated Pollutant for Purposes of Title V”) that states, PM-10 is the “regulated pollutant” for Title V (Part 70/71) applicability.

For CAM purposes, PM-10 and PM-2.5 are considered “regulated air pollutants”, not TSP or PM.

Major Source

40 CFR 64.1 defines a “major source” as having “the same meaning as provided in part 70 and 71 of this chapter”. 40 CFR 70, 71, and OAC 3745-77-01(X) all define a “major source” as, amongst other things, a stationary source that has the “potential to emit 100 tons per year or more of any pollutant subject to regulation”. Based upon the above, a major source is any stationary source with a potential to emit more than 100 TPY of PM-10, PM-2.5, VOC, NO_x, CO, and SO₂.

CAM APPLICABILTY TABLE

Stack	Description	Throughput (T/yr)	Emissions Factor (lb-PM ₁₀ /T)	Emissions Factor Reference	Uncontrolled PM ₁₀ 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

Stack	Description	Throughput (T/yr)	Emissions Factor (lb-PM ₁₀ /T)	Emissions Factor Reference	Uncontrolled PM ₁₀ Emissions (T/yr)	Do Emissions Exceed 100 T/yr?
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

Summary

Therefore, CAM applicability is based upon comparing the pre-control device emission rate of the “regulated pollutant” to the applicable major source threshold of 100 TPY of PM-10, PM-2.5, VOC, NO_x, CO, and SO₂.

4.4.4. CONCLUSION

In conclusion, none of the emission units at the Facility have a pre-control emission rate greater than the Title V major source threshold. Thus, these emission units are not subject to further CAM analysis or requirements.

4.5. 40 CFR 68 - CAA §112(R) - RISK MANAGEMENT PLAN APPLICABILITY

The Clean Air Act (CAA) Amendments of 1990 required U.S. EPA to develop regulations to prevent accidental releases of regulated substances and reduce the severity of releases that do occur. The final rule for the "Accidental Release Prevention Requirements: Risk Management Programs" under CAA Section 112(r)(7) was published in the Federal Register on June 20, 1996. The Clean Air Act (CAA) §112(r) program is both a statutory and regulatory program designed to prevent chemical accidents and releases through a program of preparedness, response and prevention. 40 CFR 68 – Chemical Accident Prevention Provisions, implements and regulates the provisions of §112(r) of the CAA.

A Risk Management Plan (RMP) is required to be developed by facilities that have a regulated substance present in a process in quantities that exceed the threshold quantity, as determined by §68.115 and §68.130. A "process" is defined as "any activity involving a regulated substance, including any use, storage, manufacturing, handling, or on-site movement of the substance or any combination of these activities. Any group of vessels that are interconnected, or separate vessels that are located in such a manner that a regulated substance potentially could be involved in a release, shall be considered a single process." The regulation includes a List of Regulated Substances under section §112(r) of the Clean Air Act, including their synonyms and threshold quantities (in pounds) to help assess if a process is subject to the RMP rule or the general duty clause. States who have taken delegation of the Clean Air Act, Section 112(r) program may have additional requirements for the federally listed chemicals, and/or additional listed chemicals.

The General Duty Clause (§112(r)(1)) requires that owners and operators of stationary sources producing, processing and storing extremely hazardous substances have a general duty to identify hazards associated with an accidental release, design and maintain a safe Facility, and minimize consequences of accidental releases that occur. EHSs are any chemical listed in 40 CFR Part 68, or any other chemical which may as a result of short-term exposures because of releases to the air cause death, injury or property damage due to their toxicity, reactivity, flammability, volatility, or corrosivity. Facilities that are not subject to RMP regulations are still covered by the General Duty Clause.

The Facility does not utilize materials that are considered an extremely hazardous substance and a regulated substance. Thus, the Facility is not subject to either the RMP and/or General Duty Clause.

4.6. 40 CFR 72 – ACID RAIN PERMIT APPLICABILITY

Pursuant to Title IV of the CAA, the purpose of 40 CFR 72 is to establish general provisions and an operating permit program for affected sources and affected units under the Acid Rain Program. The regulations also set forth requirements for obtaining three types of Acid Rain permits, during Phases I and II, for which an affected source may apply:

- Acid Rain permits issued by the United States Environmental Protection Agency during Phase I;

- Acid Rain portion of an operating permit issued by a State permitting authority during Phase II; and
- Acid Rain portion of an operating permit issued by EPA when it is the permitting authority during Phase II.

The requirements under this part supplement, and in some cases modify, the requirements under parts 70 and 71 and other regulations implementing Title V for approving and implementing State operating permit programs and for Federal issuance of operating permits under Title V, as such requirements apply to affected sources under the Acid Rain Program.

This rule applies to emission units listed in 40 CFR 73.10(a) - Table 1, 2, or 3, any other existing utility units, new utility units, and/or cogeneration facilities that sells more than one-third of their potential electrical output capacity to a utility distribution system and more than 219,000 MWe-hrs on an annual basis. A utility unit is any unit owned by a utility that generates electricity for sale.

The Facility is not a utility, nor are any emission units listed in either Table 1, 2, or 3 of 40 CFR 73.10(a), and they do not sell any electricity to a utility distribution system. Therefore, the Facility is not subject to this rule.

5.0 GREENHOUSE GAS EMISSIONS

5.1. BACKGROUND

On April 2, 2007, the U.S. Supreme Court found that Greenhouse Gases (GHGs) are air pollutants under Clean Air Act (CAA) §302(g). On December 15, 2009, the Administrator found that the current and projected atmospheric concentrations of the mix of six long-lived and directly emitted GHGs - CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆ - are reasonably anticipated to endanger the public health and welfare of current and future generations (aka “Endangerment Finding”). Therefore, GHGs are considered to be an air pollutant and subject to regulation and permitting as to protect public health and welfare.

One of the significant issues with GHGs being subject to regulations and permitting requirements is that the existing (i.e., prior to Aug. 2, 2010) regulations and permitting requirements have trigger levels at the, for sake of discussion, 100 TPY limit, while GHGs are emitted magnitudes higher than other regulated pollutants. These regulations would require nearly every facility (Hotels, Hospitals, Apartment Buildings, Schools, etc...) with a combustion unit to instantly become subject to Federal New Source Review (NSR) regulations (NSR and/or PSD) and Title V Permitting. In an attempt to minimize these impacts, EPA published (June 3, 2010) a rule “tailoring” the applicability criteria that defines which stationary sources and modification projects become subject to permitting requirements for GHG emissions under the PSD and Title V programs.

The tailoring rule became effective on August 2, 2010. This rule establishes a three step process for phasing in the applicable requirements and establishes GHG specific trigger thresholds. For example, after June 30, 2013 a source must have a potential to emit more than 100,000 tons of CO₂ equivalent emissions per year before being considered “major” and triggering the permitting requirements.

Under EPA’s long-standing interpretation, a pollutant, such as a GHG, is “subject to regulation” when it is subject to a CAA requirement that requires actual control of emissions. Title V regulations require each permit contain all pollution control requirements or “applicable requirements”. Thus, GHGs became subject to regulation on January 2, 2011 and must be incorporated into a facility’s Title V permit upon issuance, modification, or renewal.

5.2. PERMIT APPLICABILITY

If the Facility’s GHG potential to emit is more than 100,000 tons per year of CO₂ equivalent emissions, the GHG emissions are “subject to regulation” and, thus, must be incorporated into the Facility’s Title V Permit. Therefore, one must first determine the Facility’s GHG PTE.

If the GHG emissions are not subject to regulation, they do not need to be incorporated into the Title

V permit.

If the GHG emissions are subject to regulation and must be incorporated into the Title V permit, the Facility must provide:

- A description of GHGs emission sources at the facility
- A detailed quantification of its GHG emission sources
- A description of all applicable GHG regulations (e.g., PSD)
- Applicable citations and descriptions of any applicable requirements for GHGs (e.g., GHG BACT requirements resulting from a PSD review process)
- Information pertaining to any associated monitoring and other compliance activities
- A description of all applicable GHG requirements necessary to assure compliance – for example:
 - GHG control requirements resulting from PSD permitting actions
 - Monitoring, recordkeeping, and reporting

Based upon this information, the permitting authority will issue emissions limitations and standards necessary to assure compliance with all applicable requirements for GHGs. This includes all monitoring and testing requirements for GHGs, and additional compliance certification, testing, monitoring, reporting, and recordkeeping requirements sufficient to assure compliance with GHG-related terms and conditions of the permit.

5.3. GHG POTENTIAL TO EMIT

5.3.1. HISTORY

The Facility's parent company, AB-InBev, maintains a global greenhouse gas inventory. AB-InBev was a leader in establishing GHG reduction goals. Over the years, AB-InBev has set several GHG reduction targets and has met each one. For example:

- In 2007, Anheuser-Busch pledged to reduce greenhouse gas emissions from 2005 levels by five percent by 2010. Through the dedication of employees and continued use of alternative fuels, Anheuser-Busch met the goal one-year ahead of schedule and was formally recognized for its accomplishment by USEPA's Climate Leaders.
- In 2009, Anheuser-Busch committed to further decrease total greenhouse gas emissions by 15 percent by the end of 2013 based on figures from 2008. Again, the company met this target.

The latest GHG reduction goal was established in June 2013. AB-InBev's 2013 goal is to reduce global greenhouse gas emissions per hectoliter of production by 10% from a 2012 baseline by the end of 2017.

5.3.2. PROTOCOL

AB-InBev developed its greenhouse gas inventory within a specified boundary and based on WRI / WBCSD's GHG Protocol. The Greenhouse Gas Protocol Initiative is a multi-stakeholder partnership of businesses, non-governmental organizations (NGOs), governments, and others convened by the World Resources Institute (WRI), a U.S.-based environmental NGO, and the World Business Council for Sustainable Development (WBCSD), a Geneva-based coalition of 170 international companies. Launched in 1998, the Initiative's mission is to develop internationally accepted greenhouse gas (GHG) accounting and reporting standards for business and to promote their broad adoption.

The GHG Protocol provides a full suite of accounting and reporting standards, sector guidance, calculation tools, and trainings for business and government. It establishes a comprehensive, global, standardized framework for measuring and managing emissions from private and public sector operations, value chains, products, cities, and policies.

The design of GHG Protocol standards and tools is driven by generally accepted accounting and reporting principles (Completeness, Accuracy, Consistency, Relevance, and Transparency). The GHG Protocol produces general standards applicable to all sectors and regions, as well as specific guidance and calculation tools.

5.3.3. GREENHOUSE GASES

The Intergovernmental Panel on Climate Change (IPCC) lists more than 30 gases that influence the greenhouse effect. The GHG permitting rule is only applicable to the following greenhouse gases:

- carbon dioxide ("CO₂");
- methane ("CH₄");
- nitrous oxide ("N₂O");
- sulfur hexafluoride ("SF₆");
- hydrofluorocarbons ("HFCs");
- perfluorocarbons ("PFCs").

5.3.4. GREENHOUSE GAS EMISSION SOURCES

Greenhouse gas emissions are identified as either direct or indirect. Direct emissions are released within the bounds of the reporting facility. For example, fuel that is purchased and then combusted on-site is considered a direct emission. Indirect emissions are released outside the bounds of the reporting facility as a result of activities at the reporting facility. An example of this is purchased electricity. Greenhouse gas emissions are released at the power producer's

site for electricity that is consumed at the reporting facility. Those emissions are indirectly associated with the use of electricity at the reporting facility.

The Facility was evaluated to identify sources of greenhouse gas emissions. The WRI / WBCSD GHG Protocol and other tools from resources such as the IPCC, Climate Leaders and the California Climate Action Registry were used to identify whether or not there were less obvious sources of greenhouse gas emissions.

The primary sources of CO₂ emissions identified were from fuel combustion and purchased electricity. Existing reports detailing fuel use and electricity purchases were used to identify the major users of energy within the Facility. Smaller combustion sources include back-up generators which are not used often, oxy-acetylene used for welding (CO₂ only), and propane forklifts.

The direct sources of GHG included in the inventory are:

- Stationary combustion sources, including steam generation, back-up generators
- Purchased CO₂
- Mobile combustion sources, including vehicles, forklifts, shuttles and locomotives
- Acetylene torch welders
- Refrigerants and fire suppression equipment

The indirect sources of GHG included in the inventory are:

- Purchased electricity
- Purchased green electricity (CO₂ is tracked but not included in the inventory; CH₄ and N₂O emissions are included in the inventory where relevant)

The following GHG emissions are excluded from the inventory:

- Emissions from portable generators or welders brought on-site by contractors
- Emissions from contracted lawn work. These would be very small in comparison to emissions from other sources.

5.3.5. EMISSION QUANTIFICATION METHOD

EMISSION SOURCE	DATA METHODOLOGY	ACTIVITY DATA SOURCE	EMISSIONS INCLUDED IN REPORTED INVENTORY
Purchased electricity (U.S.)	Multiply usage by U.S. DOE e-GRID factors. Use appropriate conversion factors to derive emissions. Apply GWP.	Metered usage from Utility Report	100%
Natural gas combustion	Multiply MMBTU by emission factors. Use appropriate conversion factors to derive emissions. Apply GWP.	Utility Report	100%

5.3.6. CO2E PTE

USEPA has provided guidance on how to calculate GHG PTE. For example, is applicability based upon Scope 1 (direct emissions) and Scope 2 (indirect emissions) or just Scope 1 emissions? Are Biomass emission to be included in either Scope 1 or Scope 2? For purposes of Scope 1 calculations, traditional PTE calculations were used.

The Facility's direct (Scope 1) GHG potential to emit is approximately 225,000 tons of CO_{2e}. Since the Facility's GHG potential to emit is more than 100,000 tons per year of CO₂ equivalent emissions, the Facility is potentially subject to permitting.

6.0 SUMMARY

The Idaho Falls Malt Facility is requesting to renew the Tier 1 Permit (T1-2010.0127). The current Permit became effective August 3, 2011 and expires on August 3, 2016. A complete Tier 1 Permit renewal application must be filed on or before February 2, 2016. Receipt of a timely and complete application will allow BARI to operate the Idaho Falls Malt Facility under the terms and conditions of the current Tier 1 Permit until final issuance of the renewed permit (40 CFR 70.7(b) and IDAPA 58.01.01.322.15.p).

APPENDIX A

CURRENT TIER 1 PERMIT



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706 • (208) 373-0502

C.L. "Butch" Otter, Governor
Toni Hardesty, Director

August 3, 2011

John Drake
Resident Engineer
Busch Agricultural Resources, LLC – Malt Plant
5755 S. Yellowstone Hwy.
Idaho Falls, ID 83402

RE: Facility ID No. 019-00025, Busch Agricultural Resources, LLC, Idaho Falls
Final Tier I Operating Permit Letter

Dear Mr. Drake:

The Department of Environmental Quality (DEQ) is issuing Tier I Operating Permit No. TI-2010.0127 to Busch Agricultural Resources, LLC at Idaho Falls in accordance with IDAPA 58.01.01.300 through 386, Rules for the Control of Air Pollution in Idaho (Rules).

The enclosed permit is effective immediately, summarizes the applicable requirements for your facility, and requires an annual compliance certification for all emissions units. This permit replaces Tier I Operating Permit No. T1-030512, issued June 23, 2006. The enclosed operating permit is based on the information contained in your permit application received on September 21, 2010. Modifications to and/or renewal of this operating permit shall be requested in a timely manner in accordance with the Rules.

In order to fully understand the compliance requirements of this permit, DEQ highly recommends that you schedule a meeting with Maria Miles, Air Quality Analyst, at (208) 528-2650 to review and discuss the terms and conditions of this permit. Should you choose to schedule this meeting, DEQ recommends the following representatives attend the meeting: your facility's plant manager, responsible official, environmental contact, and any other staff responsible for day-to-day compliance with permit conditions.

Pursuant to IDAPA 58.01.23, you, as well as any other entity, may have the right to appeal this final agency action within 35 days of the date of this decision. However, prior to filing a petition for a contested case, I encourage you to call Darrin Pampaian at 208 373-0502 or darrin.pampaian@deq.idaho.gov to address any questions or concerns you may have with the enclosed permit.

Sincerely,

A handwritten signature in black ink, appearing to read "Mike Simon".

Mike Simon
Stationary Source Program Manager
Air Quality Division

MS/dp Permit No. T1-2011.0127 PROJ 60589

Enclosure



**Air Quality
TIER I OPERATING PERMIT**

State of Idaho
Department of Environmental Quality

PERMIT No.: T1-2010.0127

FACILITY ID No.: 019-00025

AQCR: 61 CLASS: A UTM ZONE: 12

SIC: 2083 NAICS: 311213

UTM COORDINATE (km): 413.1 E, 4810.9 N

1. PERMITTEE

Busch Agricultural Resources, LLC

2. PROJECT

Project No. 60589, Tier I Operating Permit Renewal

3. MAILING ADDRESS

5755 S. Yellowstone Hwy.

CITY

Idaho Falls

STATE

ID

ZIP

83402

4. FACILITY CONTACT

John Drake

TITLE

Resident Engineer

TELEPHONE

(208) 522-5501

5. RESPONSIBLE OFFICIAL

Adam Griffith

TITLE

Plant Manager

TELEPHONE

(208) 522-5501

6. EXACT PLANT LOCATION

5755 S. Yellowstone Hwy., Idaho Falls, ID

COUNTY

Bonneville

7. GENERAL NATURE OF BUSINESS & KINDS OF PRODUCTS

Malt manufacturing

8. PERMIT AUTHORITY

This Tier I operating permit is issued pursuant to the Rules for the Control of Air Pollution in Idaho, IDAPA 58.01.01.300 through 386. The permittee shall comply with the terms and conditions of this permit.

This permit incorporates all applicable terms and conditions of prior air quality permits issued by the Idaho Department of Environmental Quality (DEQ) for the permitted source, unless the permittee emits toxic pollutants subject to state-only requirements pursuant to IDAPA 58.01.01.210, and the permittee elects not to incorporate those terms and conditions into this operating permit.

The effective date of this permit is the date of signature by DEQ on the cover page.

DARRIN PAMPAIAN, P.E., PERMIT WRITER
DEPARTMENT OF ENVIRONMENTAL QUALITY

MIKE SIMON, STATIONARY SOURCE PROGRAM MANAGER
DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE ISSUED:	August 3, 2011
DATE MODIFIED/AMENDED:	
DATE EXPIRES:	August 3, 2016

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Acronyms, Units, and Chemical Nomenclature

acfm	actual cubic feet per minute
AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
Btu	British thermal unit
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EPA	U.S. Environmental Protection Agency
gpm	gallons per minute
gr	grain (1 lb = 7,000 grains)
HAP	hazardous air pollutants
hp	horsepower
hr/yr	hours per year
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
km	kilometers
lb/hr	pounds per hour
m	meters
MACT	Maximum Achievable Control Technology
MMBtu	million British thermal units
NAICS	North American Industry Classification System
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
NSPS	New Source Performance Standards
PM	particulate matter
PM ₁₀	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
PM _{2.5}	particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers
ppm	parts per million
PSD	Prevention of Significant Deterioration
PTC	permit to construct
PTE	potential to emit
scf	standard cubic feet
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SM	synthetic minor
SO ₂	sulfur dioxide

SO _x	sulfur oxides
T/yr	tons per year
TAP	toxic air pollutants
U.S.C.	United States Code
UTM	Universal Transverse Mercator
VOC	volatile organic compounds
µg/m ³	micrograms per cubic meter

1. TIER I OPERATING PERMIT SCOPE

Purpose

1.1 This Tier I operating permit establishes facility-wide requirements in accordance with the Idaho State Implementation Plan control strategy and the Rules.

This permit is a renewed Tier I operating permit.

1.2 This Tier I permit incorporates the following permit(s):

- Permit to Construct No. P-2010.0146, issued February 11, 2011

1.3 This Tier I operating permit supersedes the following permit(s):

- Tier I Operating Permit No. T1-030512, issued June 23, 2006

Regulated Sources

1.4 Table 1.1 lists all sources of emissions regulated in this Tier I operating permit.

Table 1.1 REGULATED SOURCES

Permit Section	Source Description	Emissions Control
2	Fugitive road dust sources	Reasonable controls
3	<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	N/A
	<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	N/A
	<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	N/A
	<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	N/A

Table 1.1 REGULATED SOURCES (continued)

Permit Section	Source Description	Emissions Control
4	<u>Boilers No. 1, 2, and 3 (three identical boilers):</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
5	<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 PM ₁₀ control efficiency: 99%
	<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 PM ₁₀ control efficiency: 99%
	<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 PM ₁₀ control efficiency: 97%
	<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 PM ₁₀ control efficiency: 97%
	<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 PM ₁₀ control efficiency: 97%
	<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 PM ₁₀ control efficiency: 97%

Table 1.1 REGULATED SOURCES (continued)

Permit Section	Source Description	Emissions Control
5	<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 PM ₁₀ control efficiency: 97%
	<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	<u>N/A:</u> Manufacturer: Donaldson Model: 72 RFW 10 AW Type: Fabric filter Number of Bags: 72 Air to Cloth ratio: 7.5 to 1 PM ₁₀ control efficiency: 99.5%
	<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 PM ₁₀ control efficiency: 99%
	<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 PM ₁₀ control efficiency: 99%
	<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 PM ₁₀ control efficiency: 99%
	<u>Malt Germination – Malt House 1 & 2:</u> Manufacturer: Custom Model: N/A Installed: Unknown Maximum Throughput: N/A (Batch Process)	N/A
	<u>Malt Germination – Malt House 3:</u> Manufacturer: Custom Model: N/A Installed: Unknown Maximum Throughput: N/A (Batch Process)	N/A
6	<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 fuel only	N/A

2. FACILITY-WIDE CONDITIONS

Table 2.1 contains a summary of requirements that apply generally to emissions units at the facility.

Table 2.1 APPLICABLE REQUIREMENTS SUMMARY

Permit Condition	Parameter	Permit Limit/ Standard Summary	Applicable Requirement References	Monitoring and Recordkeeping Requirements
2.1	Fugitive dust	Reasonable control	IDAPA 58.01.01.650-651	2.2, 2.3, and 2.4
2.5	Odors	Don not emit in quantities that cause air pollution	IDAPA 58.01.01.775-776	2.6
2.7	Visible emissions	20% opacity	IDAPA 58.01.01.625	2.8
2.9	Excess emissions	Comply with the provisions of IDAPA 58.01.01.130-136	IDAPA 58.01.01.130-136	2.9, 2.11, and 2.12

Fugitive Dust

- 2.1 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]
- 2.2 The permittee shall monitor and maintain records of the frequency and the method(s) used (e.g., water, chemical dust suppressants) to reasonably control fugitive dust emissions.
[IDAPA 58.01.01.322.06, 07, 5/1/94]
- 2.3 The permittee shall maintain records of all fugitive dust complaints received. The permittee shall take appropriate corrective action as expeditiously as practicable after receipt of a valid complaint. The records shall include, at a minimum, the date that each complaint was received and a description of the following: the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.
[IDAPA 58.01.01.322.06, 07, 5/1/94]
- 2.4 The permittee shall conduct a quarterly facility-wide inspection of potential sources of fugitive dust emissions, during daylight hours and under normal operating conditions to ensure that the methods used to reasonably control fugitive dust emissions are effective. If fugitive dust emissions are not being reasonably controlled, the permittee shall take corrective action as expeditiously as practicable. The permittee shall maintain records of the results of each fugitive dust emissions inspection. The records shall include, at a minimum, the date of each inspection and a description of the following: the permittee's assessment of the conditions existing at the time fugitive emissions were present (if observed), any corrective action taken in response to the fugitive dust emissions, and the date the corrective action was taken.
[IDAPA 58.01.01.322.06, 07, 5/1/94]

Odors

- 2.5 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]

- 2.6 The permittee shall maintain records of all odor complaints received. If the complaint has merit, the permittee shall take appropriate corrective action as expeditiously as practicable. The records shall include, at a minimum, the date each complaint was received and a description of the following: the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

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

Visible Emissions

- 2.7 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]

- 2.8 The permittee shall conduct a monthly facility-wide inspection of potential sources of visible emissions, during daylight hours and under normal operating conditions. Sources that are monitored using a continuous opacity monitoring system (COMS) are not required to comply with this permit condition. The inspection shall consist of a see/no see evaluation for each potential source of visible emissions. If any visible emissions are present from any point of emission, the permittee shall either

a) take appropriate corrective action as expeditiously as practicable to eliminate the visible emissions. Within 24 hours of the initial see/no see evaluation and after the corrective action, the permittee shall conduct a see/no see evaluation of the emissions point in question. If the visible emissions are not eliminated, the permittee shall comply with b).

or

b) perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. A minimum of 30 observations shall be recorded when conducting the opacity test. If opacity is greater than 20%, as measured using Method 9, for a period or periods aggregating more than three minutes in any 60-minute period, the permittee shall take all necessary corrective action and report the exceedance in its annual compliance certification and in accordance with IDAPA 58.01.01.130-136.

The permittee shall maintain records of the results of each visible emission inspection and each opacity test when conducted. The records shall include, at a minimum, the date and results of each inspection and test and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.

[IDAPA 58.01.01.322.06, 07, 5/1/94; IDAPA 58.01.01.322.08, 4/5/00]

Excess Emissions

Excess Emissions - General

- 2.9 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 Permit Condition 2.9 and the regulations of IDAPA 58.01.01.130-136.

2.9.1 The person responsible for or in charge of a facility during an excess emissions event shall, with all practicable speed, initiate and complete appropriate and reasonable action to correct the conditions causing the excess emissions event; to reduce the frequency of occurrence of such events; to minimize the amount by which the emission standard is exceeded; and shall, as provided below or upon request of DEQ, submit a full report of such occurrence, including a statement of all known causes, and of the scheduling and nature of the actions to be taken.

[IDAPA 58.01.01.132, 4/5/00]

Excess Emissions – Startup, Shutdown, Scheduled Maintenance

2.9.2 In all cases where startup, shutdown, or scheduled maintenance of any equipment or emission unit is expected to result or results in an excess emissions event, the owner or operator of the facility or emissions unit generating the excess emissions shall demonstrate compliance with IDAPA 58.01.01.133.01(a) through (d), including, but not limited to, the following:

[IDAPA 58.01.01.133, 4/5/00]

- A prohibition of any scheduled startup, shutdown, or maintenance resulting in excess emissions shall occur during any period in which an Atmospheric Stagnation Advisory or a Wood Stove Curtailment Advisory has been declared by DEQ.

[IDAPA 58.01.01.133.01.a, 3/20/97]

- Notifying DEQ of the excess emissions event as soon as reasonably possible, but no later than two hours prior to, the start of the event, unless the owner or operator demonstrates to DEQ's satisfaction that a shorter advance notice was necessary.

[IDAPA 58.01.01.133.01.b, 4/5/00]

- The owner or operator of a source of excess emissions shall report and record the information required pursuant to Permit Conditions 2.9.4 and 2.9.5 and IDAPA 58.01.01.135 and 136 for each excess emissions event due to startup, shutdown, or scheduled maintenance.

[IDAPA 58.01.01.133.01.c, 3/20/97]

Excess Emissions – Upset, Breakdown, or Safety Measures

2.9.3 In all cases where upset or breakdown of equipment or an emissions unit, or the initiation of safety measures, results or may result in an excess emissions event, the owner or operator of the facility or emissions unit generating the excess emissions shall demonstrate compliance with IDAPA 58.01.01.134.01(a) and (b) and the following:

[IDAPA 58.01.01.134, 4/11/06]

2.9.3.1 For all equipment or emissions units from which excess emissions result during upset or breakdown conditions, or for other situations that may necessitate the implementation of safety measures which cause excess emissions, the facility owner or operator shall comply with the following:

[IDAPA 58.01.01.134.02, 4/5/00]

- The owner or operator shall immediately undertake all appropriate measures to reduce and, to the extent possible, eliminate excess emissions resulting from the event and to minimize the impact of such excess emissions on the ambient air quality and public health.

[IDAPA 58.01.01.134.02.a, 4/5/00]

- The owner or operator shall notify DEQ of any upset, breakdown, or safety event that results in excess emissions. Such notification shall identify the time, specific location, equipment or emissions unit involved, and (to the extent known) the cause(s) of the occurrence. The notification shall be given as soon as reasonably possible, but no later than 24 hours after the event, unless the

owner or operator demonstrates to DEQ's satisfaction that the longer reporting period was necessary.

[IDAPA 58.01.01.134.02.b, 4/5/00]

- The owner or operator shall report and record the information required pursuant to Permit Conditions 2.9.4 and 2.9.5 and IDAPA 58.01.01.135 and 136 for each excess emissions event caused by an upset, breakdown, or safety measure.

[IDAPA 58.01.01.134.02.c, 3/20/97]

2.9.3.2 During any period of excess emissions caused by upset, breakdown, or operation under facility safety measures, DEQ may require the owner or operator to immediately reduce or cease operation of the equipment or emissions unit causing the period until such time as the condition causing the excess has been corrected or brought under control. Such action by DEQ shall be taken upon consideration of the factors listed in IDAPA 58.01.01.134.03 and after consultation with the facility owner or operator.

[IDAPA 58.01.01.134.03 4/5/00]

Excess Emissions – Reporting and Recordkeeping

2.9.4 A written report for each excess emissions event shall be submitted to DEQ by the owner or operator no later than 15 days after the beginning of such an event. Each report shall contain the information specified in IDAPA 58.01.01.135.02.

[IDAPA 58.01.01.135.01 and 02, 4/11/06]

2.9.5 The owner or operator shall maintain excess emissions records at the facility for the most recent five-calendar-year period. The excess emissions records shall be made available to DEQ upon request and shall include the information requested by IDAPA 58.01.01.136.03(a) and (b) as summarized in the following:

[IDAPA 58.01.01.136.01, 02, 3/20/97; IDAPA 58.01.01.136.03, 4/5/00]

- An excess emissions log book for each emissions unit or piece of equipment containing copies of all reports that have been submitted to DEQ pursuant to IDAPA 58.01.01.135 for the particular emissions unit or equipment; and

[IDAPA 58.01.01.136.03.a, 4/5/00]

- Copies of all startup, shutdown, and scheduled maintenance procedures and upset, breakdown, or safety preventative maintenance plans that have been developed by the owner or operator in accordance with IDAPA 58.01.01.133 and 134, and facility records as necessary to demonstrate compliance with such procedures and plans.

[IDAPA 58.01.01.136.03.b, 3/20/97]

Performance Testing

2.10 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

Unless a longer time is approved by DEQ, the permittee shall submit a compliance test report for the respective test to DEQ within 30 days following the date in which a compliance test required by this permit is concluded. The compliance test report shall include all process operating data collected during the test period as well as the test results, raw test data, and associated documentation, including any approved test protocol.

The proposed test date(s), test date rescheduling notice(s), compliance test report, and all other correspondence shall be sent to the following address:

Air Quality Permit Compliance
 Department of Environmental Quality
 Idaho Falls Regional Office
 900 N. Skyline, Suite B
 Idaho Falls, ID 83402
 Phone: (208) 528-2650 Fax: (208) 528-2695

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

Monitoring and Recordkeeping

- 2.11 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 58.01.01.322.07, 5/1/94]

Reports and Certifications

- 2.12 All periodic reports and certifications required by this permit shall be submitted to DEQ within 30 days of the end of each specified reporting period. Excess emissions reports and notifications shall be submitted in accordance with IDAPA 58.01.01.130-136. Reports, certifications, and notifications shall be submitted to:

Air Quality Permit Compliance
 Department of Environmental Quality
 Idaho Falls Regional Office
 900 N. Skyline, Suite B
 Idaho Falls, ID 83402
 Phone: (208) 528-2650 Fax: (208) 528-2695

The periodic compliance certification required by General Provision 21 shall also be submitted within 30 days of the end of the specified reporting period to:

EPA Region 10
Air Operating Permits, OAQ-107
1200 Sixth Ave.
Seattle, WA 98101

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

Open Burning

- 2.13 The permittee shall comply with the *Rules for Control of Open Burning*, IDAPA 58.01.01.600-623.
[IDAPA 58.01.01.600-623, 05/08/09]

Asbestos

- 2.14 The permittee shall comply with all applicable portions of 40 CFR 61, Subpart M – Asbestos.
[40 CFR 61, Subpart M]

Regulated Substances for Accidental Release Prevention

- 2.15 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)]

Recycling and Emissions Reductions

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

NSPS/NESHAP General Provisions

- 2.17 NSPS 40 CFR 60, Subpart A – General Provisions
The permittee shall comply with the applicable requirements of 40 CFR 60, Subpart A – General Provisions in accordance with 40 CFR 60.1. A summary of requirements for affected facilities is provided in Table 2.2.

Table 2.2 NSPS 40 CFR 60, SUBPART A – SUMMARY OF GENERAL PROVISIONS

Section	Subject	Summary of Section Requirements
60.4	Address(es)	<ul style="list-style-type: none"> All requests, reports, applications, submittals, and other communications associated with 40 CFR 60. Subpart(s) shall be submitted to: Idaho Falls Regional Office Department of Environmental Quality 900 N. Skyline, Ste. B Idaho Falls, ID 83402
60.7(a),(b), and (f)	Notification and Recordkeeping	<ul style="list-style-type: none"> Notification shall be furnished of commencement of construction postmarked no later than 30 days of such date. Notification shall be furnished of initial startup postmarked within 15 days of such date. Notification shall be furnished of any physical or operational change that may increase emissions postmarked 60 days before the change is made. Records shall be maintained of the occurrence and duration of any startup, shutdown or malfunction; any malfunction of the air pollution control equipment; or any periods during which a CMS or monitoring device is inoperative. Records shall be maintained, in a permanent form suitable for inspection, of all measurements, performance testing measurements, calibration checks, adjustments and maintenance performed, and other required information. Records shall be maintained for a period of two years following the date of such measurements, maintenance, reports, and records.
60.7(a),(c), (d), (e),	Notification and Recordkeeping (CMS)	<ul style="list-style-type: none"> Notification shall be furnished of the date upon which demonstration of the CMS performance commences. Excess emissions and monitoring systems performance report shall be submitted semiannually, postmarked by January 30th and July 30th. Reports shall contain the information and be in the format specified in 40 CFR 60.7(c) and (d). Records of CEMS subhourly measurements shall be maintained in accordance with the requirements of 40 CFR 60.7(f).
60.8	Performance Tests	<ul style="list-style-type: none"> At least 30 days prior notice of any performance test shall be provided to afford the opportunity to have an observer to be present. Within 60 days of achieving the maximum production rate, but not later 180 days after initial startup, performance test(s) shall be conducted and a written report of the results of such test(s) furnished. Performance testing facilities shall be provided as follows: Sampling ports adequate for test methods applicable to such facility. Safe sampling platform(s). Safe access to sampling platform(s). Utilities for sampling and testing equipment. Performance tests shall be conducted and data reduced in accordance with 40 CFR 60.8(b), (c), and (f).
60.11(a),	Compliance with Standards and Maintenance Requirements	<ul style="list-style-type: none"> When performance tests are required, compliance with standards is determined by methods and procedures established by 40 CFR 60.8. At all times, including periods of startup, shutdown, and malfunction, the owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard, nothing shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

Table 2.2 NSPS 40 CFR 60, SUBPART A – SUMMARY OF GENERAL PROVISIONS (continued)

Section	Subject	Summary of Section Requirements
60.11(b),	Compliance with Standards and Maintenance Requirements (Opacity)	<ul style="list-style-type: none"> Compliance with opacity standards shall be determined by Method 9 in Appendix A of 40 CFR 60. The permittee may elect to use COM measurements in lieu of Method 9, provided notification is made at least 30 days before the performance test. The opacity standards shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided. Opacity observations shall be conducted concurrently with the initial performance test required in 40 CFR 60.8 in accordance with the requirements and exceptions in 40 CFR 60.11(e).
60.12	Circumvention	<ul style="list-style-type: none"> No permittee shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard.
60.13	Monitoring Requirements (CMS)	<ul style="list-style-type: none"> All CMS and monitoring devices shall be installed and operational prior to conducting performance tests required by 40 CFR 60.8. A performance evaluation of the COMS or CEMS shall be conducted before or during any performance test and a written report of the results of the performance evaluation furnished. Reporting requirements include submitting performance evaluations reports within 60 days of the evaluations required by this section, and submitting results of the performance evaluations for the COM within 10 days before a performance test, if using a COM to determine compliance with opacity during a performance test instead of Method 9. The zero and span calibration drifts must be checked at least once daily and adjusted in accordance with the requirements in 40 CFR 60.13(d). The zero and upscale (span) calibration drifts of a COMS must be automatically, intrinsic to the opacity monitor, checked at least once daily. Except for system breakdowns, repairs, calibration checks, and zero and span adjustments, all CMS shall be in continuous operation and shall meet minimum frequency of operation requirements as specified in 40 CFR 60.13(e). All CMS or monitoring devices shall be installed such that representative measurements of emissions or process parameters from the affected facility are obtained. CMS shall be located and installed in accordance with the requirements in 40 CFR 60.13(f) and (g). Data shall be reduced and computed in accordance with the procedures in 40 CFR 60.13(h), (i), and (j).
60.14	Modification	<ul style="list-style-type: none"> A physical or operational change which results in an increase in the emission rate to the atmosphere or any pollutant to which a standard applies shall be considered a modification, and upon modification an existing facility shall become an affected facility in accordance with the requirements and exemptions in 40 CFR 60.14. Within 180 days of the completion of any physical or operational change, compliance with all applicable standards must be achieved.
60.15	Reconstruction	<ul style="list-style-type: none"> An existing facility, upon reconstruction, becomes an affected facility, irrespective of any change in emission rate in accordance with the requirements of 40 CFR 60.15.

[40 CFR 60, Subpart A]

2.18 NESHAP 40 CFR 63, Subpart A – General Provisions

The permittee shall comply with the requirements of 40 CFR 63, Subpart A – General Provisions. A summary of applicable requirements for affected sources is provided in Table 2.3.

Table 2.3 NESHAP 40 CFR 63, SUBPART A – SUMMARY OF GENERAL PROVISIONS

Section	Subject	Summary of Section Requirements			
63.13	Addresses	<ul style="list-style-type: none"> <u>All requests, reports, applications, submittals, and other communications associated with 40 CFR 63, Subpart(s) shall be submitted to:</u> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> Director Air and Waste US EPA 1200 Sixth Avenue Seattle, WA 98101 </td> <td style="width: 10%; text-align: center; border: none;">and</td> <td style="width: 40%; border: none;"> Idaho Falls Regional Office Department of Environmental Quality 900 N. Skyline, Ste. B Idaho Falls, ID 83402 </td> </tr> </table> 	Director Air and Waste US EPA 1200 Sixth Avenue Seattle, WA 98101	and	Idaho Falls Regional Office Department of Environmental Quality 900 N. Skyline, Ste. B Idaho Falls, ID 83402
Director Air and Waste US EPA 1200 Sixth Avenue Seattle, WA 98101	and	Idaho Falls Regional Office Department of Environmental Quality 900 N. Skyline, Ste. B Idaho Falls, ID 83402			

Table 2.3 NESHAP 40 CFR 63, SUBPART A – SUMMARY OF GENERAL PROVISIONS (continued)

Section	Subject	Summary of Section Requirements
63.4(a)	Prohibited Activities	<ul style="list-style-type: none"> No permittee must operate any affected source in violation of the requirements of 40 CFR 63 in accordance with 40 CFR 63.4(a). No permittee subject to the provisions of this part shall fail to keep records, notify, report, or revise reports as required under this part.
63.4(b)	Circumvention/ Fragmentation	<ul style="list-style-type: none"> No permittee shall build, erect, install or use any article, machine, equipment, or process to conceal an emission that would otherwise constitute noncompliance with a relevant standard. Fragmentation which divides ownership of an operation, within the same facility among various owners where there is no real change in control, will not affect applicability in accordance with 40 CFR 63.4(c).
63.6(b)	Compliance Dates	<ul style="list-style-type: none"> The permittee of any new or reconstructed source must comply with the relevant standard as specified in 40 CFR 63.6(b). The permittee of a source that has an initial startup before the effective date of a relevant standard must comply not later than the standard's effective date in accordance with 40 CFR 63.6(b)(1). The permittee of a source that has an initial startup after the effective date of a relevant standard must comply upon startup of the source in accordance with 40 CFR 63.6(b)(2). The permittee of any existing sources must comply with the relevant standard by the compliance date established in the applicable subpart or as specified in 40 CFR 63.6(c). The permittee of an area source that increases its emissions of hazardous air pollutants such that the source becomes a major source shall be subject to relevant standards for existing sources in accordance with 40 CFR 63.6(c)(5).
63.6(e)	Compliance with Standards and Maintenance Requirements (Non-Opacity)	<ul style="list-style-type: none"> At all times, including periods of startup, shutdown, and malfunction, the permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions in accordance with 40 CFR 63.6(e). The permittee of an affected source must develop a written startup, shutdown, and malfunction plan and a program of corrective action for malfunctioning process, air pollution control, and monitoring equipment used to comply with the relevant standard in accordance with 40 CFR 63.6(e). The permittee must maintain the current plan at the affected source and must make the plan available upon request. If the plan fails to address or inadequately addresses a malfunction, the permittee must revise the plan within 45 days after the event. The permittee must record and report actions taken during a startup, shutdown, or malfunction in accordance with the requirements in 40 CFR 63.6(e). The permittee shall confirm that actions taken during the relevant reporting period during periods of startup, shutdown, and malfunction were consistent with the plan in the semiannual startup, shutdown, and malfunction report. Non-opacity emission standards shall apply at all times except during periods of startup, shutdown, and malfunction, and as otherwise specified, in accordance with 40 CFR 63.6(f).
63.6(h)	Compliance with Standards and Maintenance Requirements (Opacity)	<ul style="list-style-type: none"> The opacity and visible emission standards must apply at all times except during periods of startup, shutdown, and malfunction, and as otherwise specified in accordance with 40 CFR 63.6(h). The permittee shall notify in writing of the anticipated date for conducting opacity or visible emission observations in accordance with 40 CFR 63.9(f), if such observations are required, in accordance with 40 CFR 63.6(h)(4). For the purpose of demonstrating initial compliance, opacity or visible emission observations shall be conducted in accordance with 40 CFR 63.6(h)(5). The permittee shall make records available upon request and shall provide evidence indicating proof of current visible observer emission certification in accordance with 40 CFR 63.6(h)(6).

Table 2.3 NESHAP 40 CFR 63, SUBPART A – SUMMARY OF GENERAL PROVISIONS (continued)

Section	Subject	Summary of Section Requirements
63.6(h)(7)	Methods for Determining Compliance (CMS)	<ul style="list-style-type: none"> • The permittee shall record the monitoring data produced during a performance test and shall furnish a written report of the monitoring results in accordance with 40 CFR 63.6(h)(7). • The permittee may submit, for compliance purposes, COMS data results produced during any performance test required in lieu of Method 9 data in accordance with 40 CFR 63.6(h)(7). • For the purposes of determining compliance with the opacity emission standard during a required performance test using COMS data, the COMS data shall be reduced to 6-minute averages over the duration of the mass emission performance test. • The permittee of an affected source using a COMS for compliance purposes is responsible for demonstrating that he/she has complied with the performance evaluation requirements of 40 CFR 63.8(e), that the COMS has been properly maintained, operated, and data quality-assured, as specified in 40 CFR 63.8(c) and 40 CFR 63.8(d), and that the resulting data have not been altered in any way. • Except as provided, the results of continuous monitoring by a COMS that indicate that the opacity at the time visual observations were made was not in excess of the emission standard are probative but not conclusive evidence of the actual opacity of an emission, provided that the affected source proves that, at the time of the alleged violation, the instrument used was properly maintained, as specified in 40 CFR 63.8(c), and met Performance Specification 1 in appendix B of part 60 of this chapter, and that the resulting data have not been altered in any way.
63.7	Performance Testing Requirements	<ul style="list-style-type: none"> • If required to do performance testing, the permittee must perform such tests within 180 days of the compliance date in accordance with 40 CFR 63.7(a). • The permittee must notify in writing of the intention to conduct a performance test at least 60 calendar days before the performance test is initially scheduled to begin to allow review of the site-specific test plan and to have an observer present during the test in accordance with 40 CFR 63.7(b). • Before conducting a required performance test, the permittee shall develop and, if requested, shall submit a site-specific test plan for approval in accordance with 40 CFR 63.7(c). The test plan shall include a test program summary, the test schedule, data quality objectives, and both an internal and external quality assurance (QA) program. • If required to do performance testing, the permittee shall provide performance testing facilities in accordance with 40 CFR 63.7(d): Sampling ports adequate for test methods applicable to such source. Safe sampling platform(s); Safe access to sampling platform(s); Utilities for sampling and testing equipment; and Any other facilities deemed necessary for safe and adequate testing of a source. • Performance tests shall be conducted and data reduced in accordance with 40 CFR 63.7(e) and (f). • The permittee shall report the results of the performance test before the close of business on the 60th day following the completion of the test, unless specified or approved otherwise in accordance with 40 CFR 63.7(g).

Table 2.3 NESHAP 40 CFR 63, SUBPART A – SUMMARY OF GENERAL PROVISIONS (continued)

Section	Subject	Summary of Section Requirements
63.8	Monitoring Requirements (CMS)	<ul style="list-style-type: none"> • All CMS must be installed such that representative measures of emissions or process parameters from the affected source are obtained. CMS must be located and installed in accordance with the requirements in 40 CFR 63.8(b) and (c)(2). • The permittee shall maintain and operate each CMS as specified and in a manner consistent with good air pollution control practices in accordance with 40 CFR 63.8(c)(1). • All CMS shall be installed, operational, and the data verified as specified either prior to or in conjunction with conducting performance tests required by 40 CFR 63.7 in accordance with 40 CFR 63.8(c)(3). • Except for system breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero and high-level calibration drift adjustments, all CMS shall be in continuous operation and shall meet minimum frequency of operation requirements as specified in 40 CFR 63.8(c)(4). • Minimum procedures for COMS shall include the methods and procedures specified in 40 CFR 63.8(c)(5). • The permittee of a CMS that is not a CPMS must check the zero and high-level calibration drifts at least once daily and must adjust the zero and high-level calibration drift in accordance with 40 CFR 63.8(c)(6). • The CPMS must be checked daily for indication that the system is responding in accordance with 40 CFR 63.8(c)(6). • When the CMS is out of control, the permittee shall take the necessary corrective action and shall repeat all necessary tests which indicate that the system is out of control in accordance with 40 CFR 63.8(7). • The permittee of a CMS that is out of control shall submit all information concerning out-of-control periods, including start and end dates and hours and descriptions of corrective actions taken, in the excess emissions and continuous monitoring system performance report. • The permittee of an affected source that is required to use a CMS and is subject to the monitoring requirements of this section and a relevant standard shall develop and implement a CMS quality control program in accordance with 40 CFR 63.8(d). • When required, the permittee of an affected source being monitored shall conduct a performance evaluation of the CMS in accordance with 40 CFR 63.8(e). The permittee shall provide written notification of the date of the performance evaluation simultaneously with the notification of the performance test date required in 40 CFR 63.7(b) or at least 60 days prior to the date the performance evaluation is scheduled to begin if no performance test is required. • Before conducting a required CMS performance evaluation, the permittee of an affected source shall develop and submit a site-specific performance evaluation test plan for approval upon request in accordance with 40 CFR 63.8(e). The performance evaluation test plan shall include the evaluation program objectives, an evaluation program summary, the performance evaluation schedule, data quality objectives, and both an internal and external QA program. • The permittee of an affected source shall submit the site-specific performance evaluation test plan at least 60 days before the performance test or performance evaluation is scheduled to begin, or on a mutually agreed upon date in accordance with 40 CFR 63.8(e). • The permittee shall conduct a performance evaluation during any performance test required in 40 CFR 63.7 in accordance with 40 CFR 63.8(d)(4). If a performance test is not required, the permittee of an affected source shall conduct the performance evaluation not later than 180 days after the appropriate compliance date. • The permittee shall furnish a copy of a written report of the results of the performance evaluation simultaneously with the results of the performance test required in 40 CFR 63.7 or within 60 days of completion of the performance evaluation if no test is required, unless otherwise specified in accordance with 40 CFR 63.8(d)(5). • The permittee of an affected source using a COMS to determine opacity compliance during any performance test required in 40 CFR 63.7 shall furnish copies of a written report of the results of the COMS performance evaluation in accordance with 40 CFR 63.8(d)(5). The copies shall be provided at least 15 calendar days before the performance test is conducted. • The permittee of each CMS must reduce the monitoring data as specified in 40 CFR 63.8(g).

Table 2.3 NESHAP 40 CFR 63, SUBPART A – SUMMARY OF GENERAL PROVISIONS (continued)

Section	Subject	Summary of Section Requirements
63.9	Notification Requirements	<ul style="list-style-type: none"> • The permittee of an affected source that has an initial startup before the effective date of a relevant standard shall notify in writing that the source is subject to the relevant standard, in accordance with 40 CFR 63.9(b)(2). The notification, which shall be submitted not later than 120 calendar days after the effective date of the relevant standard (or within 120 calendar days after the source becomes subject to the relevant standard), shall provide the following information: <ul style="list-style-type: none"> The name and address of the permittee; The address (i.e., physical location) of the affected source; An identification of the relevant standard, or other requirement, that is the basis of the notification and the source's compliance date; A brief description of the nature, size, design, and method of operation of the source and an identification of the types of emission points within the affected source subject to the relevant standard and types of hazardous air pollutants emitted; and A statement of whether the affected source is a major source or an area source. • The permittee of a new or reconstructed major affected source for which an application for approval of construction or reconstruction is required must provide the following information in writing in accordance with 40 CFR 63.9(b)(4): <ul style="list-style-type: none"> A notification of intention to construct a new major-emitting affected source, reconstruct a major-emitting affected source, or reconstruct a major source such that the source becomes a major-emitting affected source; A notification of the actual date of startup of the source delivered or postmarked within 15 calendar days after that date. • The permittee of a new or reconstructed affected source for which an application for approval of construction or reconstruction is not required must provide the following information in writing in accordance with 40 CFR 63.9(b)(5): <ul style="list-style-type: none"> A notification of intention to construct a new affected source, reconstruct an affected source, or reconstruct a source such that the source becomes an affected source, and A notification of the actual date of startup of the source delivered or postmarked within 15 calendar days after that date. <p>Unless the permittee has requested and received prior permission, the notification must include the information required in the application for approval of construction or reconstruction as specified in 40 CFR 63.5(d)(1).</p> <ul style="list-style-type: none"> • The permittee shall notify in writing of his or her intention to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin to allow the opportunity to review and approve the site-specific test plan required by 40 CFR 63.7(c), and to have an observer present during the test. • The permittee of an affected source shall notify in writing of the anticipated date for conducting the opacity or visible emission observations in accordance with 40 CFR 63.9(f), if such observations are required. • Each time a notification of compliance status is required under this part, the permittee of such source shall submit a notification of compliance status in accordance with 40 CFR 63.9(h)(2)(i). The notification shall list: <ul style="list-style-type: none"> The methods that were used to determine compliance; The results of any performance tests, opacity or visible emission observations, continuous monitoring system (CMS) performance evaluations, and/or other monitoring procedures or methods that were conducted; The methods that will be used for determining continuing compliance, including a description of monitoring and reporting requirements and test methods; The type and quantity of hazardous air pollutants emitted by the source (or surrogate pollutants if specified in the relevant standard), reported in units and averaging times and in accordance with the test methods specified in the relevant standard; If the relevant standard applies to both major and area sources, an analysis demonstrating whether the affected source is a major source (using the emissions data generated for this notification); A description of the air pollution control equipment (or method) for each emission point, including each control device (or method) for each hazardous air pollutant and the control efficiency (percent) for each control device (or method); and A statement by the permittee of the affected existing, new, or reconstructed source as to whether the source has complied with the relevant standard or other requirements. • The notification must be sent before the close of business on the 60th day following the completion of the relevant compliance demonstration activity specified in the relevant standard unless otherwise specified in accordance with 40 CFR 63.9(h)(2)(ii). If no performance test is required but opacity or visible emission observations are required to demonstrate compliance with a standard, the notification shall be sent before close

		<p>of business on the 30th day following the completion of the observations.</p> <ul style="list-style-type: none"> • Each time a notification of compliance status is required under this part, the permittee of such source shall submit the notification of compliance status following completion of the relevant compliance demonstration activity specified. • If an permittee submits estimates or preliminary information in an application in place of the actual emissions data or control efficiencies, the permittee shall submit the actual emissions data and other correct information as soon as available but no later than with the initial notification of compliance status required in this section in accordance with 40 CFR 63.9(h)(5). • Any change in the information already provided under this section shall be provided in writing within 15 calendar days after the change in accordance with 40 CFR 63.9(j).
63.9(g)	Additional Notification Requirements (CMS)	<ul style="list-style-type: none"> • The permittee of an affected source required to use a CMS shall furnish written notification as follows in accordance with 40 CFR 63.9(g): <p>A notification of the date the CMS performance evaluation is scheduled to begin, submitted simultaneously with the notification of the performance test date. If no performance test is required, the permittee shall notify in writing of the date of the performance evaluation at least 60 calendar days before the evaluation is scheduled to begin; and</p> <p>A notification that COMS data results will be used to determine compliance with the applicable opacity emission standard during a performance test in lieu of Method 9 or other opacity emissions test method data, as allowed by 40 CFR 63.6(h)(7)(ii), if compliance with an opacity emission standard is required for the source by a relevant standard. The notification shall be submitted at least 60 calendar days before the performance test is scheduled to begin.</p>

Table 2.3 NESHAP 40 CFR 63, SUBPART A – SUMMARY OF GENERAL PROVISIONS (continued)

Section	Subject	Summary of Section Requirements
63.10	Recordkeeping and Reporting Requirements	<ul style="list-style-type: none"> • The permittee shall maintain files of all required information recorded in a form suitable and readily available for expeditious inspection and review in accordance with 40 CFR 63.10(b)(1). The files shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent 2 years of data shall be retained on site. • The permittee shall maintain relevant records of the following in accordance with 40 CFR 63.10(b)(2); <ul style="list-style-type: none"> The occurrence and duration of each startup or shutdown when the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards; The occurrence and duration of each malfunction of operation or the required air pollution control and monitoring equipment; All required maintenance performed on the air pollution control and monitoring equipment; Actions taken during periods of startup or shutdown when the source exceeded applicable emission limitations in a relevant standard and when the actions taken are different from the procedures specified in the affected source's startup, shutdown, and malfunction plan; or Actions taken during periods of malfunction when the actions taken are different from the procedures specified in the affected source's startup, shutdown, and malfunction plan; <p>All information necessary, including actions taken, to demonstrate conformance with the affected source's startup, shutdown, and malfunction plan (see 40 CFR 63.6(e)(3)) when all actions taken during periods of startup or shutdown (and the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards), and malfunction (including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation) are consistent with the procedures specified in such plan. (The information needed to demonstrate conformance with the startup, shutdown, and malfunction plan may be recorded using a "checklist," or some other effective form of recordkeeping, in order to minimize the recordkeeping burden for conforming events);</p> <p>Each period during which a CMS is malfunctioning or inoperative (including out-of-control periods);</p> <p>All required measurements needed to demonstrate compliance with a relevant standard (including, but not limited to, 15-minute averages of CMS data, raw performance testing measurements, and raw performance evaluation measurements, that support data that the source is required to report);</p> <p>All results of performance tests, CMS performance evaluations, and opacity and visible emission observations;</p> <p>All measurements as may be necessary to determine the conditions of performance tests and performance evaluations;</p> <p>All CMS calibration checks;</p> <p>All adjustments and maintenance performed on CMS;</p> <p>All emission levels relative to the criterion for obtaining permission to use an alternative to the relative accuracy test, if the source has been granted such permission under 40 CFR 63.8(f)(6); and</p> <p>All documentation supporting initial notifications and notifications of compliance status under 40 CFR 63.9.</p> <ul style="list-style-type: none"> • If an permittee determines that his or her stationary source that emits one or more HAP, and that stationary source is in the source category regulated by the relevant standard, but that source is not subject to a relevant standard because of limitations on the source's potential to emit or an exclusion, the permittee must keep a record of the applicability determination on site at the source for a period of 5 years after the determination, or until the source changes its operations to become an affected source, whichever comes first in accordance with 40 CFR 63.10(b).

Table 2.3 NESHAP 40 CFR 63, SUBPART A – SUMMARY OF GENERAL PROVISIONS (continued)

Section	Subject	Summary of Section Requirements
63.10(b)	Additional Recordkeeping Requirements (CMS)	<ul style="list-style-type: none"> • In lieu of maintaining a file of all CEMS subhourly measurements, the permittee shall retain the most recent consecutive three averaging periods of subhourly measurements and a file that contains a hard copy of the data acquisition system algorithm used to reduce the measured data in accordance with 40 CFR 63.10(b)(2). • In lieu of maintaining a file of all CEMS subhourly measurements, the permittee shall retain all subhourly measurements for the most recent reporting period. The subhourly measurements shall be retained for 120 days from the date of the most recent summary or excess emission report submitted. • The permittee shall maintain records for each affected source of— <ul style="list-style-type: none"> All required CMS measurements The date and time identifying each period during which the CMS was inoperative except for zero and high-level checks; The date and time identifying each period during which the CMS was out of control; The specific identification of each period of excess emissions and parameter monitoring exceedances, that occurs during startups, shutdowns, and malfunctions of the affected source; The specific identification of each time period of excess emissions and parameter monitoring exceedances, that occurs during periods other than startups, shutdowns, and malfunctions of the affected source; The nature and cause of any malfunction; The corrective action taken or preventive measures adopted; The nature of the repairs or adjustments to the CMS that was inoperative or out of control; The total process operating time during the reporting period; and All procedures that are part of a quality control program developed and implemented for CMS.

[40 CFR 63, Subpart A]

Incorporation of Federal Requirements by Reference

2.19 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. Documents include, but are not limited to:

- Standards of Performance for New Stationary Sources (NSPS), 40 CFR Part 60, Subpart DD, Standards of Performance for Grain Elevators
- National Emission Standards for Hazardous Air Pollutants for Source Categories (NESHAP), 40 CFR Part 63, ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

For permit conditions referencing or cited in accordance with any document incorporated by reference (including permit conditions identified as NSPS or NESHAP), should there be any conflict between the requirements of the permit condition and the requirements of the document, the requirements of the document shall govern, including any amendments to that regulation.

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

Summary Description

In the kiln, the green malt is dried. The kilns are heated using indirect-fired natural gas burners. Heated 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 kernel. Sulfuring is accomplished by burning sulfur and allowing the SO₂ formed to contact the malt during the drying process.

Emissions from the steeping, germination and drying process include particulate from malt handling, all criteria pollutants from burning natural gas and SO₂ from sulfuring.

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

[PTC No. P-2010.0146, February 11, 2011]

Table 3.1 contains only a summary of the requirements that apply to the malt drying and sulfuring – kilns no. 1, 2, 3 east, and 3 west. Specific permit requirements are listed below Table 3.1.

Table 3.1 APPLICABLE REQUIREMENTS SUMMARY

Permit Conditions	Parameter	Permit Limit / Standard Summary	Applicable Requirements Reference	Operating and Monitoring and Recordkeeping Requirements
3.1	PM, PM ₁₀ , SO ₂ , NO _x , CO, and VOC emissions from natural gas combustion, and PM, PM ₁₀ , SO ₂ , emissions from the process	See the Kilns Emissions Limits Table	PTC No. P-040520, issued March 11, 2005	3.3, 3.5, and 2.11
3.2, 2.7	Kilns opacity limit	20% opacity	PTC No. P-040520, issued March 11, 2005	2.8
3.3	Kilns throughputs	2,040 MMscf natural gas, 404,700 T/yr of malt, and 95 T/yr of sulfur all in any consecutive 12-month period	PTC No. P-040520, issued March 11, 2005	3.5 and 2.11
3.4, 2.1	Fugitive emissions	Reasonable control	PTC No. P-040520, issued March 11, 2005	3.4, 2.2, 2.3, and 2.4

Permit Limits / Standard Summary

3.1 Emissions Limits

3.1.1 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 accordance with IDAPA 58.01.01.675.

[PTC No. P-2010.0146, February 11, 2011]

3.1.2 The PM, particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM₁₀), sulfur dioxide (SO₂), oxides of nitrogen (NO_x), 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 Kilns Emissions Limits Table of this permit.
[PTC No. P-2010.0146, February 11, 2011]

3.1.3 PM₁₀ and SO₂ emissions resulting from process operations in each of the kilns and exhausting from the kiln stacks shall not exceed any corresponding emission rate limits listed in the Kilns Emissions Limits Table of this permit.

Table 3.2 KILNS EMISSIONS LIMITS¹

Source Description	PM		PM ₁₀		SO ₂		NO _x		VOC		CO	
	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
Kilns 1, 2, 3 East, and 3 West Natural Gas Combustion ²	2.28	7.76	2.28	7.76	0.18	0.60	29.92	102.0	1.65	5.60	25.13	85.7
Kilns 1, 2, 3 East, and 3 West Process ³	17.1	74.9	15.3	67.0	192.0	95.0	--	--	--	--	--	--

¹ The permittee shall not exceed the T/yr listed based on any consecutive 12-month period.

² Limits are for all kiln burner natural gas combustion emissions combined.

³ Limits are for all kiln process emissions combined.

[PTC No. P-2010.0146, February 11, 2011]

3.2 Opacity Limit

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. Opacity shall be determined by the procedures contained in IDAPA 58.01.01.625.

[PTC No. P-2010.0146, February 11, 2011]

Operating Requirements

3.3 Throughput Limits

3.3.1 The maximum annual natural gas throughput for Kilns No. 1, 2, 3 East, and 3 West shall not exceed 2,040 million standard cubic feet in any consecutive 12-month period.
[PTC No. P-2010.0146, February 11, 2011]

3.3.2 The maximum annual amount of malt dried in the kilns shall not exceed 404,700 tons per year (T/yr) in any consecutive 12-month period.
[PTC No. P-2010.0146, February 11, 2011]

3.3.3 The maximum annual sulfur consumption rate from all kilns (Kilns No. 1, 2, 3 East, and 3 West) shall not exceed 95 T/yr in any consecutive 12-month period.
[PTC No. P-2010.0146, February 11, 2011]

3.4 Reasonable Control of Fugitive Emissions

All reasonable precautions shall be taken to prevent PM from becoming airborne. In determining what is reasonable, considerations will be given to factors such as the proximity of dust-emitting operations to human habitations and/or activities and atmospheric conditions that might affect the movement of PM. Some of the reasonable precautions include, but are not limited to, the following:

- Use, where practical, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of lands.
- Application, where practical, of asphalt, oil, water or suitable chemicals to, or covering of dirt roads, material stockpiles, and other surfaces which can create dust.
- Installation and use, where practical, of hoods, fans and fabric filters or equivalent systems to enclose and vent the handling of dusty materials. Adequate containment methods should be employed during sandblasting or other operations; covering, where practical, of open-bodied trucks transporting materials likely to give rise to airborne dusts; paving of roadways and their maintenance in a clean condition, where practical.
- Prompt removal of earth or other stored material from streets, where practical.

[PTC No. P-2010.0146, February 11, 2011]

Monitoring and Recordkeeping Requirements

3.5 Throughput Monitoring

The permittee shall monitor and record the amount of natural gas burned in Kilns No. 1 2, 3 East, and 3 West combined on a monthly basis. Each month, the permittee will compile the monthly records into a rolling sum for the most recent 12-month period. The permittee shall comply with the recordkeeping General Provision requirements.

The permittee shall monitor and record the amount of malt dried in Kilns No. 1,2,3 East, and 3 West combined on a monthly basis. Each month, the permittee will compile the monthly records into a rolling sum for the most recent 12-month period.

The permittee shall monitor and record the amount of sulfur burned in Kilns No. 1, 2, 3 East, and 3 West combined on a monthly basis. Each month, the permittee will compile the monthly records into a rolling sum for the most recent 12-month period.

[PTC No. P-2010.0146, February 11, 2011]

3.6 Visible Emissions Monitoring

The permittee shall conduct a monthly inspection of any point of emission during daylight hours and under normal operating conditions. The inspection shall consist of a see/no see evaluation for each potential source of visible emissions. If any visible emissions are present from any point of emission, the permittee shall either take appropriate corrective action as expeditiously as practicable, or perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. A minimum of 30 observations shall be recorded when conducting the opacity test. If opacity is greater than 20% for a period or periods aggregating more than three minutes in any 60-minute period, the permittee shall take all necessary corrective action and report the exceedance in its annual compliance certification and in accordance with IDAPA 58.01.01.130-136. The permittee shall maintain records of the results of each monthly visible emission inspection and each opacity test when conducted. The records shall include, at a minimum, the date and results of each inspection and test and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.

[PTC No. P-2010.0146, February 11, 2011]

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

Summary 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. Table 4.1 describes the devices used to control emissions from natural gas-fired Boilers No. 1, 2, and 3.

Table 4.1 EMISSIONS UNITS AND EMISSIONS CONTROL DEVICES

Emissions Unit / Process	Emissions Control Device
Boiler No. 1	N/A
Boiler No. 2	N/A
Boiler No. 3	N/A

Table 4.2 contains only a summary of the requirements that apply to the natural gas-fired Boilers No. 1, 2, and 3. Specific permit requirements are listed below Table 4.2.

Table 4.2 APPLICABLE REQUIREMENTS SUMMARY

Permit Conditions	Parameter	Permit Limit / Standard Summary	Applicable Requirements Reference	Operating and Monitoring and Recordkeeping Requirements
4.1.1	PM emissions	0.015 gr/dscf	PTC No. P-040520, issued March 11, 2005	4.4 and 2.11
4.1.2	PM, PM ₁₀ , SO ₂ , NO _x , VOC, and CO emissions	Boilers No. 1, 2, and 3 Emissions Limits Table	PTC No. P-040520, issued March 11, 2005	4.4 and 2.11
4.2, 2.7	Opacity	20% opacity	PTC No. P-040520, issued March 11, 2005	4.4 and 2.8
4.3	Throughput of natural gas	283 MMscf/yr	PTC No. P-040520, issued March 11, 2005	4.4 and 2.11

Permit Limits / Standard Summary

4.1 Emissions Limits

4.1.1 The PM emissions from the natural gas-fired boilers exhaust which vent to the boiler stack, shall not exceed 0.015 gr/dscf of effluent gas adjusted to 3% oxygen by volume in accordance with IDAPA 58.01.01.675.

[PTC No. P-2010.0146, February 11, 2011]

4.1.2 The PM, PM₁₀, SO₂, NO_x, CO, and VOC emissions resulting from natural gas burning and exhausting from the boilers shall not exceed any corresponding emission rate limits listed in the Boilers No. 1, 2, and 3 Emissions Limits Table.

[PTC No. P-2010.0146, February 11, 2011]

Table 4.3 BOILERS NO. 1, 2, AND 3 EMISSIONS LIMITS¹

Source Description	PM		PM ₁₀		SO ₂		NO _x		VOC		CO	
	lb/hr	lb/hr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
S10 (Boilers No. 1, 2, and 3)	0.68	1.08	0.68	1.08	0.05	0.08	9.00	14.15	0.50	0.78	7.56	11.89

¹ The permittee shall not exceed the T/yr listed based on any consecutive 12-month period.

[PTC No. P-2010.0146, February 11, 2011]

4.2 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 periods. Opacity shall be determined by the procedures contained in IDAPA 58.01.01.625.

[PTC No. P-2010.0146, February 11, 2011]

Operating Requirements

4.3 Throughput Limits

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.

[PTC No. P-2010.0146, February 11, 2011]

Monitoring and Recordkeeping Requirements

4.4 Throughput Monitoring

The permittee shall 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 to demonstrate compliance with the Emissions Limits and Throughput Limits permit conditions. The permittee shall monitor and record the amount of natural gas combusted in Boilers No. 1, 2, and 3 each month and for the most recent 12-month period. Records of this information shall remain on site for the most recent five-year period and shall be made available to DEQ representatives upon request.

[40 CFR 60.48.c(g); PTC No. P-2010.0146, February 11, 2011]

4.5 NSPS-Subpart Dc Applicability Notification, Monitoring, and Reporting Requirements

In accordance with 40 CFR 60.48c(a), the permittee shall submit notification of the date of construction or reconstruction, anticipated startup, and actual startup as required by 40 CFR 60.7 for Boilers No. 1, 2, and 3.

The notification shall include the following:

- The design heat input capacity of boilers
- The fuel(s) to be combusted in the boilers
- The annual capacity factor at which the permittee anticipates operating Boilers No. 1, 2, and 3 based on all fuels fired and based on each individual fuel fired

[40 CFR 60.48c(a); PTC No. P-2010.0146, February 11, 2011]

4.6 NSPS-Subpart Dc Recordkeeping Requirements

In accordance with 40 CFR 60.48c(g) and 40 CFR 60.48c(i), the permittee shall record and maintain records of the amount of each fuel combusted during each operating day by Boilers No. 1, 2, and 3.

As an alternative to meeting the daily requirements, the permittee may elect to record and maintain records of the amount of each fuel combusted by Boilers No. 1, 2, and 3 during each calendar month.

As an alternative to meeting the daily requirements, the permittee may elect to record and maintain records of the total amount of fuel delivered to that property during each calendar month.

[40 CFR 60.48c(g1), (g2), (g3); PTC No. P-2010.0146, February 11, 2011]

5. BARLEY AND MALT UNLOADING, HANDLING, AND LOADOUT

Summary Description

5.1 Process Descriptions

5.1.1 Stack S01 - System 100 - Barley Unloading, Byproduct Loadout, and Rail Malt Loadout

Barley is delivered to the plant by truck or railcar. For truck deliveries, the truck is driven into the shipping and receiving building, and the grain is dumped into the truck-receiving hopper. During and after dumping the grain, a drag conveyor removes the grain from the truck-receiving hopper to an elevator from which it is transferred to the storage silos. For rail receiving, the car is moved into position over the rail-receiving hopper and the grain is discharged into the hopper. Drag conveyors transport the grain to an elevator system which ties into the silo-loading system.

The majority of the malt is loaded into closed-hopper railcars using system 100 (emissions point S01), and the remaining malt is loaded into trucks using system 200 (emissions point S02.) Byproducts are transported from storage silos to the load-out conveyors. Most of the byproducts are loaded onto trucks using a large hood to control emissions. A small amount of byproducts are loaded into closed hopper railcars.

[PTC No. P-2010.0146, February 11, 2011]

5.1.2 Stack S02 - System 200 – Truck Loadout for Malt and Byproduct

System 200 includes the malt, byproduct, and barley conveyors, elevators, and spouts. Clean malt and byproducts are transported by conveyor from the storage silos to the truck loading conveyors. This system also serves several elevators, elevator boots, and drag conveyors.

[PTC No. P-2010.0146, February 11, 2011]

5.1.3 Stack S03 - System 300 - In-house Handling of Barley and Malt

System 300 controls emissions from the malt and barley conveyance within the facility by a series of enclosed conveyors, elevators, and spouts. This includes the storage silo loading system, the silos, the kiln malt storage bins, and the shipping malt storage bin.

5.1.4 Stack S04 - System 400 - Barley Cleaning, Grading, and Associated Handling

System 400 controls emissions from the barley-cleaning system and associated handling. The barley-cleaning system receives barley from storage silos via an enclosed elevator. The cleaning and grading system is headed by a garner grain bin, which is filled from the elevator leg. From the garner bin the grain drops to a grain cleaner. The cleaner screens off shorts that are discharged to a portable open container. The cleaner also aspirates dust and separates chaff and other materials. From the grain cleaner, the grain is directed to cylinder separators for length grading. The barley is elevated to steeping or to storage. The byproducts are routed to the feed bins and are removed from the facility via the malt load-out system.

5.1.5 Stack S05 - System 500 - Graded Barley Transfer to Malt House

System 500 controls emissions from the graded barley transfer to germination where steeping and germination processes occur. Barley transfer to steeping is accomplished by one of two elevators. From the garners, barley is discharged through aspirators to one of two conveyors, which feed grain to the steep tanks. A manually-operated diverter determines which tank will receive the barley.

5.1.6 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 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.

5.1.7 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.

5.1.8 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.

5.1.9 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 is for cleaning the headhouse and the second 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.

[PTC No. P-2010.0146, February 11, 2011]

5.2 Control Descriptions

5.2.1 System 100

The emissions from the barley unloading station are controlled by the System 100 baghouse with an estimated capture efficiency of 85% and a PM₁₀ removal efficiency of 99%. The associated transfer operations are totally enclosed, and the emissions from transfer are vented into the System 100 baghouse.

5.2.2 System 200

The emissions from the malt loading systems are controlled by the System 200 baghouse with an estimated capture efficiency of 85% and a PM₁₀ removal efficiency of 99%. The associated transfer operations are totally enclosed, and the emissions from malt and barley transfer and malt load-out are vented into the System 200 baghouse.

5.2.3 System 300

The emissions from the malt and barley transfer systems are controlled by the System 300 baghouse with a capture efficiency of 100% and a PM removal efficiency of 97%.

5.2.4 System 400

The emissions from the barley cleaning, grading and associated handling systems are controlled by the System 400 baghouse with a capture efficiency of 100% and a PM removal efficiency of 97%.

5.2.5 System 500

The emissions resulting from the graded barley transfer systems are controlled by the System 500 baghouse with a capture efficiency of 100% and a PM removal efficiency of 97%.

5.2.6 System 600

The emissions resulting from the dry malt cleaning, storage and transfer systems are controlled by the System 600 baghouse with a capture efficiency of 100% and a PM removal efficiency of 97%.

5.2.7 System 700

The emissions resulting from the pneumatic transfer of dust from other baghouse systems are controlled by the System 700 baghouse with a capture efficiency of 100% and a PM removal efficiency of 97%.

5.2.8 System 800

The emissions resulting from the transfer and handling of the following operations are controlled by the System 800 baghouse with a PM10 control efficiency of 99.5%:

- Barley elevator to daybin
- Barley daybin to washer
- Malt kiln to leg transfer
- Malt kiln
- Malt daybin
- Malt daybin unloading

5.2.9 Vacuum-Cleaning Systems

The emissions resulting from the vacuum-cleaning systems for the headhouse and the kiln are controlled by the MAC separator which houses both a cyclone and a baghouse in series. The systems have a capture efficiency of 100% and a PM removal efficiency of > 99%.

Table 5.1 BARLEY AND MALT UNLOADING, HANDLING, AND LOADOUT DESCRIPTION

Emissions Unit(s) / Process(es)	Emissions Control Device	Emissions Point
Barley unloading station	System 100 baghouse	Stack S01
Malt loading systems	System 200 baghouse	Stack S02
Malt and barley transfer systems	System 300 baghouse	Stack S03
Barley cleaning, grading and associated handling systems	System 400 baghouse	Stack S04
Graded barley transfer systems	System 500 baghouse	Stack S05
Dry malt cleaning, storage and transfer systems	System 600 baghouse	Stack S06
Pneumatic transfer of dust from other baghouse systems	System 700 baghouse	Stack S07
Barley and malt handling	System 800 baghouse	DS8
Headhouse and kiln vacuum-cleaning systems	MAC separator, including cyclone and baghouse in series	Stack S11, Stack S12, and Stack S13

[PTC No. P-2010.0146, February 11, 2011]

Table 5.2 contains only a summary of the requirements that apply to the barley and malt unloading, handling, and loadout. Specific permit requirements are listed below Table 5.2.

Table 5.2 APPLICABLE REQUIREMENTS SUMMARY

Permit Conditions	Parameter	Permit Limit / Standard Summary	Applicable Requirements Reference	Operating and Monitoring and Recordkeeping Requirements
5.3	PM and PM ₁₀ emissions	Barley and Malt Handling Emissions Limit Table	PTC No. P-2010.0146, issued February 11, 2011	5.9, 5.10, 5.12, 5.13, and 2.11
5.4, 2.7	Opacity limit, grain handling operations, truck loading and unloading of grain, railcar unloading station	0% opacity	PTC No. P-2010.0146, issued February 11, 2011	5.7, 5.9, and 2.8
5.5, 2.7	Visible emissions, individual truck and railcar unloading station	5% opacity	PTC No. P-2010.0146, issued February 11, 2011	5.7, 5.9, and 2.8
5.5, 2.7	Visible emissions, individual truck loading station	10% opacity	PTC No. P-2010.0146, issued February 11, 2011	5.7, 5.9, and 2.8
5.5, 2.7	Visible emissions, grain handling system	0% opacity	PTC No. P-2010.0146, issued February 11, 2011	5.7, 5.9, and 2.8
5.6	Barley unloading throughput	520,000 tons per any consecutive 12-month period	PTC No. P-2010.0146, issued February 11, 2011	5.10 and 2.11
5.8, 2.1	Fugitive dust	Reasonable control	PTC No. P-2010.0146, issued February 11, 2011	5.14, 2.2, 2.3, and 2.4

Permit Limits / Standard Summary

5.3 Emissions Limits

40 CFR 60 Subpart DD - § 60.302, Standard for particulate matter

In accordance with 40 CFR 60.302(b), the 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.

In accordance with 40 CFR 60.301(l) 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.

[40 CFR 60.302; PTC No. P-2010.0146, February 11, 2011]

PM and PM₁₀ shall not exceed any applicable emission rate limit listed in the Barley and Malt Handling Emissions Limit Table.

Table 5.3 BARLEY AND MALT HANDLING EMISSIONS LIMITS

Source Description	PM		PM ₁₀	
	lb/hr	T/yr ¹	lb/hr	T/yr ¹
S03	0.75	0.85	0.42	0.47
S04	2.49	10.89	2.21	2.95
S05	0.16	0.48	0.09	0.27
S06	3.48	15.26	3.48	2.73
S07	0.05	0.20	0.01	0.02

¹ The permittee shall not exceed the T/yr listed based on any consecutive 12-month period.

[PTC No. P-2010.0146, February 11, 2011]

5.4 Opacity Limit

40 CFR 60 Subpart DD - § 60.302, Standard for particulate matter

In accordance with 40 CFR 60.302(b), point sources of 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 shall not exceed 0% opacity. Opacity shall be determined by the procedures contained in 40 CFR 60.303.

In accordance with IDAPA 58.01.01.625, for point sources that are not covered in 40 CFR 60.302(b), 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.

[40 CFR 60.302; PTC No. P-2010.0146, February 11, 2011]

5.5 Visible Emissions Limits

Visible fugitive emissions shall not exceed the following limits:

5.5.1 5% opacity for an individual truck and railcar unloading station in accordance with 40 CFR 60 Subpart DD.

5.5.2 10% opacity from an individual truck loading station in accordance with 40 CFR 60 Subpart DD.

5.5.3 0% opacity for the grain handling system in accordance with 40 CFR 60 Subpart DD.
[PTC No. P-2010.0146, February 11, 2011]

Operating Requirements

5.6 Throughput Limits

The maximum annual barley unloaded at the facility shall not exceed 520,000 tons per any consecutive 12-month period.

[PTC No. P-2010.0146, February 11, 2011]

5.7 Baghouse Operation

Maintenance of the baghouses shall be performed if visible emissions exceed 0% opacity. The pressure drop across the baghouses shall be maintained within manufacturer and the operation and maintenance (O&M) manual specifications.

[PTC No. P-2010.0146, February 11, 2011]

5.8 Reasonable Control of Fugitive Emissions

All reasonable precautions shall be taken to prevent PM from becoming airborne. In determining what is reasonable, considerations will be given to factors such as the proximity of dust-emitting operations to human habitations and/or activities and atmospheric conditions that might affect the movement of PM. Some of the reasonable precautions include, but are not limited to, the following:

- Use, where practical, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of lands.
- Application, where practical, of asphalt, oil, water or suitable chemicals to, or covering of dirt roads, material stockpiles, and other surfaces which can create dust.
- Installation and use, where practical, of hoods, fans and fabric filters or equivalent systems to enclose and vent the handling of dusty materials. Adequate containment methods should be employed during sandblasting or other operations.
- Covering, where practical, of open-bodied trucks transporting materials likely to give rise to airborne dusts.
- Paving of roadways and their maintenance in a clean condition, where practical.
- Prompt removal of earth or other stored material from streets, where practical.

[PTC No. P-2010.0146, February 11, 2011]

Monitoring and Recordkeeping Requirements

5.9 Performance Tests

5.9.1 Within 60 days after achieving the maximum production rate at which the source will operate, but not later than 180 days after initial startup after issuance of Permit to Construct No. 019-00025, issued April 30, 2002, the permittee shall conduct performance tests to measure PM and opacity from stacks S04 and S06 in accordance with 40 CFR 60.14.

5.9.2 For new or modified facilities, within 60 days after achieving the maximum production rate at which the source will operate, but not later than 180 days after initial startup, the permittee shall conduct performance tests to measure opacity of fugitive emissions for the new or modified sources subject to 40 CFR 60, Subpart DD.

5.9.3 For any new or modified affected facility subject to 40 CFR 60 Subpart DD, the permittee shall record the following information:

- Date of initial startup
- Date of achieving maximum production rate
- Date test conducted

[PTC No. P-2010.0146, February 11, 2011]

5.9.4 The initial performance tests, and any subsequent performance tests conducted to demonstrate compliance, shall be performed in accordance with IDAPA 58.01.01.157, the Property Rights General Provision 6 of this permit, and the following requirements:

- The static pressure drop across the baghouse shall be monitored and recorded during each performance test.
- The throughput to the affected source(s) shall be recorded in pounds per hour (lb/hr) during each performance test.

[PTC No. P-2010.0146, February 11, 2011]

5.10 Throughput Monitoring

The permittee shall monitor and record the amount of barley unloaded on a monthly basis. Each month, the permittee will compile the daily records into a monthly sum and record the barley unloaded for that month and for the most recent 12-month period.

[PTC No. P-2010.0146, February 11, 2011]

5.11 Visible Emissions Monitoring

The permittee shall conduct a monthly inspection of any point of emission during daylight hours and under normal operating conditions. The inspection shall consist of a see/no see evaluation for each potential source of visible emissions. If any visible emissions are present from any point of emission, the permittee shall either take appropriate corrective action as expeditiously as practicable, or perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. A minimum of 30 observations shall be recorded when conducting the opacity test. If opacity is greater than 20% for a period or periods aggregating more than three minutes in any 60-minute period, the permittee shall take all necessary corrective action and report the exceedance in its annual compliance certification and in accordance with IDAPA 58.01.01.130-136. The permittee shall maintain records of the results of each monthly visible emission inspection and each opacity test when conducted. The records shall include, at a minimum, the date and results of each inspection and test and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.

[PTC No. P-2010.0146, February 11, 2011]

5.12 Monitoring Operating Parameters

The pressure drop across the baghouses shall be monitored and recorded on a weekly basis.

[PTC No. P-2010.0146, February 11, 2011]

5.13 Operations and Maintenance Manual Requirements

The permittee shall have an O&M manual for the baghouses, which describes the procedures that will be followed to comply with the General Compliance General Provision and the manufacturer specifications for the air pollution control device.

[PTC No. P-2010.0146, February 11, 2011]

5.14 Fugitive Dust Monitoring

The permittee shall conduct a quarterly facility-wide inspection of potential sources of fugitive emissions, during daylight hours and under normal operating conditions to ensure that the methods used to reasonably control fugitive emissions are effective. If fugitive emissions are not being reasonably controlled, the permittee shall take corrective action as expeditiously as practicable. The permittee shall maintain records of the results of each fugitive emission inspection. The records shall, at a minimum, include the date of each inspection and a description of the following:

- The permittee's assessment of the conditions existing at the time fugitive emissions were present (if observed);
- Any corrective action taken in response to the fugitive emissions; and
- The date the corrective action was taken.

[PTC No. P-2010.0146, February 11, 2011]

6. EMERGENCY IC ENGINE POWERING A FIRE PUMP

Summary Description

The diesel-fired emergency standby IC engine powers a fire pump to provide pressurized water to a fire suppression system. Table 6.1 describes the devices used to control emissions from the emergency IC engine powering a fire pump.

Table 6.1 EMISSIONS UNITS AND EMISSIONS CONTROL DEVICES

Emissions Unit / Process	Emissions Control Device
315 bhp diesel-fired IC engine	N/A

Table 6.2 contains only a summary of the requirements that apply to the emergency IC engine powering a fire pump. Specific permit requirements are listed below Table 6.2.

Table 6.2 APPLICABLE REQUIREMENTS SUMMARY

Permit Conditions	Parameter	Permit Limit / Standard Summary	Applicable Requirements Reference	Operating and Monitoring and Recordkeeping Requirements
6.4	Maintenance requirements	Change oil and filter every 500 hours of operation Inspect air cleaner every 1,000 hours of operation Inspect all hoses and belts every 500 hours of operation	PTC No. P-2010.0146, issued February 11, 2011	6.10, 6.11, and 2.11
6.5	Operational requirements	Operate and maintain the engine, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions	PTC No. P-2010.0146, issued February 11, 2011	6.10, 6.11, and 2.11
6.6	Monitoring, installation, collection, operation, and maintenance requirements	Operate and maintain the engine and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop a maintenance plan	PTC No. P-2010.0146, issued February 11, 2011	6.10, 6.11, and 2.11

40 CFR 63 Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

General Requirements

6.1 Incorporation of Federal Requirements by Reference

Should there be any conflict between the requirements of the permit condition and the requirements of 40 CFR 63 Subpart ZZZZ, the requirements of the document shall govern, including any amendments to that regulation.

[PTC No. P-2010.0146, February 11, 2011]

6.2 Affected Source - 40 CFR 63.6590, What parts of my plant does this subpart cover?

In accordance with 40 CFR 63.6590, the engine is an existing stationary RICE located at an area source of HAP emissions.

[40 CFR 63.6590; PTC No. P-2010.0146, February 11, 2011]

6.3 Compliance Date - 40 CFR 63.6595, When do I have to comply with this subpart?

In accordance with 40 CFR 63.6595, an existing stationary CI RICE located at an area source of HAP emissions, the permittee shall comply with the applicable emission limitations and operating limitations no later than May 3, 2013.

[40 CFR 63.6595; PTC No. P-2010.0146, February 11, 2011]

Operating Requirements

6.4 40 CFR 63.6603, What emission limitations and operating limitations must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?

In accordance with 40 CFR 63.6603, the permittee shall comply with the requirements in Table 2d to this subpart. They are listed as follows:

- Change oil and filter every 500 hours of operation or annually, whichever comes first.
- Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first.
- Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

[40 CFR 63.6603; PTC No. P-2010.0146, February 11, 2011]

6.5 40 CFR 63.6605, What are my general requirements for complying with this subpart?

In accordance with 40 CFR 63.6605 (a), the permittee shall be in compliance with the emission limitations and operating limitations in this subpart that apply to the permittee at all times.

In accordance with 40 CFR 63.6605 (b), the permittee at all times shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[40 CFR 63.6605; PTC No. P-2010.0146, February 11, 2011]

6.6 40 CFR 63.6625, What are my monitoring, installation, collection, operation, and maintenance requirements?

6.6.1 In accordance with 40 CFR 63.6625 (e) and 63.6640 (a), the permittee shall 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.

6.6.2 In accordance with 40 CFR 63.6625 (f), the permittee shall install a non-resettable hour meter if one is not already installed.

- 6.6.3 In accordance with 40 CFR 63.6625 (h), the permittee shall 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.
- 6.6.4 In accordance with 40 CFR 63.6625 (i), the permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2d to this subpart (in the What emission limitations and operating limitations must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions Permit Condition or 40 CFR 63.6603.) The oil analysis must be performed at the same frequency specified for changing the oil in Table 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 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 days or before commencing operation, whichever is later. The permittee shall 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.

[40 CFR 63.6625; PTC No. P-2010.0146, February 11, 2011]

Reporting Requirements

- 6.7 40 CFR 63.6640, How do I demonstrate continuous compliance with the emission limitations and operating limitations?

In accordance with 40 CFR 63.6640(b), the permittee shall report each instance in which you did not meet each emission limitation or operating limitation in Table 2d as listed under the What are my general requirements for complying with this subpart Permit Condition.

In accordance with 40 CFR 63.6640(e), the permittee shall report each instance in which the permittee did not meet the requirements in Table 8 to this subpart that apply to the permittee. Table 8 is the Applicability of General Provisions to Subpart ZZZZ. It is included in the appendix of the permit.

[40 CFR 63.6640; PTC No. P-2010.0146, February 11, 2011]

Compliance Requirements

- 6.8 In accordance with 40 CFR 63.6640(f),
- (i) There is no time limit on the use of emergency stationary RICE in emergency situations.
 - (ii) The permittee may operate the emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. 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 year.

- (iii) The permittee may operate the emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving 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; except that the permittee may operate the emergency engine for a maximum of 15 hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout, such as unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level. The engine may not be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur, and the engine operation must be terminated immediately after the facility is notified that the emergency condition is no longer imminent. The 15 hours per year of demand response operation are counted as part of the 50 hours of operation per year provided for non-emergency situations. The supply of emergency power to another entity or entities pursuant to financial arrangement is not limited by this paragraph 40 CFR 63.6640(f)(1)(iii), as long as the power provided by the financial arrangement is limited to emergency power.

[40 CFR 63.6640(f); PTC No. P-2010.0146, February 11, 2011]

Reporting Requirements

- 6.9 40 CFR 63.6650, What reports must I submit and when?

In accordance with 40 CFR 63.6650(f), each affected source that has obtained a Title V operating permit pursuant to 40 CFR part 70 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).

[40 CFR 63.6650; PTC No. P-2010.0146, February 11, 2011]

Recordkeeping Requirements

- 6.10 40 CFR 63.6655, What records must I keep?

- 6.10.1 In accordance with 40 CFR 63.6655(a), the permittee shall keep the following records:

- Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment according to 40 CFR 63.6655(a)(2).
- Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 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 according to 40 CFR 63.6655(a)(5).

- 6.10.2 In accordance with 40 CFR 63.6655 (d), the permittee shall keep the records of working practice as required in 40 CFR 63.6640 (a) or 40 CFR 63.6625 (e).

- 6.10.3 In accordance with 40 CFR 63.6655 (e), the permittee shall keep the records of the maintenance conducted on the stationary RICE in order to demonstrate that the permittee operated and maintained the stationary RICE and after-treatment control device (if any) according to the permittee's own maintenance plan.

6.10.4 In accordance with 40 CFR 63.6655 (f), the permittee shall keep the records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The permittee shall 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 engines are used for demand response operation, the permittee shall keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response.

[40 CFR 63.6655; PTC No. P-2010.0146, February 11, 2011]

6.11 40 CFR 63.6660, In what form and how long must I keep my records?

In accordance with 40 CFR 63.6660,

- The records must be in a form suitable and readily available for expeditious review according to 40 CFR 63.10(b)(1).
- As specified in 40 CFR 63.10(b)(1), the permittee shall keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.
- The permittee shall 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 40 CFR 63.10(b)(1).

[40 CFR 63.6660; PTC No. P-2010.0146, February 11, 2011]

Other Requirements

6.12 40 CFR 63.6665, What parts of the General Provisions apply to me?

In accordance with 40 CFR 63.6665, the permittee is subject to Table 2.4 to this subpart that shows which parts of the General Provisions in 40 CFR 63.1 through 63.15 apply.

[40 CFR 63.6665; PTC No. P-2010.0146, February 11, 2011]

7. INSIGNIFICANT ACTIVITIES

Activities and emission units identified as insignificant under IDAPA 58.01.01.317.01(b) are listed in Table 7.1 to qualify for a permit shield.

Table 7.1 INSIGNIFICANT ACTIVITIES

Description	Insignificant Activities IDAPA 58.01.01.317.01(b)(1) Citation
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.	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.	2
Welding using not more than one (1) ton per day of welding rod.	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.	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.	16
Surface coating, using less than two (2) gallons per day.	17
Space heaters and hot water heaters using natural gas, propane or kerosene and generating less than five million (5,000,000) Btu/hr.	18
Milling and grinding activities, using paste-form compounds with less than one percent (1%) volatile organic compounds.	22
Surface coating, aqueous solution or suspension containing less than one percent (1%) volatile organic compounds.	25
Storage and handling of water based lubricants for metal working where the organic content of the lubricant is less than ten percent (10%).	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.	30

7.1 There are no monitoring, recordkeeping, or reporting requirements for insignificant emission units or activities beyond those required in the Facility-wide Permit Conditions.

8. TIER I OPERATING PERMIT GENERAL PROVISIONS

General Compliance

1. The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation and is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application.
[IDAPA 58.01.01.322.15.a, 5/1/94; 40 CFR 70.6(a)(6)(i)]
2. It shall not be a defense in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the terms and conditions of this permit.
[IDAPA 58.01.01.322.15.b, 5/1/94; 40 CFR 70.6(a)(6)(ii)]
3. Any permittee who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information.
[IDAPA 58.01.01.315.01, 5/1/94; 40 CFR 70.5(b)]

Reopening

4. This permit may be revised, reopened, revoked and reissued, or terminated for cause. Cause for reopening exists under any of the circumstances listed in IDAPA 58.01.01.386. Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Such reopening shall be made as expeditiously as practicable in accordance with IDAPA 58.01.01.360 through 369.
[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)]
5. The filing of a request by the permittee for a permit revision, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
[IDAPA 58.01.01.322.15.d, 5/1/94; 40 CFR 70.6(a)(6)(iii)]

Property Rights

6. 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

7. The permittee shall furnish all information requested by DEQ, within a reasonable time, that DEQ may request 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)]

8. Upon request, the permittee shall 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

9. The provisions of this permit are severable, and if any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.
[IDAPA 58.01.01.322.15.h, 5/1/94; 40 CFR 70.6(a)(5)]

Changes Requiring Permit Revision or Notice

10. 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 shall 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)]
11. 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

12. Unless specifically identified as a “State-only” provision, all terms and conditions in this permit, including any terms and conditions designed to limit a source’s potential to emit, are enforceable: (i) by DEQ in accordance with state law; and (ii) by the United States or any other person in accordance with federal law.
[IDAPA 58.01.01.322.15.j, 5/1/94; 40 CFR 70.6(b)(1) and (2)]
13. Provisions specifically identified as a “State-only” provision are enforceable only in accordance with state law. “State-only” provisions are those that are not required under the Federal Clean Air Act or under any of its applicable requirements or those provisions adopted by the state prior to federal approval.
[Idaho Code §39-108; IDAPA 58.01.01.322.15.k, 3/23/98]

Inspection and Entry

14. Upon presentation of credentials, the permittee shall allow DEQ or an authorized representative of DEQ to do the following:
- a. 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;
 - b. Have access to and copy, at reasonable times, any records that are kept under the conditions of this permit;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
 - d. 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.i, 5/1/94; 40 CFR 70.6(c)(2)]**

New Requirements During Permit Term

15. The permittee shall comply with applicable requirements that become effective during the permit term 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

16. 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

17. 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

18. a. The owner or operator of a Tier I source 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)]**

- b. 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

19. 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:
- a. Such applicable requirements are included and are specifically identified in the Tier I operating permit; or
 - i. 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.
 - b. 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).
 - c. Nothing in this permit shall alter or affect the following:
 - i. Any administrative authority or judicial remedy available to prevent or terminate emergencies or imminent and substantial dangers;
 - ii. 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;
 - iii. The applicable requirements of the acid rain program, consistent with 42 U.S.C. Section 7651(g)(a); and
 - iv. 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

20.
 - a. For each applicable requirement for which the source is not in compliance, the permittee shall comply with the compliance schedule incorporated in this permit.
 - b. 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.
 - c. 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.
 - d. 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

21. The permittee shall submit compliance certifications during the term of the permit for each emissions unit to DEQ and the EPA as follows:
- a. The compliance certifications for all emissions units shall be submitted annually from January 1 to December 31 or more frequently if specified by the underlying applicable requirement or elsewhere in this permit by DEQ.
 - b. The initial compliance certification for each emissions unit shall address all of the terms and conditions contained in the Tier I operating permit that are applicable to such emissions unit including emissions limitations, standards, and work practices;
 - c. The compliance certification shall be in an itemized form providing the following information (provided that the identification of applicable information may cross-reference the permit or previous reports as applicable):
 - i. The identification of each term or condition of the Tier I operating permit that is the basis of the certification;
 - ii. The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period. Such methods and other means shall include, at a minimum, the methods and means required under Subsections 322.06, 322.07, and 322.08;
 - iii. The status of compliance with the terms and conditions of the Tier I operating permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the method or means designated in Subsection 322.11.c.ii. above. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 occurred; and
 - iv. Such information as the Department may require to determine the compliance status of the emissions unit.
 - d. 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

22. No person shall knowingly 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

23. No person shall knowingly 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

24. 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. The permittee's semiannual reporting periods shall be from January 1 to June 30 and July 1 to December 31. All instances of deviations from this operating permit's requirements must be clearly identified in the report. The semiannual reports shall be submitted to DEQ within 30 days of the end of the specified reporting period.
[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

25. The permittee shall promptly report all deviations from permit requirements including upset conditions, their probable cause, and any corrective actions or preventive measures taken. For excess emissions, the report shall be made in accordance with IDAPA 58.01.01.130-136. For all other deviations, the report shall be made in accordance with IDAPA 58.01.01.322.08.c, unless otherwise specified in this permit.
[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

26. No permit revision shall 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

27. 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)]

APPENDIX B

IDEQ RENEWAL APPLICATION FORMS



Please see instructions on back page before filling out the form. All information is required. If information is missing, the application will not be processed.

Identification

1. Facility name: Idaho Falls Malt Facility
 2. Existing facility identification number: 019-00025
 Check if new facility (not yet operating)
 3. Brief project description: Renewal of Tier 1 Operating Permit - No Modifications

Facility Information

4. Primary facility permitting contact name: Mr. Kirby Kraft
 Contact type: Facility permitting contact
 Telephone number: 314-577-4572
 E-mail: kirby.kraft@anheuser-busch.com
 5. Alternate facility permitting contact name: [Blank]
 Alternate contact type: Facility permitting contact
 Telephone number: [Blank]
 E-mail: [Blank]
 6. Mailing address where permit will be sent (street/city/county/state/zip code): 5755 South Yellowstone Highway, Bonneville County, Idaho Falls, ID 83402
 7. Physical address of permitted facility (if different than mailing address) (street/city/county/state/zip code): Same
 8. Is the equipment portable? Yes* No *If yes, complete and attach PERF; see instructions.
 9. NAICS codes: Primary NAICS: 311213 Secondary NAICS: [Blank]
 10. Brief business description and principal product produced: Malt Products
 11. Identify any adjacent or contiguous facility this company owns and/or operates: N/A

12. Specify type of application Permit to construct (PTC); application fee of \$1,000 required. See instructions.
 Tier I permit Tier II permit Tier II/Permit to construct
 For Tier I permitted facilities only: If you are applying for a PTC then you must also specify how the PTC will be incorporated into the Tier I permit.
 Co-process Tier I modification and PTC Incorporate PTC at the time of Tier I renewal Administratively amend the Tier I permit to incorporate the PTC upon applicant's request (IDAPA 58.01.01.209.05.a, b, or c)

Certification

In accordance with IDAPA 58.01.01.123 (Rules for the Control of Air Pollution in Idaho), I certify based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete.

13. Responsible official's name: John Drake
 Official's title: Plant Manager
 Official's address: 5755 South Yellowstone Highway, Bonneville County, Idaho Falls, ID 83402
 Telephone number: 208-522-5992
 E-mail: john.drake@anheuser-busch.com
 Official's signature:
 Date: 2/1/2016

14. Check here to indicate that you want to review the draft permit before final issuance.

Instructions for Form GI

This form is used by DEQ to identify a company or facility, equipment locations, and personnel involved with the permit application. Additional information may be required.

Identification

1. Provide the facility name. If the facility is *doing business as* (dba) a facility different in name than the primary facility, provide the dba name.
2. If the facility is an existing permitted facility in Idaho, provide the facility identification number. If the facility is new and not yet operating, check the box.
3. Provide a brief project description as on Form CS, Cover Sheet. This is useful in case any pages of the application are separated.

Facility information

4. Provide name of the *primary* person who should be contacted regarding this permit. Provide telephone number and e-mail address for the primary person.
5. Provide name of an *alternate* person who should be contacted if the person listed in 4 is not available. Provide telephone number and e-mail address for the alternate person.
6. Provide the mailing address where DEQ should mail the permit.
7. Provide the physical address where the equipment is located (if different than 6).
8. Indicate if the permitted equipment is portable by checking the appropriate box. If the permitted equipment is portable, complete and attach the Portable Equipment Relocation Form (PERF) to this application. The PERF is available from DEQ's website at http://www.deq.idaho.gov/media/576773-ptc_relocation.pdf or http://www.deq.idaho.gov/media/576769-ptc_relocation.doc (for Word format).
9. Provide the North American Industry Classification System (NAICS) code for your facility. NAICS codes can be found at <http://www.census.gov/epcd/naics02/naicod02.htm>.
10. Describe the primary activity and principal product of your business as it relates to the NAICS code listed in 9.
11. Identify and describe any other sources or equipment owned and operated by the primary facility that are located on contiguous or adjacent properties and the role the source or equipment plays in supporting the primary facility.
12. Check the box describing the type of permit application.

Important note: If application is for a permit to construct (PTC), include the application fee of \$1,000 when submitting the application. Per IDAPA 58.01.01.226.02, DEQ cannot process the application without the fee, which must be submitted with the application.

For existing Tier I facilities that are applying for a PTC, the applicant must specify how the PTC will be incorporated into the Tier I permit (IDAPA 58.01.01.209.05). If you have questions, call the Air Permit Hotline at 1-877-573-7648.

Certification

13. Provide the name, title, address, telephone number, and e-mail of the facility's responsible official. Responsible official is defined in IDAPA 58.01.01.006.99. The responsible official must sign and date the application before it is submitted to DEQ.
14. Check this box to indicate that you want to review a draft before the final permit is issued.



DEQ AIR QUALITY PROGRAM
 1410 N. Hilton, Boise, ID 83706
 For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

Cover Sheet for Air Permit Application – Tier I **Form CSTI**

Revision 5
 08/28/08

Please see instructions on page 2 before filling out the form.

COMPANY NAME, FACILITY NAME, AND FACILITY ID NUMBER

1. Company Name	Busch Agricultural Resources, LLC.		
2. Facility Name	Idaho Falls Malt Facility	3. Facility ID No.	019-00025
4. Brief Project Description - One sentence or less	Renewal of Tier 1 Operating Permit - No Modifications		

PERMIT APPLICATION TYPE

5. Initial Tier I Tier I Administrative Amendment Tier I Minor Modification Tier I Significant Modification
 Tier I Renewal: Permit No.: T1-2010.0127 Date Issued: August 3, 2011

FORMS INCLUDED

Include	N/A	Forms	DEQ Verify
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Form CSTI – Cover Sheet	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Form GI – Facility Information	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form EU0 – Emissions Units General	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form EU1– Industrial Engine Information Please specify number of EU1s attached: _____	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form EU2– Nonmetallic Mineral Processing Plants Please specify number of EU2s attached: _____	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form EU3– Spray Paint Booth Information Please specify number of EU3s attached: _____	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form EU4– Cooling Tower Information Please specify number of EU4s attached: _____	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form EU5 – Boiler Information Please specify number of EU5s attached: _____	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form CBP– Concrete Batch Plant Please Specify number of CBPs attached: _____	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form HMAP – Hot Mix Asphalt Plant Please specify number of HMAPs attached: _____	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	PERF – Portable Equipment Relocation Form	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form BCE– Baghouses Control Equipment	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form SCE– Scrubbers Control Equipment	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form VSCE – Venturi Scrubber Control Equipment	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form ESP – Electrostatic Precipitator	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form AO – Afterburner/Oxidizer	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form CYS – Cyclone Separator	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form CA – Carbon Adsorber	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Forms EI-CP1 - EI-CP4– Emissions Inventory– criteria pollutants (Excel workbook, all 4 worksheets)	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Form CAM – Compliance Assurance Monitoring	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Form FRA – Federal Regulation Applicability	<input type="checkbox"/>

Instructions for Form CSTI

This form is the cover sheet for an air quality permit application. It provides DEQ with basic information regarding the company and the proposed permitting action. This form helps DEQ efficiently determine whether the application is administratively complete. This form also provides the applicant with a list of forms available to aid the applicant to successfully submit a complete application.

Company Name, Facility Name, and Facility ID Number

- 1-3. Provide the name of your company, the name of the facility (if different than company name), and the facility identification (ID) number (Facility ID No.) in the boxes provided. The facility ID number is also known as the AIRS number or AIRS/AFS number (example: 095-00077). If you already have a permit, the facility ID number is located in the upper right hand corner of the cover page. The facility ID number must be provided unless your facility has not received one, in which case you may leave this box empty. **Use these same names and ID number on all forms.** This is useful in case any pages of the application are separated.
4. Provide a brief description of this permitting project in one sentence or less. Examples might be "Tier I Administrative Amendment to allow for the change of ownership of this facility" or "Tier I Significant Modification to change the existing monitoring, recordkeeping, and reporting requirements Boiler #1." **This description will be used by DEQ as a unique identifier for this permitting project, in conjunction with the name(s) and ID number referenced in 1-3.** You will need to put this description, using the exact same words, on all other forms that are part of this project application. This is useful in case any pages of the application are separated.

If this Tier I is being issued as a result of a PTC issued pursuant to IDAPA 58.01.01.209.05.c, the source or modification may operate upon submittal for an administrative amendment issued pursuant to IDAPA 58.01.01.381.

Permit Application Type

5. Provide the reason you are submitting the permit application by checking the appropriate box and filling in the number and/or date if needed.

Forms Included

Check the "Included" box for each form included in this permit to construct application. If there are multiples of a form for multiple units of that type, check the box and fill in the number of forms in the blank provided.

The "N/A" box should only be checked if the form is absolutely unnecessary to complete the application. Additional information may be requested.

When complete, enclose the hardcopy application certified by a responsible official (as defined in IDAPA 58.01.01.006.94), and send to:

Air Quality Program Office – Application Processing
Department of Environmental Quality
1410 N. Hilton
Boise, ID 83706-1255



**IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

**Preapplication Meeting Information
Form FRA (Federal Requirements Applicability) -
Regulatory Review**

In each box in the table below, CTRL+click on the blue underlined text for instructions and information.

IDENTIFICATION	
<p>1. Company Name:</p> <p style="text-align: center;">Busch Agricultural Resources, LLC.</p>	<p>2. Facility Name:</p> <p style="text-align: center;">Idaho Falls Malt Facility</p>
<p>3. Brief Project Description: Renewal of Tier 1 Operating Permit - No Modifications</p>	
APPLICABILITY DETERMINATION	
<p>4. List all applicable subparts of the New Source Performance Standards (NSPS) (40 CFR part 60).</p> <p>List all non-applicable subparts of the NSPS which may appear to apply to the facility but do not.</p> <p>Examples of NSPS-affected emissions units include internal combustion engines, boilers, turbines, etc. Applicant must thoroughly review the list of affected emissions units.</p>	<p>List of all applicable subpart(s):</p> <p>Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units</p> <p>Subpart DD – Standards of Performance for Grain Elevators</p> <p><input type="checkbox"/> Not Applicable</p>
<p>5. List applicable subpart(s) of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) (40 CFR part 61 and 40 CFR part 63).</p> <p>List all non-applicable subparts of the NESHAP which may appear to apply to the facility but do not.</p> <p>Examples of affected emission units include solvent cleaning operations, industrial cooling towers, paint stripping and miscellaneous surface coating. Reference EPA's webpage on NESHAPs for more information.</p>	<p>List of all applicable subpart(s):</p> <p>Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines</p> <p><input type="checkbox"/> Not Applicable</p>
<p>6. For each subpart identified above, conduct a complete regulatory analysis using the instructions and referencing the example on the following pages.</p> <p>Note - Regulatory reviews must be submitted with sufficient detail so that DEQ can verify applicability and document in legal terms why the regulation does or does not apply. Regulatory reviews submitted with insufficient detail will be determined incomplete.</p>	<p><input type="checkbox"/> A detailed regulatory review is provided (Follow instructions and example).</p> <p><input checked="" type="checkbox"/> DEQ has already been provided a detailed regulatory review. Give a reference to the document including the date.</p> <p>No requested modifications to the existing Tier 1 Permit – a detailed regulatory review is included within the current operating permit.</p>

IF YOU ARE UNSURE HOW TO ANSWER ANY OF THESE QUESTIONS, CALL THE AIR PERMIT HOTLINE AT 1-877-5PERMIT.

It is emphasized that it is the applicant's responsibility to satisfy all technical and regulatory requirements, and that DEQ will help the applicant understand those requirements prior to submittal of the application but that DEQ will not perform the required technical or regulatory analyses on the applicant's behalf.

Instructions for Form FRA

- Item 4 & 5.** It is important that facilities review the most recent federal regulations when submitting their permit application to DEQ. Current federal regulations can be found at the following website: http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?&c=ecfr&tpl=/ecfrbrowse/Title40/40tab_02.tpl.
- Item 6.** For each applicable subpart identified under items 4-5, conduct a complete regulatory analysis. The facility must follow the procedure given below or obtain permission from DEQ to provide the necessary information using an alternative procedure:
1. Retrieve a TEXT or PDF copy of the applicable federal regulation subpart(s) online at <http://www.gpoaccess.gov/cfr/retrieve.html>.
 2. Copy and paste the regulation(s) into the DEQ air permit application.
 3. Highlight or underline sections in the regulation(s) that are applicable to the source(s).
 4. Under each section of the subpart, explain why the source is or is not subject to the section in addition to how the source will comply with the section. When providing the explanation use a different font than the regulation (i.e. **bold, italic**) so that it is easy for the reader to determine the text provided by the applicant. An example NSPS regulatory analysis is attached. The applicant must provide all information needed to determine applicability. If information is lacking or the analysis is incomplete, the application will be determined incomplete.

Information on NSPS/NESHAP applicability determinations that may be useful to applicants is available on EPA's website: [Clean Air Act Applicability Determination Index - Compliance Monitoring - EPA](#). Another useful source of information is the preamble to the regulation which is published in the Federal Register on the date the regulation was promulgated. Federal Registers may be found online at [Federal Register: Main Page](#). The date the regulation was published in the Federal Register is included in the footnotes of the regulation.
 5. DEQ will assist in identifying the applicable requirements that the applicant must include in the application, but will not perform the required technical or regulatory analysis on the applicant's behalf. Applicants should contact the Air Quality Permit Hotline (1-877-573-7648) to discuss NSPS/NESHAP regulatory analysis requirements or to schedule a meeting.
 6. Facilities should also document a non-applicability determination on federal air regulations which may appear to apply to the facility but actually do not. A non-applicability determination will avoid future confusion and expedite the air permit application review. If you conduct an applicability determination and find that your activity is not NSPS or NESHAP affected facility, an analysis should be submitted using the methods described above.
 7. **It is not sufficient to simply provide a copy of the NSPS or NESHAP. The applicant must address each section of the regulation as described above and as shown in the example that is provided.**

EXAMPLE OF A NSPS REGULATORY ANALYSIS

[Title 40, Volume 6]
[Revised as of July 1, 2008]
From the U.S. Government Printing Office via GPO Access
[CITE: 40CFR60]

TITLE 40--PROTECTION OF ENVIRONMENT

CHAPTER I--ENVIRONMENTAL PROTECTION AGENCY (CONTINUED)

PART 60 STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES--
Table of Contents

Subpart H Standards of Performance for Sulfuric Acid Plants

Sec.60.80 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to each sulfuric acid production unit, which is the affected facility.

(b) Any facility under paragraph (a) of this section that commences construction or modification after August 17, 1971, is subject to the requirements of this subpart.

ACME Chemicals, Inc. is proposing to construct after August 17, 1971 a sulfuric acid plant which burns elemental sulfur as defined by 40 CFR 60.81(a). ACME is therefore affected by this subpart.

(Be sure to use the terms of the regulation to describe applicability; usually applicability is determined based on a specific date, definition of an affected facility, and rated input capacity. All of the applicability criteria must be addressed by the applicant.)

Note - if a determination of non-applicability is being submitted it is not necessary to address the remaining non-applicable regulatory sections. Be sure to provide the applicability determination in terms of the regulation (i.e. construction/modification date, rated input capacity, definition of affected facility).

Sec.60.81 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

(a) Sulfuric acid production unit means any facility producing sulfuric acid by the contact process by burning elemental sulfur, alkylation acid, hydrogen sulfide, organic sulfides and mercaptans, or acid sludge, but does not include facilities where conversion to sulfuric acid is utilized primarily as a means of preventing emissions to the atmosphere of sulfur dioxide or other sulfur compounds.

(b) Acid mist means sulfuric acid mist, as measured by Method 8 of appendix A to this part or an equivalent or alternative method.

ACME Chemicals, Inc. has read and understands these definitions and used them in providing this regulatory analysis.

Sec.60.82 Standard for sulfur dioxide.

(a) On and after the date on which the performance test required to be conducted by Sec.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 any gases which contain sulfur dioxide in excess of 2 kg per metric ton of acid produced (4 lb per ton), the production being expressed as 100 percent H₂/SO₄/.

ACME Chemicals, Inc. is subject to this standard and has provided a documented emission inventory (or manufacturer guarantee) which shows compliance.

Sec.60.83 Standard for acid mist.

(a) On and after the date on which the performance test required to be conducted by Sec.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 any gases which:

(1) Contain acid mist, expressed as H₂/SO₄/, in excess of 0.075 kg per metric ton of acid produced (0.15 lb per ton), the production being expressed as 100 percent H₂/SO₄/.

ACME Chemicals, Inc. is subject to this standard and has provided a documented emission inventory (or manufacturer guarantee) which shows compliance.

(2) Exhibit 10 percent opacity, or greater.

ACME Chemicals, Inc. understands that this will become a permit condition and has supplied a manufacturer guarantee that the sulfuric acid plant will comply with this standard.

Sec.60.84 Emission monitoring.

(a) A continuous monitoring system for the measurement of sulfur dioxide shall be installed, calibrated, maintained, and operated by the owner or operator. The pollutant gas used to prepare calibration gas mixtures under Performance Specification 2 and for calibration checks under Sec.60.13(d), shall be sulfur dioxide (SO₂/). Method 8 shall be used for conducting monitoring system performance evaluations under Sec.60.13(c) except that only the sulfur dioxide portion of the Method 8 results shall be used. The span value shall be set at 1000 ppm of sulfur dioxide.

(b) The owner or operator shall establish a conversion factor for the purpose of converting monitoring data into units of the applicable standard (kg/metric ton, lb/ton). The conversion factor shall be determined, as a minimum, three times daily by measuring the concentration of sulfur dioxide entering the converter using suitable methods (e.g., the Reich test, National Air Pollution Control Administration Publication No. 999-AP-13) and calculating the appropriate conversion factor for each eight-hour period as follows:

$$CF=k[(1.000-0.015r)/(r-s)]$$

where:

CF=conversion factor (kg/metric ton per ppm, lb/ton per ppm).
 k=constant derived from material balance. For determining CF in metric units, k=0.0653. For determining CF in English units, k=0.1306.
 r=percentage of sulfur dioxide by volume entering the gas converter.
 Appropriate corrections must be made for air injection plants subject to the Administrator's approval.
 s=percentage of sulfur dioxide by volume in the emissions to the atmosphere determined by the continuous monitoring system required under paragraph (a) of this section.

(c) The owner or operator shall record all conversion factors and values under paragraph (b) of this section from which they were computed (i.e., CF, r, and s).

ACME Chemicals, Inc. is not proposing to utilize Sections 60.84(a)-(c) listed above to monitor emissions. Instead ACME Chemicals is utilizing 40 CFR 60.84(d) listed below to monitor emissions of sulfur dioxide.

(d) Alternatively, a source that processes elemental sulfur or an ore that contains elemental sulfur and uses air to supply oxygen may use the following continuous emission monitoring approach and calculation procedures in determining SO₂/ emission rates in terms of the standard. This procedure is not required, but is an alternative that would alleviate problems encountered in the measurement of gas velocities or production rate. Continuous emission monitoring systems for measuring SO₂/, O₂/, and CO₂/ (if required) shall be installed, calibrated, maintained, and operated by the owner or operator and subjected to the certification procedures in Performance Specifications 2 and 3. The calibration procedure and span value for the SO₂/ monitor shall be as specified in paragraph (b) of this section. The span value for CO₂/ (if required) shall be 10 percent and for O₂/ shall be 20.9 percent (air). A conversion factor based on process rate data is not necessary. Calculate the SO₂/ emission rate as follows:

$$Es/=(Cs/ S)/[0.265-(0.126 \%O_2/)-(A \%CO_2/)]$$

where:

Es/=emission rate of SO₂/, kg/metric ton (lb/ton) of 100 percent of H₂/SO₄/ produced.

Cs/=concentration of SO₂/, kg/dscm (lb/dscf).

S=acid production rate factor, 368 dscm/metric ton (11,800 dscf/ton) of 100 percent H₂/SO₄/ produced.

%O₂/=oxygen concentration, percent dry basis.

A=auxiliary fuel factor,

=0.00 for no fuel.

=0.0226 for methane.

=0.0217 for natural gas.

=0.0196 for propane.

=0.0172 for No 2 oil.

=0.0161 for No 6 oil.

=0.0148 for coal.

=0.0126 for coke.

%CO₂/= carbon dioxide concentration, percent dry basis.

Note: It is necessary in some cases to convert measured concentration units to other units for these calculations:

Use the following table for such conversions:

From--	To--	Multiply by--
g/scm.....	kg/scm.....	10 ⁻³
mg/scm.....	kg/scm.....	10 ⁻⁶
ppm (SO ₂).....	kg/scm.....	2.660x10 ⁻⁶
ppm (SO ₂).....	lb/scf.....	1.660x10 ⁻⁷

ACME Chemicals, Inc. has elected to use the monitoring requirements of the preceding section.

(e) For the purpose of reports under Sec.60.7(c), periods of excess emissions shall be all three-hour periods (or the arithmetic average of three consecutive one-hour periods) during which the integrated average sulfur dioxide emissions exceed the applicable standards under Sec.60.82.

ACME acknowledges that this section applies to the sulfuric acid plant.

Sec.60.85 Test methods and procedures.

(a) In conducting the performance tests required in Sec.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 Sec.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 SO₂/ acid mist, and visible emission standards in Sec. Sec. 60.82 and 60.83 as follows:

(1) The emission rate (E) of acid mist or SO₂/ shall be computed for each run using the following equation:

$$E = (CQsd) / (PK)$$

where:

E=emission rate of acid mist or SO₂/ kg/metric ton (lb/ton) of 100 percent H₂/SO₄/ produced.

C=concentration of acid mist or SO₂/, g/dscm (lb/dscf).

Qsd/=volumetric flow rate of the effluent gas, dscm/hr (dscf/hr).

P=production rate of 100 percent H₂/SO₄/, metric ton/hr (ton/hr).

K=conversion factor, 1000 g/kg (1.0 lb/lb).

(2) Method 8 shall be used to determine the acid mist and SO₂/ concentrations (C's) and the volumetric flow rate (Qsd/) of the effluent gas. The moisture content may be considered to be zero. The sampling time and sample volume for each run shall be at least 60 minutes and 1.15 dscm (40.6 dscf).

(3) Suitable methods shall be used to determine the production rate (P) of 100 percent H₂/SO₄/ for each run. Material balance over the production system shall be used to confirm the production rate.

(4) Method 9 and the procedures in Sec.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) If a source processes elemental sulfur or an ore that contains elemental sulfur and uses air to supply oxygen, the following procedure may be used instead of determining the volumetric flow rate and production rate:

(i) The integrated technique of Method 3 is used to determine the O₂/ concentration and, if required, CO₂/ concentration.

(ii) The SO₂/ or acid mist emission rate is calculated as described in Sec.60.84(d), substituting the acid mist concentration for Cs/ as appropriate.

ACME Chemicals, Inc. acknowledges that performance tests shall be conducted as specified above.



Facility Wide Potential to Emit Emission Inventory Application Template and Instructions

For new stationary sources provide the facility’s potential to emit for all NSR Regulated Air Pollutants. The potential to emit provided here must match the emissions rates which are requested to be permitted.

For modifications to existing facilities (including the addition of new emissions units), if the existing facility classification is in question an existing facility wide potential to emit emission inventory will be required to be submitted¹. Contact DEQ to determine if a facility wide emission inventory for the existing facility is required.

All emissions inventories must be submitted with thorough documentation. The emission inventories will be subjected to technical review. Therefore, prepare your application with sufficient documentation so that the public and DEQ can verify the validity of the emission estimates. **Applications submitted without sufficient documentation are incomplete. Follow the instructions provided on page 2; do not proceed until you have read the instructions.**

Applicants must use the Potential to Emit Summary table provided below.

Table 1. POTENTIAL TO EMIT FOR NSR REGULATED POLLUTANTS

REF BELOW

Emissions Unit	NSR Pollutant ^a					
	T/yr	T/yr	T/yr	T/yr	T/yr	T/yr
Point Sources						
XXX	0.00	0.00	0.00	0.00	0.00	0.00
XXX	0.00	0.00	0.00	0.00	0.00	0.00
XXX	0.00	0.00	0.00	0.00	0.00	0.00
Fugitive Sources						
<i>[For listed source categories only, see item 3 below in the instructions]</i>						
XXX	0.00	0.00	0.00	0.00	0.00	0.00
XXX	0.00	0.00	0.00	0.00	0.00	0.00
XXX	0.00	0.00	0.00	0.00	0.00	0.00
Totals	0.00	0.00	0.00	0.00	0.00	0.00

a) NSR Regulated air Pollutants are defined² as: Particulate Matter (PM, PM-10, PM-2.5), Carbon Monoxide, Lead, Nitrogen Dioxide, Ozone (VOC), Sulfur Dioxide, CO_{2e}³, Green House Gases (GHG) mass, all pollutants regulated by NSPS (40 CFR 60)(i.e. TRS, fluoride, sulfuric acid mist) & Class I & Class II Ozone Depleting Substances (40 CFR 82)(i.e. CFC, HCFC, Halon, etc.)

¹ The applicant must determine if the existing facility is a major facility. If the facility is an existing PSD major facility and changes are being made to the facility the major modification test must be conducted.

² 40 CFR 52.21(b)(50), as incorporated by reference at IDAPA 58.01.01.107.03.d

³ Multiply each green house gas (GHG) by the global warming potential (GWP) listed at 40 CFR 98, Table A- 1 of Subpart A then sum all values to determine CO_{2e} (GHGs are carbon dioxide, nitrous oxide, methane, hydrofluorcarbons, perfluorcarbons, sulfur hexafluoride). Be sure to show all calculations as described in the instructions.

Applicants are encouraged to call DEQ's Air Quality Permit Hotline (1-877-573-7648) to ask questions as they prepare the application. **Emission Inventory Instructions:**

1. Use the same emission unit name throughout the application (i.e. in air pollution control equipment forms and for modeling purposes).
2. The application must **show in detail all calculations** used to develop the PTE summary and include:
 - Electronic copies of any spreadsheets used to estimate emissions. If a spreadsheet is used submit an electronic copy of the spread sheet (i.e. Excel File).
 - Documentation of all calculations conducted by hand (i.e. show all calculations).
 - Clear statements on all assumptions relied upon in estimating emissions.
 - Documentation of the emissions factors used to estimate emissions. If the emissions factor documentation is readily available to DEQ, such as an EPA AP-42 emissions factor, a simple reference to the emissions factor suffices. If the emissions factor documentation is not readily available to DEQ the applicant must submit the documentation with the application; ask DEQ if you are uncertain. **Applications without sufficient documentation are incomplete.** Documentation may consist of manufacturer guarantees, research conducted by trade organizations, published emission factors, and source test results. **If there are multiple factors for a given operation, note why the factor used is the most representative.**
 - Copies of manufacturer guarantees upon which emission inventories are based.
 - The best available emission information (see [DEQ's Guidance on Emission Data Hierarchy](#)).
 - If source tests are used as the basis for emissions estimates the source test report must be submitted. If the source test report is on file with DEQ provide the date of the source test was submitted along with the name of the facility and the emission unit that was tested. Source data from similar emissions units may be considered reliable provided it is clearly described why the sources are similar. Similar sources are those that the applicant has shown serve a similar function, use similar raw materials, and have similar processing rates.
3. Fugitive emissions of NSR regulated air pollutants from the source categories listed below must be included in the emission inventory.

Listed Source Categories for Inclusion of Fugitive Emissions

- | | |
|---|---|
| • Coal cleaning plants (with thermal dryers) | • Carbon black plants (furnace process) |
| • Kraft pulp mills | • Primary lead smelters |
| • Portland cement plants | • Fuel conversion plants |
| • Primary zinc smelters | • Sintering plants |
| • Iron and steel mills | • Secondary metal production plants |
| • Primary aluminum ore reduction plants | • Chemical process plants (excluding ethanol plants by natural fermentation). |
| • Primary copper smelters | • Fossil-fuel fired boilers totaling more than 250 MMBtu/hr |
| • Municipal incinerators -250 T/day of refuse | • Petroleum storage and transfer units with total capacity of 300,000 barrels |
| • Hydrofluoric, sulfuric, or nitric acid plants | • Taconite ore processing plants |
| • Petroleum refineries | • Glass fiber processing plants |
| • Lime plants | • Charcoal production plants |
| • Phosphate rock processing plants | • Fossil fuel-fired steam electric plants greater than 250 MMBtu/hr) |
| • Coke oven batteries | • Categories regulated by NSPS or NESHAP prior to 8/7/80 |
| • Sulfur recovery plants | |

Source Type	Emission Unit #	Source Name	Description	Permitted Limits		Potential Emissions (tons/year)					
				Annual Throughput	Throughput Units	PM	PM ₁₀	NO _x	CO	SO _x	VOC
Grain Handling	SO1	Dust System #1	Barley Unloading/Conveying	520,000	tons	18.0	18.0				
Grain Handling	SO1	Dust System #1	By-Product Load-out	32,730	tons						
Grain Handling	SO2	Dust System #2	By-Product Load-out	32,730	tons	14.8	14.8				
Grain Handling	SO2	Dust System #2	Malt Load-out	404,700	tons						
Grain Handling	SO2	Dust System #2	Barley Transfer	520,000	tons						
Grain Handling	SO2	Dust System #2	Malt Transfer	404,700	tons						
Grain Handling	SO3	Dust System #3	In-house Handling of Barley	520,000	tons	0.48	0.27				
Grain Handling	SO3	Dust System #3	In-house Handling of Malt	404,700	tons	0.37	0.21				
Grain Handling	SO4	Dust System #4	Barley Cleaning, Grading and Associated Handling	520,000	tons	10.89	0.74				
Grain Handling	SO5	Dust System #5	Graded Barley Transfer to Malt House	520,000	tons	0.48	0.27				
Grain Handling	SO6	Dust System #6	Dry Malt Cleaning, Storage and Associated Handling	404,700	tons	15.26	0.58				
Grain Handling	SO7	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 ₂ 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 ₂ 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 ₁₀	NO _x	CO	SO _x	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 ₂ 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 ₂ 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
Totals						147.0	113.4	116.6	97.7	95.7	8.1



Facility Wide Hazardous Air Pollutant Potential to Emit Application Template and Instructions

Provide the facility wide potential to emit for all Hazardous Air Pollutants (HAPs). **The potential to emit provided here must match the emissions rates which are requested to be permitted.**

HAPs are pollutants that are required to be regulated under the Clean Air Act. A list of the HAPs may be found by following this link: [HAP list](#); review the list carefully to be sure you have included all listed HAPs.

All emissions inventories must be submitted with thorough documentation. The emission inventories will be subjected to technical review; prepare your application with sufficient documentation so that either the public or DEQ can verify the validity of the emission estimates. **Applications submitted without sufficient documentation are incomplete. Follow the instructions provided on the following page; do not proceed until you have read the instructions.**

Applicants must use the Potential to Emit Summary table provided below. Identify the individual HAP with the highest emissions and total HAP emissions. The potential to emit provided here must match the emissions rates which are requested to be permitted. **All fugitive emissions of HAPs must be included.**

Table X HAP POTENTIAL TO EMIT EMISSIONS SUMMARY

REF BELOW

HAP Pollutants	PTE (T/yr)
List the HAP here	X.X
List the HAP here*	X.X
List the HAP here	X.X
Total	X.X

* Maximum Individual HAP

Applicants are encouraged to call DEQ's Air Quality Permit Hotline (1-877-573-7648) to ask questions as they prepare the application.

Emission Inventory Instructions:

1. Use the same emission unit name throughout the application (i.e. in air pollution control equipment forms and for modeling purposes).
2. The application must **show in detail all calculations** used to develop the PTE summary and include:
 - Electronic copies of any spreadsheets used to estimate emissions. If a spreadsheet is used submit an electronic copy of the spread sheet (i.e. Excel File).
 - Documentation of all calculations conducted by hand (i.e. show all calculations).
 - Clear statements on all assumptions relied upon in estimating emissions.
 - Documentation of the emissions factors used to estimate emissions. If the emissions factor documentation is readily available to DEQ, such as an EPA AP-42 emissions factor, a simple reference to the emissions factor suffices. If the emissions factor documentation is not readily available to DEQ the applicant must submit the documentation with the application; ask DEQ if you are uncertain. **Applications without sufficient documentation are incomplete.** Documentation may consist of manufacturer guarantees, research conducted by trade organizations, published emission factors, and source test results. **If there are multiple factors for a given operation, note why the factor used is the most representative.**
 - Copies of manufacturer guarantees upon which emission inventories are based.
 - The best available emission information (see [DEQ's Guidance on Emissions Data Hierarchy](#)).
 - If source tests are used as the basis for emissions estimates the source test report must be submitted. If the source test report is on file with DEQ provide the date of the source test was submitted along with the name of the facility and the emission unit that was tested. Source data from similar emissions units may be considered reliable provided it is clearly described why the sources are similar. Similar sources are those that the applicant has shown serve a similar function, use similar raw materials, and have similar processing rates.
2. **All fugitive emissions of HAPs must be included¹.**

¹ November 27, 2001 (66 FR 59161), EPA published a rule, "Change to Definition of Major Source," that requires the fugitive emissions of all hazardous air pollutants ("HAPs") listed under section 112(b) of the Act in determining whether the source is a major source.

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 ³ /hr
Annual Rate		584.0 MMft ³ /yr
Heating Value		1,020 Btu/ft ³
Annual Operation	8,760	hr/yr

2

HAP Pollutant	Cas #	Kiln 1		
		Factor lb/10 ⁹ ft ³	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 (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-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			
1,1,2,2-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)	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 ³ /hr
Annual Rate		584.0 MMft ³ /yr
Heating Value		1,020 Btu/ft ³
Annual Operation		8,760 hr/yr

2

HAP Pollutant	Cas #	Kiln 2		
		Factor lb/10 ³ ft ³	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 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	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 sulfite	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 sulfite	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 (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	2.00E-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			
Phenanthrene	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 ³ /hr
Annual Rate	700.8	MMft ³ /yr
Heating Value		1,020 Btu/ft ³
Annual Operation	8,760	hr/yr

2

HAP Pollutant	Cas #	Kiln 3		
		Factor lb/10 ³ ft ³	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 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 (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-Dichloroeth	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-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	1.44E-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 (Quintoben	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 (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	2.72E-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
Kiln 4		

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

2

HAP Pollutant	Cas #	Kiln 4		
		Factor lb/10 ³ ft ³	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
Benzdine	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)flouranthene	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
Benzotrchloride	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 (l-Chloro-2,3-epoxyp	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 (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	2.72E-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
Boiler 1		

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

2

HAP Pollutant	Cas #	Boiler 1		
		Factor lb/10 ⁹ ft ³	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-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	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 (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).

Emission Source		
Description		Unit ID
Boiler 2		

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

2

HAP Pollutant	Cas #	Boiler 2		
		Factor lb/10 ⁶ ft ³	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 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 sulfite	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 sulfite	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-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	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 (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	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 ³ /hr
Annual Rate	257.6	MMft ³ /yr
Heating Value	1,020	Btu/ft ³
Annual Operation	8,760	hr/yr

2

HAP Pollutant	Cas #	Boiler 3		
		Factor lb/10 ⁶ ft ³	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) fluoranthene	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-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	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 (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).



Please see instructions on pages 3-8 before filling out the form.

IDENTIFICATION			
1. Company Name: Busch Agricultural Resources, LLC.	2. Facility Name: Idaho Falls Malt Facility	3. Facility ID No.: 019-00025	
4. Brief Project Description: Renewal of Tier 1 Operating Permit - No Modifications			
MONITORING APPROACH SUBMITTAL			
Background			
5. Emissions Unit	Description (type of emission point):	Identification (emission point number):	
6. Applicable Regulation, Limits, and Requirements	Emission Monitoring	Applicable regulation citation:	Pollutant: Emission limit: Pollutant: Emission limit: Pollutant: Emission limit: Monitoring requirements:
7. Control Technology	Brief description:		
Table 1. Monitoring Approach			
	Indicator No. 1	Indicator No. 2	Indicator No. 3
I. Indicator Description			
Measurement Approach			
II. Indicator Range (Quality improvement plan threshold optional)			
III. Performance Criteria	—	—	—
A. Data Representativeness			
B. Verification of Operational Status			
C. QA/QC Practices and Criteria			
D. Monitoring Frequency			
Data Collection Procedures			
Averaging Period			
Justification	Present justification for selection of monitoring approach(es) and indicator range(s): Justification for Indicator 1: Justification for Indicator 2: Justification for Indicator 3:		

Instructions for Form CAM

This form allows the applicant to submit their compliance assurance monitoring (CAM) plan to DEQ in accordance with 40 CFR 64.

1 – 4. Provide the same company name, facility name (if different), facility ID number, and brief project description as on Form CS. This is useful in case any pages of the application are separated.

Background

This section provides background information on the pollutant-specific emissions unit.

- Item 5. Briefly describe the emissions unit and emissions point, and give the emission point identification number, if applicable.
- Item 6. Cite the applicable regulation (emission limitation or standard[s]), list the pollutant(s) and emission limit(s), and, if applicable, briefly describe any existing monitoring requirements.
- Item 7. Identify and briefly describe the emissions control technology for the unit.

Table 1. Monitoring Approach

In this section, you will describe the monitoring approach to be used. 40 CFR 64.3 specifies design criteria that the monitoring approach must address. The description of the monitoring approach must explain how the applicable design criteria, which are described in the following sections, will be satisfied.

When filling out Table 1, use as many indicator columns as needed. If you have more than three indicators, continue on an additional Form CAM.

I. Indicator Description

Describe each type of indicator. In the space for "Measurement Approach," describe how the emissions are measured for each indicator.

According to 40 CFR 64.3(a)(1), monitoring must be designed to obtain data for one or more indicators of performance of the control device, any associated capture system, and processes necessary to assure compliance. Such indicators can include:

- a measured or predicted emissions level, such as total hydrocarbon concentration, nitrogen oxides (NO_x) concentration, opacity, or visible emissions
- a pollution control device operating parameter, such as temperature or pressure drop
- a process operating parameter, such as temperature or flow
- a recordkeeping item, such as pounds of volatile organic compound per gallon of coating
- a work practice activity, such as records of solvent usage for cleaning activities
- recorded findings of inspection and maintenance activities, such as an internal fabric filter baghouse inspection, or
- a combination of these types of indicators

II. Indicator Range

Describe the indicator range. Providing the quality improvement plan threshold is optional.

According to 40 CFR 64.3(a)(2), monitoring must be based on establishing appropriate indicator ranges or designated conditions such that operation within the ranges provides a reasonable assurance of ongoing compliance with the applicable requirement over the anticipated range of operations. Reasonable assurance of compliance will be assessed by maintaining performance within the indicator range(s) or designated conditions that reflect proper operation and maintenance of the control device (and associated capture system). Except for a continuous emission monitoring system (CEMS), a predictive emission monitoring system (PEMS), and a continuous opacity monitoring system (COMS) that provide data in units of the applicable emissions standard, you must specify the range to be maintained for each monitored indicator.

According to 40 CFR 64.3(a)(3), the indicator range may be:

- a true range, comprised of upper and lower limits; (e.g., 3.5 to 5.0 in. w.c. for differential pressure)
- a single maximum or minimum value not to be exceeded (e.g., not less than 1650 °F for a thermal incinerator temperature)
- different values for different operating conditions (e.g., different ranges for high vs. low process load)
- expressed as a function of process variables (e.g., maintaining condenser temperatures “x” degrees below the condensation temperature of the applicable compounds being processed)
- expressed as maintaining the applicable indicator in a particular operational status (e.g., maintaining the position of a damper controlling gas flow to the atmosphere through a bypass duct)
- established as interdependent between more than one indicator

III. Performance Criteria

Monitoring approaches used to comply with 40 CFR 64 are subject to minimum performance criteria, which are specified in 40 CFR 64.3. The minimum criteria assure that the data generated by the monitoring approach provide valid and sufficient information on the actual conditions being monitored.

A. Data Representativeness

Describe the specifications that allow data to be obtained that are representative of the emissions or parameters being monitored (40 CFR 64.3(b)(1)).

Typically these specifications should include, as a minimum, a brief description of (a) detector location, (b) installation requirements (if applicable), and (c) minimum acceptable accuracy. For example, the specifications for a thermocouple used to measure thermal incinerator combustion chamber temperature could be as follows:

1. Detector location—exit of thermal incinerator combustion chamber.
2. Installation requirements—housed in a ceramic protection tube, shielded from flame.
3. Minimum acceptable accuracy—thermocouple sensor with a minimum accuracy of ± 4 °F or $\pm 0.75\%$, whichever is greater, and a data recording system with a minimum resolution of 20 °F.

B. Verification of Operational Status

Describe the verification procedures, including installation, calibration, and operation of the monitoring equipment, in accordance with manufacturer's recommendations, to confirm the operational status of the monitoring prior to the commencement of required monitoring.

For new or modified monitoring equipment, the monitoring approach must describe the verification procedures that will be used to confirm the operational status of the monitoring prior to the date by which the owner or operator must conduct monitoring (40 CFR 64.3(b)(2)).

C. Quality Assurance/Quality Control Practices and Criteria

Describe quality assurance/quality control (QA/QC) practices to ensure continuing validity of data (40 CFR 64.3(b)(3)).

QC activities are those routine activities included as a part of normal internal procedures such as periodic calibration checks (e.g., zero check of manometer), visual inspections by operating staff, routine maintenance activities (e.g., replacement of filters on COMS purge air system, weekly blowback purge of manometer lines), or training/certification of staff.

QA activities are those activities that are performed on a less frequent basis, typically by someone other than the person(s) responsible for the normal routine operations. An example

of a QA activity is quarterly or annual calibration verification/adjustments performed by an instrument technician.

In developing minimum QA/QC activities for monitoring equipment and instruments, the owner or operator should take into account the calibration and maintenance requirements or recommendations specified by the instrument manufacturer or supplier. When establishing QA/QC activities, the desired precision and accuracy of the data should be considered; e.g., if greater inaccuracy can be tolerated for the application (i.e., ± 20 °F rather than ± 2 °F), less frequent calibrations and/or less stringent acceptance criteria may be necessary.

Include a list of the primary QA/QC activities; their frequency; and, where appropriate, the acceptable limits. For example, for a thermocouple, the QA/QC activities could be specified as follows:

1. Visual inspection of thermocouple sensor and well (semiannually).
2. Measurement of system accuracy using a thermocouple simulator (calibrated millivolt source) at the sensor terminal location (semiannually); specified accuracy limit of ± 40 °F at 1800 °F.

D. Monitoring Frequency, Data Collection Procedures, Averaging Period

Describe the monitoring frequency, data collection, and if applicable, averaging periods for discrete data points to be used in determining whether an excursion or exceedance has occurred.

The monitoring and data collection frequency (including associated averaging periods) must be designed to obtain data at such intervals that are, as a minimum, consistent with the time period over which an excursion is likely to occur based on the characteristics and typical variability of the emissions unit (including the control device and associated capture system).

Monitoring Frequency

Specify the monitoring frequency (how often measurements will be taken and recorded). Emissions units with postcontrol PTE $\geq 100\%$ of the amount classifying the source as a major source must collect four or more values per hour to be averaged. Other emissions units must collect data at least once per 24 hour period (40 CFR 64.3(b)(4)).

Examples of monitoring frequency include (a) incinerator temperature at 1-minute intervals, (b) NO_x and oxygen (O₂) concentration at 15-minute intervals, (c) differential pressure at 1-hour intervals, and (d) opacity observations for 15 contiguous minutes per day. Where the measurement frequency and the recording frequency differ, both should be specified.

Data Collection Procedures

Describe the data collection procedures (e.g., manual readings and data logging or use of a data acquisition system), which should indicate the equipment or method and the frequency at which indicator values are to be recorded. Examples of data acquisition procedures include (a) 24-hour circular chart—incinerator temperature at 1-minute intervals, (b) electronic data file via data acquisition system—incinerator temperature at 1-minute intervals, (c) electronic data file via data acquisition system—15-minute average NO_x and O₂ CEMS measurements, (d) written entry on log sheet—hourly differential pressure, and (e) completion of Reference Method 9 visible emission data form—daily opacity observations.

Averaging Period

Specify the data averaging period (if applicable) for each parameter. If the proposed parameter indicator will be an average value, you must clearly specify the averaging period that will be used to determine that the indicator range is maintained. For example, "The NO_x analyzer will measure the concentration at 10-second intervals, and the average value for each 15-minute period will be recorded. The 15-minute values for each clock-hour will be averaged to provide a 1-hour NO_x concentration to assess compliance with the indicator range." For monitoring an operating parameter, "The thermocouple will measure thermal incinerator combustion chamber temperature at 1-minute intervals, and the average value for

each 1-hour period will be recorded. The 1-hour values will be averaged over each 3-hour period to provide a 3-hour temperature to assess compliance with the indicator range.”

Justification

Please include a justification for the selection of monitoring approach and indicator range(s).

The justification should briefly describe how the selected monitoring approach and performance indicator ranges are adequate to:

1. Demonstrate that the control device and processes significant to achieving compliance are operated and maintained in accordance with good air pollution practices that will minimize emissions at least to levels required by all applicable requirements; and
2. Provide reasonable assurance of compliance with emission limitations for the anticipated range of operations.

To support the justification the owner/operator may rely on:

- facility or corporate experience with monitoring control device or process operation performance
- generally available sources of information (e.g., air pollution engineering manuals, EPA and permitting authority publications on monitoring, operation, and maintenance of pollution control devices), or
- regulatory precedents, such as the following:
 - presumptively acceptable or required monitoring approaches established by the permitting authority to achieve compliance with the CAM rule for the particular pollutant specific emissions unit
 - continuous emission, opacity, or predictive emission monitoring systems that satisfy applicable monitoring requirements and performance specifications as specified in 40 CFR 64
 - alternative monitoring methods allowed or approved pursuant to 40 CFR 75
 - monitoring included for standards exempt from CAM
 - monitoring requirements established in other regulations for the same or similar type sources (e.g., a monitoring requirement in an NSPS)

The justification for the selected indicator range(s) should include a summary (tabular or graphical format) of the data supporting the selected ranges, supplemented by engineering assessments or control device manufacturer's recommendations, if necessary. References for the appropriate compliance test report(s) also should be provided. If site-specific compliance data are not available, the documentation must include a test plan and schedule for obtaining such data. The test plan should identify the following:

1. Pollutants to be measured and the compliance test methods to be used.
2. Number and duration of test runs to be conducted.
3. Proposed process operating conditions during the tests (e.g., percent of full load).
4. Proposed control device operating conditions and indicator ranges (e.g., venturi pressure drop, condenser temperature).
5. Process and control device parameters to be monitored during the test and reported.
6. Whether indicator data will be collected over an extended time period and the process/control device data will be collected concurrently.

As an alternative to providing a compliance test plan, the owner/operator may propose other information as the basis for the indicator ranges proposed. However, in such cases, the documentation provided must demonstrate to DEQ's satisfaction that compliance testing is unnecessary to establish indicator ranges at levels that satisfy 40 CFR 64 criteria.

Other information that the owner/operator may consider in selecting operator ranges, in lieu of compliance test data, in order of preference includes:

- site-specific data from tests other than compliance tests
- data from tests performed on similar units at the facility or similar facilities
- empirical information concerning the assessment of control technology performance (e.g., empirical performance information from a scrubber control technology handbook)
- regulatory precedents involving appropriate monitoring of similar emissions units (e.g., NSPS requirement for same control technology at a similar source)
- theoretical considerations based on generally accepted engineering practices (i.e., engineering judgment)

If the owner/operator bases the indicator ranges on any of the other types of available information listed above rather than on site-specific compliance test data, the documentation must include a concise explanation of the rationale for relying on information other than site-specific compliance data. The rationale must demonstrate that compliance testing is not necessary for the owner/operator to establish operating ranges so that excursions from the operating ranges can be addressed prior to potential emission exceedances. Factors to consider in the rationale for using information other than compliance test data include the ability to establish the appropriate operating ranges based upon engineering principles, and conservative assumptions with respect to the emissions variability and the margin of compliance associated with the emissions unit and control device.

Additional Information

Evaluation Factors

Site-specific factors should be considered in designing monitoring to meet 40 CFR 64.3(a) and (b). These factors include applicability of existing monitoring procedures, ability of monitoring to account for process and control device operational variability, reliability and latitude built into control technology, and level of actual emissions compared to compliance limitation (40 CFR 64.3(c)).

Special Criteria for Use of CEMS, PEMS, or COMS

40 CFR 64.3(d)(1)

CEMS, PEMS, or COMS that are required by other authorities under the Clean Air Act, State, or local law must be used to satisfy the CAM rule.

40 CFR 64.3(d)(2)

CEMS, PEMS, or COMS that satisfy any of the following monitoring requirements are deemed to satisfy the general design and performance criteria:

- § 51.214 and Appendix P of 40 CFR 51
- § 60.13 and Appendix B of 40 CFR 60
- § 63.8 and applicable performance specifications of the applicable subpart of 40 CFR 63
- 40 CFR 75
- subpart H and Appendix IX of 40 CFR 266
- or comparable requirements established by the permitting authority

40 CFR 64.3(d)(3)

Monitoring must allow for reporting of exceedances (or excursions) consistent with any underlying requirement or with 40 CFR 64.3(b)(4), and provide an indicator range consistent with 40 CFR 64.3(a) for a COMS used to assure compliance with a PM standard.

For More Information

For more detailed information on filling out this form, please see EPA's *Technical Guidance Document: Compliance Assurance Monitoring* at <http://www.epa.gov/ttn/emc/cam/toc-ch3.pdf>.