Statement of Basis

Permit to Construct and Tier II Operating Permit No. T2-2010.0185
Project No. 60671

Micron Technology, Inc.
Nampa Facility
Nampa, Idaho

Facility ID No. 027-00095

Final

March 28, 2011
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Permit Writer

The purpose of this Statement of Basis is to satisfy the requirements of IDAPA 58.01.01.et seq, Rules for the Control of Air Pollution in Idaho, for issuing air permits.

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
Btu	British thermal unit
CAA	Clean Air Act
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EPA	U.S. Environmental Protection Agency
FEC	facility emissions cap
gpm	gallons per minute
gr	grain (1 lb = 7,000 grains)
HAPs	Hazardous Air Pollutants
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
lb/hr	pound per hour
MMBtu	million British thermal units
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_2	nitrogen dioxide
NOx	nitrogen oxides
NSPS	New Source Performance Standards
NAICS	North American Industry Classification System
O_3	ozone
PM	particulate matter
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
PSD	Prevention of Significant Deterioration
PTC	permit to construct
PTE	potential to emit
Rules	Rules for the Control of Air Pollution in Idaho
scf	standard cubic feet
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SM	Synthetic Minor
SO_2	sulfur dioxide
TAPs	toxic air pollutants
T/yr	tons per year
$\mu g/m^3$	micrograms per cubic meter
UTM	Universal Transverse Mercator
VOC	volatile organic compound

FACILITY INFORMATION

Description

Micron Technology, Inc. (MTI) submitted an application for its semiconductor manufacturing facility and related operations at 1401 N. Kings Rd. Nampa, Idaho. MTI facility has semiconductor manufacturing equipment and associated heating, cooling, support operations, emergency generators, and pollution control equipment.

MTI manufactures semiconductor devices (also called chips or die) on silicon wafers.

MTI must constantly adapt to changing product mix, architecture, and functionality. The nature and rapid pace of constant technological change affects the type, number, and configuration of equipment (also known as "tools" in the industry) required to fabricate chips or die. Current plans for the Fab generally include photolithography processes, although in the future, the Fab may perform the other basic processes described in detail below: cleaning, diffusion, wet etch, dry etch, implant, metallization, and assembly.

Effective production of semiconductor products requires utilization of advanced semiconductor manufacturing techniques and effective deployment of these techniques across multiple facilities. MTI is continuously enhancing production processes, reducing die sizes and transitioning to higher density products.

Manufacturing

The semiconductor fabrication (manufacture) process includes cleaning, diffusion, photolithography, etch, doping, metallization, and assembly.

Cleaning

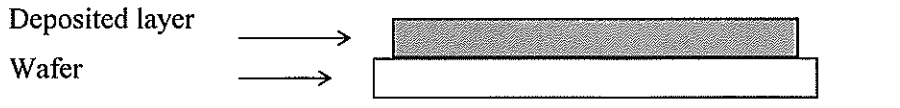
Silicon wafers are cleaned to remove particles and contaminants such as dust. Aqueous acid or acid mixtures are the most commonly used cleaning solutions. Use of acids is generally necessary because of the solubility characteristics of silicon, silicon oxide, and common contaminants. A variety of acids may be used depending on the nature of the material to be removed.

Diffusion

The next step in the process depends on the type (i.e., imager, flash, DRAM), of integrated circuit device being produced, but commonly involves the diffusion or growth of a layer or layers of silicon dioxide, silicon nitride, or polycrystalline silicon (see Figure 2-1). For example, an initial layer of silicon dioxide with the subsequent deposition of a silicon nitride layer is commonly applied to metal oxide silicon devices. Diffusion processes can be conducted at atmospheric pressure or in a vacuum chamber and are typically conducted at temperatures between 400 and 1200°C. Chemicals and gasses necessary to obtain the desired effect are flowed for a limited time into the chambers where a reaction takes place, depositing a layer of the element or compound on the surface of the wafer. Wafer residence times in the chambers can range from several minutes to twenty-four hours. Several products containing volatile organic compounds (VOC) may be used in the diffusion step depending on the desired composition of the layer. As gases react in the diffusion process, a small amount of particulate matter may be produced and emitted.

FIGURE 2-1

SCHEMATIC REPRESENTATION OF A WAFER AFTER DIFFUSION



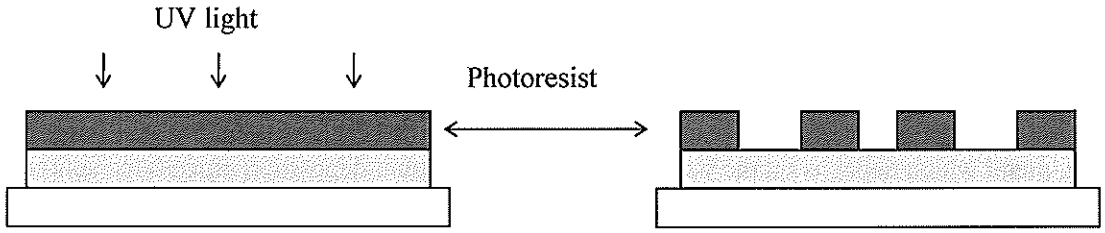
Photolithography

The wafer then proceeds to the photo process. Vapor priming occurs first to remove any moisture present on the surface of the wafer to prepare it for optimum photoresist adhesion. The wafer continues on to coat tracks where it is coated with a photoresist, a photosensitive emulsion, followed by a rinse to remove excess photoresist from the edges and backside of the wafer. The wafer is next exposed to ultraviolet light using glass photo masks that allow

the light to strike only selected areas and depolymerize the photoresist in these areas (see Figure 2-2). After exposure to ultraviolet light, exposed photoresist is removed from the wafer on develop tracks and rinsed off with deionized (DI) water. Photo allows subsequent processes to affect only the exposed portions of the wafer. Wafer residence times during chemical application in the photo process can vary from several seconds to ten or fifteen minutes.

FIGURE 2-2

SCHEMATIC REPRESENTATION OF A WAFER DURING AND AFTER PHOTO

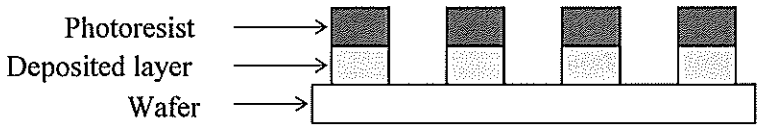


Etch

Etching of the wafer is then conducted to selectively remove deposited layers not protected by the photoresist material (see Figure 2-3). Either dry or wet etch processes may be used depending on the type of layer being removed. Dry etch uses a high energy plasma to remove the target layer. Process gases are ionized under vacuum pressure to form plasmas capable of etching specific layers. Wet etch may also be used to remove specific layers from the wafer. Some wet etch processes, however, also perform cleaning functions and prepare the wafer for subsequent processing. Wet etch is generally conducted at atmospheric pressure. Both etch processes may be conducted at ambient temperature or elevated temperatures (400°C or higher). Chemicals and gases used in both etch processes may be used in varying quantities depending on the specific objective of the etch being conducted. Wafer etching can be conducted for anywhere from two minutes to more than two hours.

FIGURE 2-3

SCHEMATIC REPRESENTATION OF A WAFER AFTER ETCHING

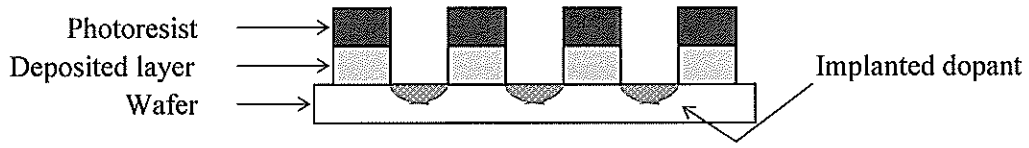


Doping (Diffusion and Implant)

Following etch, the wafer moves on to a process where dopants are added to the wafer or layers. Dopants are impurities such as boron, phosphorus, or arsenic. Adding small quantities of these impurities to the wafer substrate alters its electrical properties. Implant and diffusion are two methods currently used to add dopants. During implant a chemical is ionized and accelerated in a beam to velocities approaching the speed of light. Scanning the beam across the wafer surface implants the energized ions into the wafer. A subsequent heating step, termed annealing, is necessary to make the implanted dopants electrically active. Diffusion is a vapor phase process in which the dopant, in the form of a gas, is injected into a furnace containing the wafers. The gaseous compound breaks down into its elemental constituents on the hot wafer surface. Continued heating of the wafer allows diffusion of the dopant into the surface at controlled depths to form the electrical pathways within the wafer (see Figure 2-4). Solid forms of the dopant may also be used.

FIGURE 2-4

SCHEMATIC REPRESENTATION OF A WAFER AFTER IMPLANT



Metallization

Metallization is a process that can be used to add metal layers to a wafer. Sputtering and vacuum deposition are forms of metallization that may be used to deposit a layer of metal on the wafer surface. In the sputtering process the source metal and the target wafer are electrically charged, as the cathode and anode, respectively, in a partially evacuated chamber. The electric field ionizes the gas in the chamber and these ions bombard the source metal cathode, ejecting metal which deposits on the wafer surface. In the vacuum deposition process the source metal is heated in a high vacuum chamber by resistance or electron beam heating to the vaporization temperature. The vaporized metal condenses on the surface of the silicon wafer. Some VOCs may be used in the diffusion process, but are generally not used in the implant or metallization processes.

The wafer is then rinsed in an acid or solvent solution to remove the remainder of the hardened photoresist material. A second oxide layer is grown on the wafer and the process is repeated. This photolithographic-etching-implant-oxide process sequence may occur a number of times depending upon the application of the semiconductor. During these processes the wafer may be cleaned many times in acid solutions followed by DI water rinses and solvent drying. This is necessary to maintain wafer cleanliness. The rinsing and drying steps may involve the use of a VOC-containing material.

The wafer-fabrication phase of manufacture ends with an electrical test (probe). Each die on the wafer is probed to determine whether it functions correctly. Defective die are marked to indicate they should be discarded. A computer-controlled testing machine quickly tests each circuit.

Wafer-Level Packaging

Rather than being assembled into protective packages as described above, some semiconductor chips are processed further at the wafer level. Front-end wafer-level packaging consists of extending the wafer fab process to include device inter-connection and device protection processes prior to final assembly. Back-end wafer level packaging processes are described in the assembly section.

Assembly

After the fabrication processes are completed, most semiconductor chips are assembled into protective packages. The wafers are first mounted on tape in a metal frame where the wafer is sectioned by a wafer saw to separate the individual chips or die. Die are picked off the tape and attached to the bonding pad of a leadframe. Die attach cure ovens heat treat the die/leadframe assembly for several hours. The die is then connected to the legs of the leadframe by fine bonding wire. A protective coating is applied to the die and hardened in die coat cure ovens. The entire die is then encapsulated with a protective molding compound. The leadframe strip is trimmed and individual die leads formed. The legs of individual die packages are then plated to provide reliable electrical contacts. Individual die may then be sold as die or assembled further into modules. Several VOC-containing materials are used in the assembly process.

The primary difference between the assembly process described above and back-end wafer level packaging is that the thin conductive wire and the leadframe are eliminated and replaced by metal balls that allow the chip to be attached directly to the electronic device.

Support Operations

Numerous operations are conducted at the facility in support of the manufacturing process. These include:

- natural gas boilers used to supply steam for general heating and humidification;
- cooling towers used to dissipate heat with non-contact cooling water;

- temporary storage of solid and liquid hazardous waste and secondary materials generated at the facility pending shipment to a licensed off-site treatment, storage, and disposal facility or for lawful reuse or other recycling;
- storage of diesel fuels;
- painting and welding in support of new construction and maintenance of existing equipment and facilities;
- maintenance of surfaces in production areas by general cleaning activities; and
- emergency equipment.

Permitting History

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

July 14, 2006	P-060013, Initial FEC permit, Permit status (A, but will become S upon issuance of this permit)

Application Scope

This T2/PTC is a renewal of the facility emission cap (FEC) in accordance with IDAPA 58.01.01.179 for the facility's permit which expires on July 14, 2011. The applicant included in the renewed application modeling analysis with an updated property boundary to allow for future business planning. Applicant also requested reduced FECs based on actual emissions rates, the updated property boundary, and a reduced growth component.

Application Chronology

December 20, 2010	DEQ received an application and an application fee.
January 19, 2011	DEQ received supplemental information from the applicant.
January 19, 2011	DEQ determined that the application was complete.
March 10, 2011	DEQ made available the draft permit and statement of basis for peer and regional office review.
March 15, 2011	DEQ made available the draft permit and statement of basis for applicant review.
March 22, 2011	DEQ received comments on the draft permit and state of basis from the applicant.

TECHNICAL ANALYSIS

Emissions Units and Control Devices

Emissions sources at MTI are divided into the following general emissions units: manufacturing processes, boilers, emergency equipment, and miscellaneous emission sources. Descriptions of these emission units follow and are taken from the FEC permit renewal application.

Manufacturing Processes

VOC and HAP Emissions Mass Balance

The manufacturing processes are the principal source of VOC and HAP emissions from the facility. This describes how VOC and HAP emissions are calculated and controlled.

VOC and HAP emissions from manufacturing processes are estimated based on a conservative mass-balance method. The batch nature of the manufacturing process dictates that materials be used in different quantities and

different ratios in each of the hundreds of different tools used. Also, as technology continually improves, there may be wholesale changes in the way tools operate or in the type or quantity of material required for a given process. A mass-balance method of estimating emissions can best account for these continuous variations in the production process.

With the exception of some support operations (e.g., general-production cleans, discussed below), all VOC-containing waste materials from manufacturing are segregated and handled as solid non-hazardous waste, hazardous waste, or industrial wastewater. Tracking the production of bulk hazardous waste allows a mass-balance calculation to estimate manufacturing emissions. Any VOCs or HAPs are assumed to be emitted if they cannot be accounted for in the bulk hazardous waste. This is a conservative approach, since the material constituents may also be consumed in the manufacturing process. This mass-balance method accounts for all sources of VOC or HAP emissions in the manufacturing process, including production, fugitive emissions, hazardous or volatile tank or line losses. For this reason, these specific sources of emissions are not fully described separately, but are instead included as part of the manufacturing emissions unit.

The quantity of materials issued from the MTI warehouse and the quantity of bulk liquid hazardous waste shipped offsite are the basic elements of the mass-balance method.

The final element in the mass-balance calculation involves the credit for air pollution control equipment. Calculations for materials used in processes which are vented to air pollution control devices are separated from uncontrolled process calculations where possible. The remaining fraction available to be emitted from controlled processes is reduced by the efficiency of the appropriate control device. Any remaining VOC or HAP constituents represent the air emissions from the MTI facility.

PM_{10} Emissions

The primary source of PM emissions from the manufacturing processes is gas-to-particle conversion. This may occur after oxidation of gases in control devices or as materials evaporated from heated liquid materials condense. The majority of the manufacturing PM_{10} emissions are exhausted through scrubbers.

There are two primary oxidation processes that for PM_{10} formed by oxidation of gases occur at the facility: 1) the oxidation of process gases in VOC abatement devices and 2) the oxidation of pyrophoric in safety equipment. According to the application the estimated PM_{10} emissions from VOC abatement devices are based on standard AP-42 emission factors for natural gas combustion because the natural gas is used for pilot lights and the resulting emissions are very low.

Pyrophoric gases are those that ignite spontaneously when exposed to air. Because Silane is a pyrophoric gas, manufacturing processes using silane must be connected to safety device that oxidizes excess silane in a controlled environment. The safety device manufacturer estimates that 99.99% of the silane will be converted to silicon dioxide (a particle). Other PM_{10}-forming gases will have similar conversion efficiencies in the oxidizer. The pyrophoric gases (i.e., silane, diborane, phosphine, and tungsten hexafluoride) emissions will also be scrubbed in the wet scrubbers at approximately 90% control efficiency.

PM_{10} emissions from the manufacturing processes are also formed by evaporation and condensation of liquid materials, such as wet process area that uses hydrochloric and hydrofluoric acids, which are used in liquid form in baths. During processing of wafers, some of the chemical bath will be depleted as wafers are removed from chemical bath and placed in a rinse bath. After certain time intervals, baths need to be "topped off" due to loss of chemicals from drag out and evaporation. The facility conservatively assumes that 10% of the total usage of liquid chemicals evaporates and is emitted from wet baths such as HF and HCl baths. The wet process baths are connected to acid gas scrubbers (which are assumed to remove 95% of the acids)

Boilers

Small boilers, with nameplate rating heat input no greater than 10 million British thermal units per hour (MMBtu/hr), provide steam to heat the facility as well as to humidify portions of the manufacturing process. In reality, the boilers are physically limited by ambient conditions such that they cannot run at their rated capacities for an entire year. The boilers may operate at rated capacities for short period of time during periods of extreme

cold. The annual emission rates based on continuous operation at the boilers' nameplate capacities are presented in Appendix A of the statement of basis.

There are currently three 8.34 MMBtu/hr boilers and a 8.165 MMBtu/hr boiler on site.

All the boilers are fired by natural gas, and will be operated in a staging process in order to provide a continuous supply of heated glycol water for a fluctuating demand. Glycol water used to provide heat to manufacturing processes will not come in contact with the processes.

MTI calculates boiler emissions using EPA's "Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources," also known as AP-42. Boilers are assumed to operate at maximum capacity for 8,760 hours per year when calculating hypothetical emissions. In reality, the maximum boiler capacity is only required during very cold periods. Consequently, the steam demand and boiler operation is limited by ambient temperature; estimated annual emissions based on maximum firing 8,760 hrs/yr ignores this physical constraint and significantly overstates boiler potential emissions.

Emergency Equipment

MTI currently operates two emergency diesel IC engines which power the generators for use in sudden and unforeseeable events. One of the units has a rated capacity of 1490 bhp (Cummins, model QST30-G4), and one has a rated capacity of 2220 bhp (Cummins, model KTA50-G9.) This equipment usually burns No. 2 diesel fuel oil but No. 1 diesel can be used during cold weather to prevent the fuel from gelling. To maximize efficiency and for optimum operation, the emergency generators are heated year-round. Both the internal cab where the engine and generator are located and the water/glycol loop that circulates in the engine are heated. This allows the engines to warm up very quickly and reduces visible emissions during cold starts.

Emission factors for NOx, CO, and PM_{10} for the two existing generators were obtained from the manufacturer's website (http://cumminspower.com/en/technical/documents). Sulfur dioxide (SO_2) emission factors were calculated using AP-42 Section 3.4, *Large Stationary Diesel and All Stationary Duel Fuel Engines*, with the assumption of 15 ppm sulfur content in the fuel (ultra-low sulfur distillate fuel oil). Emissions estimates from the emergency generators are based on each generator operating a maximum of four hours per day and up to 200 hours per year.

One additional IC engine powering a generator is proposed in the Growth Component of the MTI's application. This IC engine was also proposed in the 2006 PTC but was not installed during the previous permit term.

Cooling Towers

Cooling towers are used at MTI to dissipate heat from non-contact cooling water. An on-demand system is used with the cooling towers to accommodate fluctuating demand for cooling. Cooling demand will dictate when the different cells within a cooling tower configuration are utilized. No chromium-based water treatment chemicals will be used in the circulating water of any of the cooling towers at MTI.

Emission rates have been calculated for six cooling towers (five existing and one proposed). Emissions from cooling towers are based on the drift loss, amount of total dissolved solids (TDS) in the circulating water, water flow rate, and hours of operation. Particulate matter is the only emission relevant to cooling towers and results from dissolved solids in the water carried with drift. Drift loss is the percent of water entrained in the air exhausted from the cooling tower.

There are currently five cooling tower systems located at the facility. Three of these towers are older and have water recirculation rates of 1,150 gallons per minute and air flows of 239,500 actual cubic feet per minute (acfm). Each tower has six four foot circular exhausts. MTI estimated the drift loss from these towers to be 0.02% drift (derived from AP-42, Table 13.4-1 by converting the drift emission factor into a percentage.) the two newer towers have water recirculation rates of 1,694 gallons per minute and air flows of 418,800 acfm. Each tower has two eleven foot circular exhausts. MTI estimated the drift loss from these towers to be 0.001% drift, based on the manufacturer's specification.

MTI plans to install one more cooling tower, similar to the two ones.

Water circulated through the cooling towers is maintained with a maximum TDS concentration of 750 ppm. Cooling tower operations depend on cooling demand and may, therefore, fluctuate throughout the year. MTI does not intend to monitor water circulation rate at each tower. Therefore, cooling tower emissions are based on maximum operation of all existing and proposed towers for 8,760 hours per year. An example calculation of potential particulate emissions from the towers is shown below in the following equation:

$$1{,}150\frac{gal}{\min} * 60\frac{\min}{hr} * 8{,}760\frac{hr}{yr} * 8.34\frac{lb}{gal} * \frac{1ton}{2{,}000lb} * \frac{750\ parts}{10^6} * \frac{0.02}{100} = 0.38\frac{ton}{yr}$$

H_2O flow rate × time conversions × density of H_2O × weight conversion × TDS concentration × drift loss = total emissions

Miscellaneous Sources

Miscellaneous emission sources include wastewater treatment processes, tanks, and fugitive dust.

Wastewater Treatment

Multiple industrial wastewater streams are treated in an effort to recycle, recover, or treat the wastewater. Standard treatment methods include neutralization, precipitation, settling, filtration, reverse osmosis, ion exchange, and degassification. These methods may be used alone or in any number of combinations depending on the characteristics of the wastewater being treated.

Storage Tanks

Storage tanks are maintained on site for the storage and distribution of diesel fuels and temporary storage of hazardous waste. The emergency generators will have dedicated fuel storage tanks. These tanks emit negligible quantities of VOCs. If a tank is installed that meets the applicability criteria for NSPS subpart Kb, MTI will maintain the required records for the tank.

Paved and Unpaved Road Fugitive Emissions

MTI has an interest in keeping the facility as clean as possible. Dust is detrimental to semiconductor manufacturing and MTI operates in a fashion that minimizes particulate matter generation. In an effort to limit particulate matter generated from outside sources, all major traffic areas have been paved.

Emissions Inventories

Proposed FEC – Criteria pollutant and HAP Emissions

Table 1 summarizes MTI's estimated baseline actual emissions for period 2007-2009, when the facility was in normal operation. Prior to this time, the facility was still in a start-up mode. Table 1 presents the maximum emission rate over the three years as a baseline. The proposed operational variability components of the FECs for the criteria pollutants are included in Table 1. The proposed growth component allows for potential future business growth or facility changes that may increase emissions. Table 1 identifies anticipated emission increases of criteria pollutants due to the installation of the third generator, the sixth cooling tower, and the future manufacturing process. Table 1 includes also the existing 2006 permit limits for reference.

The proposed permit conditions presented in the permit conditions review section of this statement of basis; and the monitoring, recordkeeping, and recording requirements in the existing FEC permit are considered appropriate requirements to ensure compliance with the FECs.

Table 1 CRITERIA POLLUTANTS AND HAP BASELINE EMISSIONS AND PROPOSED FEC

Source Description	PM_{10}	SO_2	NO_X	CO	VOC	Lead	Single HAP	All HAPs
	T/yr[1]	T/yr[1]	T/yr[1]	T/yr[1]	T/yr[1]	lbs/yr[3]	T/yr[1]	T/yr[1]
Baseline Actual Emissions	0.8	0.09	2.2	1.8	11	0.02	NA	NA
Operational Variability Component	7	5	20	20	32	60	NA	NA
Proposed Growth Component	3.2	< 0.01	3.4	4.2	9.4	0	NA	NA
Existing 2006 FEC Limits[2]	20	6	66	46	73	60	<10	<25
Total Proposed FEC	11	6	26	26	53	60	<10	<25

[1] Tons per rolling 12-month period.

[2] Existing permit limits included for reference

[3] Pounds per rolling 12-month period.

The facility-wide HAP emissions from manufacturing processes, natural gas boilers, and the emergency generators for the period 2007 to 2009, as presented in the Table 2 are well below the major source threshold limits for HAP emissions. Therefore, this facility is not a major facility (see IDAPA 58.01.01.008) of HAP emissions. For this FEC permit renewal the facility proposes to retain the permit limits on potential to emit to below major source thresholds for HAP emissions, which is 10 tons per year for any single HAP and 25 tons per year for the aggregate HAP emissions.

Table 2 TOTAL HAP EMISSIONS FROM THE FACILITY in T/YR

Year	Manufacturing	Boilers	Generators	Total	Max of any HAP (T/yr)
2007	0.18	0.26	2.3E-03	0.45	0.10
2008	0.20	0.26	2.3E-03	0.47	0.06
2009	0.09	0.26	2.3E-03	0.35	0.03

Toxic Air Pollutant Emissions

In support of MTI's renewal of the Nampa facility emission caps and for pre-authorization of future facility changes, the facility has addressed in the application the considerations underlying IDAPA 58.01.01.210.

MTI has addressed compliance with IDAPA 58.01.01.210 in two steps, first addressing the manufacturing process emissions, then addressing the combustion sources (boilers and generators) emissions. MTI is proposing to retain, but revise, the methodology in Section 4 of the current permit (issued on July 14, 2006), for demonstration of continued compliance with IDAPA 58.01.01.210.

The TAP emissions from the manufacturing process at the Nampa facility is based on a system that tracks the chemicals used at the facility. The system is based on MSDS for each chemical allows the facility to track chemicals by CAS number and common name. Some chemicals result in emissions of TAPs listed in IDAPA 58.01.01.585 and 586.

A complete list of chemicals listed at Sections 585 and 586 that the facility emits is provided in the application and are presented in Appendix A of this statement of basis. Chemicals listed in Appendix A are ranked by percentage of actual maximum annual emissions versus the corresponding emissions levels established at IDAPA 58.01.01.585 and 586. For example, acetone is the chemical emitted in greatest quantity (13,110 lb/yr), but its emissions are only 1% of the corresponding emissions levels. Consequently, it ranks lower in the table than other chemicals emitted in lesser quantities but with comparatively lower emissions levels. As can be seen from the table in Appendix A, the projected increase in emissions for each pollutant is below the acceptable ambient concentrations in IDAPA 58.01.01.585 and 586.

The Proposed Generator Emissions

There are currently four boilers and two generators at the MTI-Nampa facility, operating under the 2006 FEC permit. Because compliance with IDAPA 58.01.01.210 requires evaluating emissions from new emissions units, not existing emissions units, the emission of substances listed at IDAPA 58.01.01.585/586 from the existing generators units are not considered in the application.

One additional IC engine is proposed in the Growth Component of MTI's application. This IC engine was also proposed in the 2006 permit but was not installed during the previous permit.

Appendix A contains a table that has the proposed generator IDAPA 585/586 emissions. The table indicates that emissions of four substances listed in IDAPA 58.01.01.585 and 586 from the proposed generator exceed the EL. All four substances are listed in IDAPA 58.01.01.586. When these substances were modeled and comparing the results of the modeling to the IDAPA 58.01.01.586, none of the substances are predicted to exceed the listed AACC.

Ambient Air Quality Impact Analyses

The facility has demonstrated compliance to DEQ's satisfaction that emissions from MTI-Nampa facility will not cause or significantly contribute to a violation of any ambient air quality standards. The facility has also demonstrated compliance to DEQ's satisfaction that the TAP emissions due to this permitting action will not exceed any applicable TAP AAC/AACC presented in IDAPA 58.01.01.585-586. An ambient air quality impact analyses document has been crafted by DEQ based on a review of the modeling analysis submitted in the application. That document is part of the final permit package for this permitting action (see Appendix B).

REGULATORY ANALYSIS

Attainment Designation (40 CFR 81.313)

The facility is located in Canyon County, which is designated as attainment or unclassifiable for $PM_{2.5}$, PM_{10}, SO_2, NO_2, CO, and Ozone. Refer to 40 CFR 81.313 for additional information.

Tier II Operating Permit/Permit to Construct (Tier II Operating Permit)

IDAPA 58.01.01.401/IDAPA 58.01.01.201 Tier II Operating Permit/Permit to Construct Required

The permittee has requested that a Tier II OP/PTC be issued to the facility for the renewal of the FEC permit and roll the current PTC into a combo Tier II operating permit and permit to construct (Tier II OP/PTC). Therefore, a Tier II OP and a PTC is required to be issued in accordance with IDAPA 58.01.01.175 (Procedures and Requirements for Permits Establishing a Facility Emissions Cap). This permitting action was processed in accordance with the procedures of IDAPA 58.01.01.200-228 and IDAPA 58.01.01.400-461.

IDAPA 58.01.01.210 Demonstration of Preconstruction Compliance with Toxic Standards

The applicant has demonstrated preconstruction compliance for all TAPs identified in the permit application. As shown in Appendix A (obtained from the application) of the statement of basis and by using the maximum annual emission rate (in lbs/yr) for each substance used at MTI's Nampa facility over the three year period 2007, 2008, and 2009. MTI converted annual manufacturing process emissions to an hourly emission rates (lb/hr) for comparison with the screening emission limits (EL) specified in IDAPA 58.01.01.585-586.

No chemical species listed in IDAPA 58.01.01.585-586 that are used at the facility were estimated to be emitted by the Nampa facility at rates that (collectively) exceed the EL. If there were, the Nampa facility would scale the emission rate (lbs/hr) by the maximum predicted concentration ($\mu g/m^3$) of the "Chi/Q" run of the model- refer to the modeling memo in Appendix B. The modeling indicated that the scrubber stack (FS-01) with the maximum predicted impact for substances addressed with 24-hr averaging period (i.e., IDAPA 585) and for substances addressed with an annual averaging period (i.e., IDAPA 586). After scaling the emission rate for each substance by the appropriate Chi/Q factor, the Nampa facility would compare the predicted concentration with that listed at IDAPA 58.01.01.585 and 586 to demonstrate compliance with IDAPA .58.01.01.585-586. This is a very conservative approach because it assumes the entire facility's manufacturing process emissions come from a single (worst-case) stack, which over predicts the highest impact.

Rules for Control Fugitive Dust Emissions (IDAPA 58.01.01.650-651)

All sources of fugitive dust emissions at the facility are subject to the State of Idaho rules for controlling fugitive dust. Reasonable precautions shall be taken to prevent particulate matter from becoming airborne. This requirement is assured by Permit Conditions 2.1, 2.2, 2.3, and 2.4.

Rules for Control of Odors (IDAPA 58.01.01. 775-776)

No person shall allow, suffer, cause, or permit the emission of odorous gases, liquids, or solids into the atmosphere in such quantities as to cause air pollution. This requirement is assured by Permit Conditions 2.5 and 2.6.

Visible Emissions (IDAPA 58.01.01.625)

The sources of PM_{10} emissions at this facility are subject to the State of Idaho visible emissions standard of 20% opacity. This requirement is assured by Permit Conditions 2.7 and 2.8

Rules For Open Burning (IDAPA 58.01.01. 600-616)

The permittee shall comply with the requirements of IDAPA 58.01.01.600-616. This requirement is assured by permit condition 2.9.

Fuel-Burning Equipment (IDAPA 58.01.01. 676-677)

The fuel burning equipment located at the facility, with a maximum rated input of ten (10) MM Btu/hr or more or the fuel burning equipment located at the facility, with a maximum rated input of less ten MM Btu/hr, are subject to particulate matter limitation of 0.015 gr/dscf of effluent gas corrected to 3% oxygen by volume when combusting gaseous fuels. Fuel-Burning Equipment is defined as any furnace, boiler, apparatus, stack and all appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat or power by indirect heat transfer. This requirement is assured by Permit Condition 2.12.

Sulfur Content (IDAPA 58.01.01. 725)

The permittee shall comply with the requirements of IDAPA 58.01.01.725. The permittee shall maintain documentation of supplier verification of distillate fuel oil sulfur content on an as-received basis. This requirement is assured by permit condition 2.13 and 2.14.

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

IDAPA 58.01.01.301 Requirement to Obtain Tier I Operating Permit

Post project facility-wide emissions from this facility do not have a potential to emit greater than 100 tons per year for PM_{10}, SO_2, NO_X, CO, or VOC nor 10 T/yr for any one HAP or 25 T/yr for all HAPs combined as demonstrated in the emissions inventories section of the permit application and in Table 2 of this statement of basis. Therefore, the facility is not a Tier I source in accordance with IDAPA 58.01.01.006.113 and the requirements of IDAPA 58.01.01.301 do not apply.

PSD Classification (40 CFR 52.21 and IDAPA 58.01.01.205)

40 CFR 52.21 Prevention of Significant Deterioration of Air Quality

The facility is not a major stationary source as defined in 40 CFR 52.21(b)(1), nor is it undergoing any physical change at a stationary source not otherwise qualifying under paragraph 40 CFR 52.21(b)(1) as a major stationary source, that would constitute a major stationary source by itself as defined in 40 CFR 52. Therefore in accordance with 40 CFR 52.21(a)(2), PSD requirements are not applicable to this permitting action. The facility is not a designated facility as defined in 40 CFR 52.21(b)(1)(i)(a), and does not have facility-wide emissions of any criteria pollutant that exceed 250 T/yr.

NSPS Applicability (40 CFR Part 60)

40 CFR 60, Subpart Dc — Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

This subpart applies to each steam generating unit for which construction commenced after June 9, 1989, and has a maximum design heat input capacity of 100 MMBtu/hr or less, but greater than 10 MMBtu/hr.

Currently there are four natural gas boilers on site and each with a rated capacity of less than 10 MMBtu/hr. All the boilers are fired by natural gas and will be operated in a staging process in order to provide heat for the manufacturing processes. These boilers are not subject to 40 CFR 60, Subpart Dc.

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

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

40 CFR 60.4200..... Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (3) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(1) Manufacturers of stationary CI ICE with a displacement of less than 30 liters per cylinder where the model year is:

(i) 2007 or later, for engines that are not fire pump engines,

(ii) The model year listed in table 3 to this subpart or later model year, for fire pump engines.

(2) Owners and operators of stationary CI ICE that commence construction after July 11, 2005 where the stationary CI ICE are:

(i) Manufactured after April 1, 2006 and are not fire pump engines, or

(ii) Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

(3) Owners and operators of stationary CI ICE that modify or reconstruct their stationary CI ICE after July 11, 2005.

Because the emission factors for the proposed CI engine were taken from NSPS Subpart IIII, Table 2 (see permit application, section 3.3), and the CI ICE engine is with a displacement of less than 10 liters/cylinder and with a capacity of 2220 HP, it is assumed that the model of the new CI ICE engine will be 2008 model year and later. Thus, the requirements of this subpart are applicable to the permittee.

(b) The provisions of this subpart are not applicable to stationary CI ICE being tested at a stationary CI ICE test cell/stand.

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

Because the emergency generator engine has not been proposed to be operated at a stationary CI ICE test cell/stand at the facility, and because the permittee will be required to obtain a permit for a reason other than the area source status of the stationary CI ICE (refer to the emergency generator engine section for additional information), the requirements of §60.4200(b) through (c) are not applicable.

(d) Stationary CI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR part 89, subpart J and 40 CFR part 94, subpart J, for engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security.

§60.4200(d) contains elective compliance exemption options which may require approval and which were not included as a permit condition. The permittee has not requested or qualified for exemption pursuant to the subparts provided.

40 CFR 60.4201..... What emission standards must I meet for non-emergency engines if I am a stationary CI internal combustion engine manufacturer?

Because the permittee has not proposed to manufacture stationary CI ICE, the requirements of §60.4201 are not applicable and were not included as a permit condition.

40 CFR 60.4202..... What emission standards must I meet for emergency engines if I am a stationary CI internal combustion engine manufacturer?

Because the permittee has not proposed to manufacture stationary CI ICE, the requirements of §60.4202 are not applicable to the permittee as a manufacturer and were not included as a permit condition. However, in accordance with §60.4205, as an owner or operator the permittee must comply with the applicable emission standards for new nonroad CI engines, as discussed below:

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 kW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (a)(1) through (2) of this section.

(1) For engines with a maximum engine power less than 37 kW (50 HP):

(i) The certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants for model year 2007 engines, and

(ii) The certification emission standards for new nonroad CI engines in 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, 40 CFR 1039.115, and table 2 to this subpart, for 2008 model year and later engines.

*(2) **For engines with a maximum engine power greater than or equal to 37 kW (50 HP), the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants beginning in model year 2007.***

Table 1 to 40 CFR 89.112–Emission Standards (g/kW-hr)

Rated Power (kW)	*Tier*	*Model Year*[1]	*NO_X*	*HC*	*NMHC + NO_X*	*CO*	*PM*
kW<8	*Tier 1*	*2000*	—	—	*10.5*	*8.0*	*1.0*
	Tier 2	*2005*	—	—	*7.5*	*8.0*	*0.80*
8≤kW<19	*Tier 1*	*2000*	—	—	*9.5*	*6.6*	*0.80*
	Tier 2	*2005*	—	—	*7.5*	*6.6*	*0.80*
19≤kW<37	*Tier 1*	*1999*	—	—	*9.5*	*5.5*	*0.80*
	Tier 2	*2004*	—	—	*7.5*	*5.5*	*0.60*
37≤kW<75	*Tier 1*	*1998*	*9.2*	—	—	—	—
	Tier 2	*2004*	—	—	*7.5*	*5.0*	*0.40*
	Tier 3	*2008*	—	—	*4.7*	*5.0*	
75≤kW<130	*Tier 1*	*1997*	*9.2*	—	—	—	—
	Tier 2	*2003*	—	—	*6.6*	*5.0*	*0.30*
	Tier 3	*2007*	—	—	*4.0*	*5.0*	
130≤kW<225	*Tier 1*	*1996*	*9.2*	*1.3*	—	*11.4*	*0.54*
	Tier 2	*2003*	—	—	*6.6*	*3.5*	*0.20*
	Tier 3	*2006*	—	—	*4.0*	*3.5*	
225≤kW<450	*Tier 1*	*1996*	*9.2*	*1.3*	—	*11.4*	*0.54*
	Tier 2	*2001*	—	—	*6.4*	*3.5*	*0.20*
	Tier 3	*2006*	—	—	*4.0*	*3.5*	
450≤kW≤560	*Tier 1*	*1996*	*9.2*	*1.3*	—	*11.4*	*0.54*
	Tier 2	*2002*	—	—	*6.4*	*3.5*	*0.20*
	Tier 3	*2006*	—	—	*4.0*	*3.5*	
kW>560	*Tier 1*	*2000*	*9.2*	*1.3*	—	*11.4*	*0.54*
	Tier 2	*2006*	—	—	*6.4*	*3.5*	*0.20*

a. The model years listed indicate the model years for which the specified tier of standards takes effect.

- *In accordance with 40 CFR 89.113(a), exhaust opacity from compression-ignition nonroad engines shall not exceed:*
  - *20 percent during the acceleration mode;*
  - *15 percent during the lugging mode; and*
  - *50 percent during the peaks in either the acceleration or lugging modes.*

This section (40 CFR 60.4205) of Subpart IIII is applicable to Micron-Nampa facility

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power greater than 2,237 kW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (b)(1) through (2) of this section.

(1) For 2007 through 2010 model years, the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(2) For 2011 model year and later, the certification emission standards for new nonroad CI engines for engines of the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants.

(c) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power.

(d) Beginning with the model years in table 3 to this subpart, stationary CI internal combustion engine manufacturers must certify their fire pump stationary CI ICE to the emission standards in table 4 to this subpart, for all pollutants, for the same model year and NFPA nameplate power.

This part of Subpart IIII is not applicable to Micron-Nampa facility

40 CFR 60.4203..... How long must my engines meet the emission standards if I am a stationary CI internal combustion engine manufacturer?

Engines manufactured by stationary CI internal combustion engine manufacturers must meet the emission standards as required in §§60.4201 and 60.4202 during the useful life of the engines.

Because the permittee has not proposed to manufacture stationary CI ICE, the requirements of §60.4203 are not applicable and were not included as a permit condition.

40 CFR 60.4204..... What emission standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

Because the permittee has not proposed the use of the stationary CI ICE for non-emergency purposes, the requirements of §60.4204 are not applicable and were not included as a permit condition.

40 CFR 60.4205..... What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of less than 10 liters per cylinder that are not fire pump engines must comply with the emission standards in table 1 to this subpart. Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards in 40 CFR 94.8(a)(1).

Because the proposed stationary CI ICE is not with a displacement greater than or equal to 10 liters per cylinder and is not less than 30 liters per cylinder and is not a fire pump, the requirements of §60.4205(a) are not applicable and were not included as a permit condition.

(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.

Because the proposed emergency stationary CI ICE has less than 30 liters per cylinder of displacement, the requirements of §60.4205(b) are applicable and were included as a permit condition. (Permit Condition 7.8)

(c) Owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in table 4 to this subpart, for all pollutants.

Table 4 to Subpart IIII of Part 60—Emission Standards for Stationary Fire Pump Engines

[As stated in §§60.4202(d) and 60.4205(c), you must comply with the following emission standards for stationary fire pump engines]

Maximum engine power	*Model year(s)*	*NMHC + NO_X*	*CO*	*PM*
kW<8 (HP<11)	*2010 and earlier*	*10.5 (7.8)*	*8.0 (6.0)*	*1.0 (0.75)*
8≤kW<19 (11≤HP<25)	*2011+*	*7.5 (5.6)*		*0.40 (0.30)*
	2010 and earlier	*9.5 (7.1)*	*6.6 (4.9)*	*0.80 (0.60)*
	2011+	*7.5 (5.6)*		*0.40 (0.30)*
19≤kW<37 (25≤HP<50)	*2010 and earlier*	*9.5 (7.1)*	*5.5 (4.1)*	*0.80 (0.60)*
	2011+	*7.5 (5.6)*		*0.30 (0.22)*
37≤kW<56 (50≤HP<75)	*2010 and earlier*	*10.5 (7.8)*	*5.0 (3.7)*	*0.80 (0.60)*
	2011+[1]	*4.7 (3.5)*		*0.40 (0.30)*
56≤kW<75 (75≤HP<100)	*2010 and earlier*	*10.5 (7.8)*	*5.0 (3.7)*	*0.80 (0.60)*
	2011+1	*4.7 (3.5)*		*0.40 (0.30)*
75≤kW<130 (100≤HP<175)	*2009 and earlier*	*10.5 (7.8)*	*5.0 (3.7)*	*0.80 (0.60)*
	2010+[2]	*4.0 (3.0)*		*0.30 (0.22)*
130≤kW<225 (175≤HP<300)	*2008 and earlier*	*10.5 (7.8)*	*3.5 (2.6)*	*0.54 (0.40)*
	2009+[3]	*4.0 (3.0)*		*0.20 (0.15)*
225≤kW<450 (300≤HP<600)	*2008 and earlier*	*10.5 (7.8)*	*3.5 (2.6)*	*0.54 (0.40)*
	2009+[3]	*4.0 (3.0)*		*0.20 (0.15)*
450≤kW≤560 (600≤HP≤750)	*2008 and earlier*	*10.5 (7.8)*	*3.5 (2.6)*	*0.54 (0.40)*
	2009+	*4.0 (3.0)*		*0.20 (0.15)*
kW>560 (HP>750)	*2007 and earlier*	*10.5 (7.8)*	*3.5 (2.6)*	*0.54 (0.40)*
	2008+	*6.4 (4.8)*		*0.20 (0.15)*

1) *For model years 2011–2013, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 revolutions per minute (rpm) may comply with the emission limitations for 2010 model year engines.*
2) *For model years 2010–2012, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2009 model year engines.*
3) *In model years 2009–2011, manufacturers of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2008 model year engines.*

This section of Subpart IIII does not apply to the proposed emergency generator engine at MTI-Nampa facility.

(d) Owners and operators of emergency stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in paragraphs (d)(1) and (2) of this section.

(1) Reduce NO_X emissions by 90 percent or more, or limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to 1.6 grams per kW-hour (1.2 grams per HP-hour).

(2) Reduce PM emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/kW-hr (0.11 g/HP-hr).

This subpart applies to emergency stationary CI ICE with a displacement of greater than or equal to 30 liters/cylinder. The proposed CI ICE stationary emergency generator is with a displacement of less than ten 10 liters/cylinder; therefore, this section of Subpart IIII is not applicable to the proposed emergency generator at Micron-Nampa facility.

40 CFR 60.4206..... How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?

Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and 60.4205 according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine.

Permit Condition 7.10 includes the requirements of this section.

40 CFR 60.4207..... What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?

(a) Beginning October 1, 2007, owners and operators of stationary CI ICE subject to this subpart that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(a).

(b) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel.

- In accordance with 40 CFR 80.510(b), all NR and LM diesel fuel is subject to the following per-gallon standards:

  (1) Sulfur content.

  (i) 15 ppm maximum for NR diesel fuel.

  (2) Cetane index or aromatic content, as follows:

  (i) A minimum cetane index of 40; or

  (ii) A maximum aromatic content of 35 volume percent.

Permit Condition 7.12 includes the requirements of this section. Because the fuel requirements of 40 CFR 80.510(b) are more stringent than 40 CFR 80.510(a) and will apply after October 2010, the standards of 40 CFR 80.510(a) were referenced but were not included as a permit condition.

(c) Owners and operators of pre-2011 model year stationary CI ICE subject to this subpart may petition the Administrator for approval to use remaining non-compliant fuel that does not meet the fuel requirements of paragraphs (a) and (b) of this section beyond the dates required for the purpose of using up existing fuel inventories. If approved, the petition will be valid for a period of up to 6 months. If additional time is needed, the owner or operator is required to submit a new petition to the Administrator.

(d) Owners and operators of pre-2011 model year stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the Federal Aid Highway System may petition the Administrator for approval to use any fuels mixed with used lubricating oil that do not meet the fuel requirements of paragraphs (a) and (b) of this section. Owners and operators must demonstrate in their petition to the Administrator that there is no other place to use the lubricating oil. If approved, the petition will be valid for a period of up to 6 months. If additional time is needed, the owner or operator is required to submit a new petition to the Administrator.

(e) Stationary CI ICE that have a national security exemption under §60.4200(d) are also exempt from the fuel requirements in this section.

§60.4207(c) and (e) include compliance options for which approval is required, and which were not included in the application and thus are not included as a permit condition. Because the proposed emergency generator engine will not be located in Alaska, the requirements of §60.4207(d) are not applicable and were not included as a permit condition.

40 CFR 60.4208..... What is the deadline for importing or installing stationary CI ICE produced in the previous model year?

(a) After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.

This requirement was not included as a permit condition.

(b) After December 31, 2009, owners and operators may not install stationary CI ICE with a maximum engine power of less than 19 kW (25 HP) (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year engines.

Because the proposed emergency generator engine will be greater than 25 HP, the requirements of §60.4208(b) are not applicable and were not included as a permit condition.

(c) After December 31, 2014, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 19 kW (25 HP) and less than 56 kW (75 HP) that do not meet the applicable requirements for 2013 model year non-emergency engines.

(d) After December 31, 2013, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 56 kW (75 HP) and less than 130 kW (175 HP) that do not meet the applicable requirements for 2012 model year non-emergency engines.

(e) After December 31, 2012, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 130 kW (175 HP), including those above 560 kW (750 HP), that do not meet the applicable requirements for 2011 model year non-emergency engines.

(f) After December 31, 2016, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 560 kW (750 HP) that do not meet the applicable requirements for 2015 model year non-emergency engines.

(g) In addition to the requirements specified in §§60.4201, 60.4202, 60.4204, and 60.4205, it is prohibited to import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements specified in paragraphs (a) through (f) of this section after the dates specified in paragraphs (a) through (f) of this section.

Because the stationary CI ICE has not been proposed for non-emergency use, the requirements of §60.4208(c) through (f) are not applicable and were not included as a permit condition. Because the permittee has not proposed importation of CI ICE, §60.4208(g) was not included as a permit condition.

(h) The requirements of this section do not apply to owners or operators of stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location.

Because the proposed stationary CI ICE is not existing units which has been modified, reconstructed, or reinstalled, the requirements of §60.4208(h) is not applicable and was not included as a permit condition.

40 CFR 60.4209..... What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine?

If you are an owner or operator, you must meet the monitoring requirements of this section. In addition, you must also meet the monitoring requirements specified in §60.4211.

(a) If you are an owner or operator of an emergency stationary CI internal combustion engine, you must install a non-resettable hour meter prior to startup of the engine.

(b) If you are an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in §60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached.

Permit Condition 7.11 includes the requirements of this section.

40 CFR 60.4210..... What are my compliance requirements if I am a stationary CI internal combustion engine manufacturer?

Because the permittee has not proposed to manufacture stationary CI ICE, the requirements of §60.4210 are not applicable and were not included as a permit condition.

40 CFR 60.4211..... What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer. You must also meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

In accordance with 40 CFR 94.1(d), 40 CFR 94 applies to the permittee as specified in NSPS Subpart IIII, to CI engines subject to the standards of NSPS Subpart IIII.

In accordance with 40 CFR 1068.1(a)(3), 40 CFR 1068 applies to the permittee with respect to stationary CI engines certified using the provisions of 40 CFR 1039, as indicated in NSPS Subpart IIII.

Because the permittee has not proposed the use of the emergency generator engine for nonroad use (as defined in 40 CFR 89.2), and the engines are regulated by NSPS Subpart IIII, the requirements of Part 89 are not applicable.

§60.4211(a) incorporates applicable requirements from 40 CFR parts 89, 94, and 1068 by reference. Permit Condition 7.9 references and includes the requirements of this section.

(b) If you are an owner or operator of a pre-2007 model year stationary CI internal combustion engine and must comply with the emission standards specified in §§60.4204(a) or 60.4205(a), or if you are an owner or operator of a CI fire pump engine that is manufactured prior to the model years in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) through (5) of this section.

Table 3 to Subpart IIII of Part 60—Certification Requirements for Stationary Fire Pump Engines

[As stated in §60.4202(d), you must certify new stationary fire pump engines beginning with the following model years:]

Engine power	*Starting model year engine manufacturers must certify new stationary fire pump engines according to §60.4202(d)*
kW<75 (HP<100)	*2011*
75≤kW<130 (100≤HP<175)	*2010*
130≤kW≤560 (175≤HP≤750)	*2009*
kW>560 (HP>750)	*2008*

(1) Purchasing an engine certified according to 40 CFR part 89 or 40 CFR part 94, as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications.

(2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly.

(3) Keeping records of engine manufacturer data indicating compliance with the standards.

(4) Keeping records of control device vendor data indicating compliance with the standards.

(5) Conducting an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in §60.4212, as applicable.

This section of Subpart IIII is not applicable to the proposed emergency generator at Micron-Nampa facility

(c) If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(b) or §60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's specifications.

(d) If you are an owner or operator and must comply with the emission standards specified in §60.4204(c) or §60.4205(d), you must demonstrate compliance according to the requirements specified in paragraphs (d)(1) through (3) of this section.

(1) Conducting an initial performance test to demonstrate initial compliance with the emission standards as specified in §60.4213.

(2) Establishing operating parameters to be monitored continuously to ensure the stationary internal combustion engine continues to meet the emission standards. The owner or operator must petition the Administrator for approval of operating parameters to be monitored continuously. The petition must include the information described in paragraphs (d)(2)(i) through (v) of this section.

(i) Identification of the specific parameters you propose to monitor continuously;

(ii) A discussion of the relationship between these parameters and NO_X and PM emissions, identifying how the emissions of these pollutants change with changes in these parameters, and how limitations on these parameters will serve to limit NO_X and PM emissions;

(iii) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(iv) A discussion identifying the methods and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(v) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(3) For non-emergency engines with a displacement of greater than or equal to 30 liters per cylinder, conducting annual performance tests to demonstrate continuous compliance with the emission standards as specified in §60.4213.

(e) Emergency stationary ICE may be operated 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. There is no time limit on the use of emergency stationary ICE in emergency situations. Anyone 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 ICE beyond 100 hours per year. For owners and operators of emergency engines meeting standards under §60.4205 but not §60.4204, any operation other than emergency operation, and maintenance and testing as permitted in this section, is prohibited.

Because the emission standards specified in §60.4205(b) were applicable to the proposed emergency generator, the requirements of §60.4211(c) were included as a permit condition.

Permit Condition 7.9 references and includes the requirements of this section.

40 CFR 60.4212..... What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to this subpart must do so according to paragraphs (a) through (d) of this section.

This section of Subpart IIII is not applicable to the proposed emergency generator at Micron-Nampa facility.

(a) The performance test must be conducted according to the in-use testing procedures in 40 CFR part 1039, subpart F.

(b) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1039 must not exceed the not-to-exceed (NTE) standards for the same model year and maximum engine power as required in 40 CFR 1039.101(e) and 40 CFR 1039.102(g)(1), except as specified in 40 CFR 1039.104(d). This requirement starts when NTE requirements take effect for nonroad diesel engines under 40 CFR part 1039.

(c) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8, as applicable, must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112 or 40 CFR 94.8, as applicable, determined from the following equation:

NTE requirement for each pollutant = (1.25) x (STD) (Eq. 1)

Where:

STD = The standard specified for that pollutant in 40 CFR 89.112 or 40 CFR 94.8, as applicable.

Alternatively, stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8 may follow the testing procedures specified in §60.4213 of this subpart, as appropriate.

(d) Exhaust emissions from stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in §60.4204(a), §60.4205(a), or §60.4205(c), determined from the equation in paragraph (c) of this section.

Where:

STD = The standard specified for that pollutant in §60.4204(a), §60.4205(a), or §60.4205(c).

Alternatively, stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) may follow the testing procedures specified in §60.4213, as appropriate.

This section of Subpart IIII is not applicable to the proposed emergency generator at Micron-Nampa facility.

40 CFR 60.4213..... What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of greater than or equal to 30 liters per cylinder?

This section of Subpart IIII is not applicable to the proposed emergency generator at Micron-Nampa facility.

40 CFR 60.4214..... What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of non-emergency stationary CI ICE that are greater than 2,237 kW (3,000 HP), or have a displacement of greater than or equal to 10 liters per cylinder, or are pre-2007 model year engines that are greater than 130 kW (175 HP) and not certified, must meet the requirements of paragraphs (a)(1) and (2) of this section.

(1) Submit an initial notification as required in §60.7(a)(1). The notification must include the information in paragraphs (a)(1)(i) through (v) of this section.

(i) Name and address of the owner or operator;

(ii) The address of the affected source;

(iii) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

(iv) Emission control equipment; and

(v) Fuel used.

(2) Keep records of the information in paragraphs (a)(2)(i) through (iv) of this section.

(i) All notifications submitted to comply with this subpart and all documentation supporting any notification.

(ii) Maintenance conducted on the engine.

(iii) If the stationary CI internal combustion is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards.

(iv) If the stationary CI internal combustion is not a certified engine, documentation that the engine meets the emission standards.

The proposed CI ICI is with a displacement of less than 10 liters/cylinder and the permittee has not proposed the use of the stationary CI ICE for non-emergency purposes, the requirements of §60.4214(a) are not applicable and were not included as a permit condition.

(b) If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.

Table 5 to Subpart IIII of Part 60—Labeling and Recordkeeping Requirements for New Stationary Emergency Engines

[You must comply with the labeling requirements in §60.4210(f) and the recordkeeping requirements in §60.4214(b) for new emergency stationary CI ICE beginning in the following model years:]

Engine power	*Starting model year*
19≤kW<56 (25≤HP<75)	*2013*
56≤kW<130 (75≤HP<175)	*2012*
kW≥130 (HP≥175)	*2011*

.

(c) If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached

The permittee is not required to submit an initial notification. If the emergency generator engine is equipped with a diesel particulate filter, the permittee shall keep records of any corrective action taken after the backpressure monitor has notified the permittee that the high backpressure limit of the engine is approached, in accordance with 40 CFR 60.4214(c).

Permit Condition 7.13 includes the requirements of this section.

40 CFR 60.4215..... What requirements must I meet for engines used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands?

Because the facility will not be located in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands, the requirements of §60.4215 are not applicable and were not included as a permit condition.

40 CFR 60.4216..... What requirements must I meet for engines used in Alaska?

Because the facility will not be located in Alaska, the requirements of §60.4215 are not applicable and were not included as a permit condition.

40 CFR 60.4217..... What emission standards must I meet if I am an owner or operator of a stationary internal combustion engine using special fuels?

(a) Owners and operators of stationary CI ICE that do not use diesel fuel, or who have been given authority by the Administrator under §60.4207(d) of this subpart to use fuels that do not meet the fuel requirements of paragraphs (a) and (b) of §60.4207, may petition the Administrator for approval of alternative emission standards, if they can demonstrate that they use a fuel that is not the fuel on which the manufacturer of the engine certified the engine and that the engine cannot meet the applicable standards required in §60.4202 or §60.4203 using such fuels.

(b) [Reserved]

§60.4217 contains alternative compliance options for special fuels which require approval and which were not included as a permit condition.

40 CFR 60.4218..... What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§60.1 through 60.19 apply to you.

Table 8 to Subpart IIII of Part 60—Applicability of General Provisions to Subpart IIII

[As stated in §60.4218, you must comply with the following applicable General Provisions:]

General Provisions citation	*Subject of citation*	*Applies to subpart*	*Explanation*
§60.1	*General applicability of the General Provisions*	*Yes*	
§60.2	*Definitions*	*Yes*	*Additional terms defined in §60.4219.*
§60.3	*Units and abbreviations*	*Yes*	
§60.4	*Address*	*Yes*	
§60.5	*Determination of construction or modification*	*Yes*	
§60.6	*Review of plans*	*Yes*	
§60.7	*Notification and Recordkeeping*	*Yes*	*Except that §60.7 only applies as specified in §60.4214(a).*
§60.8	*Performance tests*	*Yes*	*Except that §60.8 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder and engines that are not certified.*
§60.9	*Availability of information*	*Yes*	
§60.10	*State Authority*	*Yes*	
§60.11	*Compliance with standards and maintenance requirements*	*No*	*Requirements are specified in subpart IIII.*
§60.12	*Circumvention*	*Yes*	
§60.13	*Monitoring requirements*	*Yes*	*Except that §60.13 only applies to stationary CI ICE with a displacement of ≥30 liters per cylinder.*
§60.14	*Modification*	*Yes*	
§60.15	*Reconstruction*	*Yes*	
§60.16	*Priority list*	*Yes*	
§60.17	*Incorporations by reference*	*Yes*	
§60.18	*General control device requirements*	*No*	
§60.19	*General notification and reporting requirements*	*Yes*	

40 CFR 60.4218 contains a table identifying applicable and non-applicable general provisions. This table is included in this statement of basis and it is an applicable requirements. Permit Condition 7.14 includes the requirements of this section.

40 CFR 60.4219..... What definitions apply to this subpart?

§60.4219 contains applicable definitions which were not included as a permit condition.

NESHAP Applicability (40 CFR 61)

The facility is not subject to any NESHAP requirements in 40 CFR 61.

MACT Applicability (40 CFR 63)

40 CFR 63, Subpart BBBBB — National Emissions Standards for Hazardous Air Pollutants for Semiconductor Manufacturing

In accordance with 40 CFR 63.7181, "(a) You are subject to this subpart if you own or operate a semiconductor manufacturing process unit that is a major source of hazardous air pollutants (HAP) emissions or that is located at, or is part of, a major source of HAP emissions. (b) A major source of HAP emissions is any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit, considering controls, in the aggregate, any single HAP at a rate of 10 T/yr or more or any combination of HAP at a rate of 25 T/yr or more."

The MTI-Nampa facility is not subject to this subpart because it is not a major source of hazardous air pollutant emissions. The permit contains a limit to prevent emissions from exceeding 10 tons per year of any single HAP and 25 tons per year of any combination of HAPs.

40 CFR 63, Subpart DDDDD National Emissions Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters.

In accordance with 40 CFR 63.7480, "(a) You are subject to this subpart if you own or operate an industrial, commercial, or institutional boiler or process heater as defined in 40 CFR 63.7575 that is located at, or is part of, a major source of HAP as defined in 40 CFR 63.2 or 40 CFR.761 (40 CFR part 63, subpart HH, National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities), except as specified in 40 CFR 63.7491"

The MTI-Nampa facility is not subject to this subpart because it is not a major source of HAP emissions. The permit contains a limit to prevent emissions from exceeding 10 T/yr of any single HAP and 25 T/yr of any combination of HAPs.

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

The facility is subject to 40 CFR 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

40 CFR 63.6580..... What is the purpose of subpart ZZZZ?

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

40 CFR 63.6585..... Am I subject to this subpart?

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

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

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

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

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

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

In accordance with §63.6585, because the permittee operates a stationary RICE at an area source of HAP emissions, the permittee is subject to this subpart.

40 CFR 63.6590..... What parts of my plant does this subpart cover?

This subpart applies to each affected source.

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

...

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

...

In accordance with §63.6590(a)(iii), because the emergency CI generators engines are located at an area source of HAP emissions and commenced construction before June 12, 2006, it is an affected source.

40 CFR 63.6595..... When do I have to comply with this subpart?

(a) Affected sources. (1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than May 3, 2013. If you have an existing stationary SI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary SI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than October 19, 2013.

In accordance with §63.6595(a)(1), because the emergency stationary CI generators engines are an existing stationary CI RICE located at an area source of HAP emissions, the permittee must comply with the applicable emission limitations and operating limitations no later than May 3, 2013.

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?

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

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

Table 2b to Subpart ZZZZ of Part 63— Operating Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP Located at a Major Source of HAP Emissions, New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions, Existing Compression Ignition Stationary RICE >500 HP, and Existing 4SLB Stationary RICE >500 HP Located at an Area Source of HAP Emissions

As stated in §§63.6600, 63.6601, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed 2SLB and compression ignition stationary RICE located at a major source of HAP emissions; new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions; existing compression ignition stationary RICE >500 HP; and existing 4SLB stationary RICE >500 HP located at an area source of HAP emissions that operate more than 24 hours per calendar year:

For each . . .	*You must meet the following operating limitation . . .*
1. 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an oxidation catalyst; or 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of CO in the stationary RICE exhaust and using an oxidation catalyst	*a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.[1]*
2. 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and not using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst; or 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst	*Comply with any operating limitations approved by the Administrator.*

Table 2d to Subpart ZZZZ of Part 63— Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions

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

For each . . .	***You must meet the following requirement, except during periods of startup . . .***	***During periods of startup you must . . .***
1. Non-Emergency, non-black start CI stationary RICE ≤300 HP	*a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first;[1]*	*Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.*
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
2. Non-Emergency, non-black start CI stationary RICE 300<HP≤500	*a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent O_2; or*	
	b. Reduce CO emissions by 70 percent or more.	
3. Non-Emergency, non-black start CI stationary RICE >500 HP	*a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O_2; or*	

	b. Reduce CO emissions by 70 percent or more.	
4. Emergency stationary CI RICE and black start stationary CI RICE.[2]	*a. Change oil and filter every 500 hours of operation or annually, whichever comes first;*[1]	
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE >500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE >500 HP that operate 24 hours or less per calendar year.[2]	***a. Change oil and filter every 500 hours of operation or annually, whichever comes first;***[1] ***b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first; and*** ***c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.***	
6. Non-emergency, non-black start 2SLB stationary RICE	*a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;*[1]	
	b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.	
7. Non-emergency, non-black start 4SLB stationary RICE ≤500 HP	*a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;*[1]	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	

8. Non-emergency, non-black start 4SLB stationary RICE >500 HP	*a. Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd at 15 percent O_2; or*	
	b. Reduce CO emissions by 93 percent or more.	
9. Non-emergency, non-black start 4SRB stationary RICE ≤500 HP	*a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1]*	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
10. Non-emergency, non-black start 4SRB stationary RICE >500 HP	*a. Limit concentration of formaldehyde in the stationary RICE exhaust to 2.7 ppmvd at 15 percent O_2; or*	
	b. Reduce formaldehyde emissions by 76 percent or more.	
11. Non-emergency, non-black start landfill or digester gas-fired stationary RICE	*a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1]*	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	

[1]Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Table 2d of this subpart.

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

...

Because the engines existing at Micron-Nampa facility are stationary compression ignition internal combustion engines (CI ICE), the permittee must meet the relevant inspection and maintenance requirements specified in Table 2d.

Permit Condition 7.6.1 includes the requirements of this section.

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

(a) You must be in compliance with the emission limitations and operating limitations in this subpart that apply to you at all times.

(b) At all times you 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. 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.

Permit Condition 7.6.2 includes the requirements of this section.

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

...

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

...

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

Because the the emergency generators engines are an existing emergency stationary RICE located at an area source of emissions, the permittee must meet the requirements of this section.

Permit Condition 7.6.3 includes the requirements of this section.

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

...

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

...

(j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to this subpart or in items 5, 6, 7, 9, or 11 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the

viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 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 owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

Because the emergency generators engines are subject to item 4 of Table 2d to this subpart, 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.

Permit Condition 7.6.3 includes the requirements of this section.

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

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

Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, Operating Limitations, Work Practices, and Management Practices

As stated in §63.6640, you must continuously comply with the emissions and operating limitations and work or management practices as required by the following:

For each...	*Complying with the requirement to...*	*You must demonstrate continuous compliance by...*
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	*a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS*	*i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved;[a] and* *ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and* *iii. Reducing these data to 4-hour rolling averages; and* *iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and*
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
2. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	*a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS*	*i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved; and* *ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and* *iii. Reducing these data to 4-hour rolling averages; and* *iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.*
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, new or reconstructed non-emergency stationary CI RICE >500	*a. Reduce CO emissions and using a CEMS*	*i. Collecting the monitoring data according to §63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction of CO emissions according to §63.6620; and* *ii. Demonstrating that the catalyst achieves the*

HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP, existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year		*required percent reduction of CO emissions over the 4-hour averaging period; and* *iii. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.*
4. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	*a. Reduce formaldehyde emissions and using NSCR*	*i. Collecting the catalyst inlet temperature data according to §63.6625(b); and* *ii. Reducing these data to 4-hour rolling averages; and*
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
5. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	*a. Reduce formaldehyde emissions and not using NSCR*	*i. Collecting the approved operating parameter (if any) data according to §63.6625(b); and* *ii. Reducing these data to 4-hour rolling averages; and*
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
6. Non-emergency 4SRB stationary RICE with a brake HP ≥5,000 located at a major source of HAP	*a. Reduce formaldehyde emissions*	*Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved.*[a]
7. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	*a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR*	*i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit;*[a] *and* *ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and*
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
8. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	*a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR*	*i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit;*[a] *and* *ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and*
		iii. Reducing these data to 4-hour rolling averages; and

		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
9. Existing emergency and black start stationary RICE ≤500 HP located at a major source of HAP, existing non-emergency stationary RICE <100 HP located at a major source of HAP, existing emergency and black start stationary RICE located at an area source of HAP, existing non-emergency stationary CI RICE ≤300 HP located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency landfill or digester gas stationary SI RICE located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE ≤500 HP located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate 24 hours or less per calendar year	***a. Work or Management practices***	***i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.***
10. Existing stationary CI RICE >500 HP that are not limited use stationary RICE, and existing 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year and are not limited use stationary RICE	*a. Reduce CO or formaldehyde emissions, or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and using oxidation catalyst or NSCR*	*i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and*
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
11. Existing stationary CI RICE >500 HP that are not limited use stationary RICE, and existing 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year and are not limited use stationary RICE	*a. Reduce CO or formaldehyde emissions, or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and not using oxidation catalyst or NSCR*	*i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and*
		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.

12. Existing limited use CI stationary RICE >500 HP and existing limited use 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year	*a. Reduce CO or formaldehyde emissions or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and using an oxidation catalyst or NSCR*	*i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and*
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
13. Existing limited use CI stationary RICE >500 HP and existing limited use 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year	*a. Reduce CO or formaldehyde emissions or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and using an oxidation catalyst or NSCR*	*i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and*
		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.

[a] *After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.*

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

...

(e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you.

(f) Requirements for emergency stationary RICE. (1) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that was installed on or after June 12, 2006, or an existing emergency stationary RICE located at an area source of HAP emissions, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1)(i) through (iii) of this section. Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1)(i) through (iii) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1)(i) through (iii) of this section, the engine will not be considered an emergency engine under this subpart and will need to meet all requirements for non-emergency engines.

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

(ii) You may operate your 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) You may operate your 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 owners and operators 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 (f)(1)(iii), as long as the power provided by the financial arrangement is limited to emergency power.

...

Permit Condition 7.6.4 includes the requirements of this section.

40 CFR 63.6645..... What notifications must I submit and when?

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

...

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

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

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

...

The notifications in 40 CFR 63.6645 does not apply to Micron-Nampa facility.

40 CFR 63.6655..... What records must I keep?

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

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in §63.10(b)(2)(xiv).

(2) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.

(3) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii).

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

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

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

(3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.

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

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

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

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

Permit Condition 7.6.5 includes the requirements of this section.

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

Table 8 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you.

Table 8 to Subpart ZZZZ of Part 63—Applicability of General Provisions to Subpart ZZZZ.

As stated in §63.6665, you must comply with the following applicable general provisions.

General provisions citation	*Subject of citation*	*Applies to subpart*	*Explanation*
§63.1	*General applicability of the General Provisions*	*Yes.*	
§63.2	*Definitions*	*Yes*	*Additional terms defined in §63.6675.*
§63.3	*Units and abbreviations*	*Yes.*	
§63.4	*Prohibited activities and circumvention*	*Yes.*	

§63.5	*Construction and reconstruction*	*Yes.*	
§63.6(a)	*Applicability*	*Yes.*	
§63.6(b)(1)–(4)	*Compliance dates for new and reconstructed sources*	*Yes.*	
§63.6(b)(5)	*Notification*	*Yes.*	
§63.6(b)(6)	*[Reserved]*		
§63.6(b)(7)	*Compliance dates for new and reconstructed area sources that become major sources*	*Yes.*	
§63.6(c)(1)–(2)	*Compliance dates for existing sources*	*Yes.*	
§63.6(c)(3)–(4)	*[Reserved]*		
§63.6(c)(5)	*Compliance dates for existing area sources that become major sources*	*Yes.*	
§63.6(d)	*[Reserved]*		
§63.6(e)	*Operation and maintenance*	*No.*	
§63.6(f)(1)	*Applicability of standards*	*No.*	
§63.6(f)(2)	*Methods for determining compliance*	*Yes.*	
§63.6(f)(3)	*Finding of compliance*	*Yes.*	
§63.6(g)(1)–(3)	*Use of alternate standard*	*Yes.*	
§63.6(h)	*Opacity and visible emission standards*	*No*	*Subpart ZZZZ does not contain opacity or visible emission standards.*
§63.6(i)	*Compliance extension procedures and criteria*	*Yes.*	
§63.6(j)	*Presidential compliance exemption*	*Yes.*	
§63.7(a)(1)–(2)	*Performance test dates*	*Yes*	*Subpart ZZZZ contains performance test dates at §§63.6610, 63.6611, and 63.6612.*
§63.7(a)(3)	*CAA section 114 authority*	*Yes.*	
§63.7(b)(1)	*Notification of performance test*	*Yes*	*Except that §63.7(b)(1) only applies as specified in §63.6645.*
§63.7(b)(2)	*Notification of rescheduling*	*Yes*	*Except that §63.7(b)(2) only applies as specified in §63.6645.*
§63.7(c)	*Quality assurance/test plan*	*Yes*	*Except that §63.7(c) only applies as specified in §63.6645.*
§63.7(d)	*Testing facilities*	*Yes.*	

§63.7(e)(1)	*Conditions for conducting performance tests*	*No.*	*Subpart ZZZZ specifies conditions for conducting performance tests at §63.6620.*
§63.7(e)(2)	*Conduct of performance tests and reduction of data*	*Yes*	*Subpart ZZZZ specifies test methods at §63.6620.*
§63.7(e)(3)	*Test run duration*	*Yes.*	
§63.7(e)(4)	*Administrator may require other testing under section 114 of the CAA*	*Yes.*	
§63.7(f)	*Alternative test method provisions*	*Yes.*	
§63.7(g)	*Performance test data analysis, recordkeeping, and reporting*	*Yes.*	
§63.7(h)	*Waiver of tests*	*Yes.*	
§63.8(a)(1)	*Applicability of monitoring requirements*	*Yes*	*Subpart ZZZZ contains specific requirements for monitoring at §63.6625.*
§63.8(a)(2)	*Performance specifications*	*Yes.*	
§63.8(a)(3)	*[Reserved]*		
§63.8(a)(4)	*Monitoring for control devices*	*No.*	
§63.8(b)(1)	*Monitoring*	*Yes.*	
§63.8(b)(2)–(3)	*Multiple effluents and multiple monitoring systems*	*Yes.*	
§63.8(c)(1)	*Monitoring system operation and maintenance*	*Yes.*	
§63.8(c)(1)(i)	*Routine and predictable SSM*	*Yes.*	
§63.8(c)(1)(ii)	*SSM not in Startup Shutdown Malfunction Plan*	*Yes.*	
§63.8(c)(1)(iii)	*Compliance with operation and maintenance requirements*	*Yes.*	
§63.8(c)(2)–(3)	*Monitoring system installation*	*Yes.*	
§63.8(c)(4)	*Continuous monitoring system (CMS) requirements*	*Yes*	*Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).*
§63.8(c)(5)	*COMS minimum procedures*	*No*	*Subpart ZZZZ does not require COMS.*
§63.8(c)(6)–(8)	*CMS requirements*	*Yes*	*Except that subpart ZZZZ does not require COMS.*
§63.8(d)	*CMS quality control*	*Yes.*	
§63.8(e)	*CMS performance evaluation*	*Yes*	*Except for §63.8(e)(5)(ii), which applies to COMS.*
		Except that §63.8(e) only applies as	

		specified in §63.6645.	
§63.8(f)(1)–(5)	*Alternative monitoring method*	*Yes*	*Except that §63.8(f)(4) only applies as specified in §63.6645.*
§63.8(f)(6)	*Alternative to relative accuracy test*	*Yes*	*Except that §63.8(f)(6) only applies as specified in §63.6645.*
§63.8(g)	*Data reduction*	*Yes*	*Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§63.6635 and 63.6640.*
§63.9(a)	*Applicability and State delegation of notification requirements*	*Yes.*	
§63.9(b)(1)–(5)	*Initial notifications*	*Yes*	*Except that §63.9(b)(3) is reserved.*
		Except that §63.9(b) only applies as specified in §63.6645.	
§63.9(c)	*Request for compliance extension*	*Yes*	*Except that §63.9(c) only applies as specified in §63.6645.*
§63.9(d)	*Notification of special compliance requirements for new sources*	*Yes*	*Except that §63.9(d) only applies as specified in §63.6645.*
§63.9(e)	*Notification of performance test*	*Yes*	*Except that §63.9(e) only applies as specified in §63.6645.*
§63.9(f)	*Notification of visible emission (VE)/opacity test*	*No*	*Subpart ZZZZ does not contain opacity or VE standards.*
§63.9(g)(1)	*Notification of performance evaluation*	*Yes*	*Except that §63.9(g) only applies as specified in §63.6645.*
§63.9(g)(2)	*Notification of use of COMS data*	*No*	*Subpart ZZZZ does not contain opacity or VE standards.*
§63.9(g)(3)	*Notification that criterion for alternative to RATA is exceeded*	*Yes*	*If alternative is in use.*
		Except that §63.9(g) only applies as specified in §63.6645.	
§63.9(h)(1)–(6)	*Notification of compliance status*	*Yes*	*Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. §63.9(h)(4) is reserved.*
			Except that §63.9(h) only applies as specified in §63.6645.
§63.9(i)	*Adjustment of submittal deadlines*	*Yes.*	
§63.9(j)	*Change in previous information*	*Yes.*	

§63.10(a)	*Administrative provisions for recordkeeping/reporting*	*Yes.*	
§63.10(b)(1)	*Record retention*	*Yes.*	
§63.10(b)(2)(i)–(v)	*Records related to SSM*	*No.*	
§63.10(b)(2)(vi)–(xi)	*Records*	*Yes.*	
§63.10(b)(2)(xii)	*Record when under waiver*	*Yes.*	
§63.10(b)(2)(xiii)	*Records when using alternative to RATA*	*Yes*	*For CO standard if using RATA alternative.*
§63.10(b)(2)(xiv)	*Records of supporting documentation*	*Yes.*	
§63.10(b)(3)	*Records of applicability determination*	*Yes.*	
§63.10(c)	*Additional records for sources using CEMS*	*Yes*	*Except that §63.10(c)(2)–(4) and (9) are reserved.*
§63.10(d)(1)	*General reporting requirements*	*Yes.*	
§63.10(d)(2)	*Report of performance test results*	*Yes.*	
§63.10(d)(3)	*Reporting opacity or VE observations*	*No*	*Subpart ZZZZ does not contain opacity or VE standards.*
§63.10(d)(4)	*Progress reports*	*Yes.*	
§63.10(d)(5)	*Startup, shutdown, and malfunction reports*	*No.*	
§63.10(e)(1) and (2)(i)	*Additional CMS Reports*	*Yes.*	
§63.10(e)(2)(ii)	*COMS-related report*	*No*	*Subpart ZZZZ does not require COMS.*
§63.10(e)(3)	*Excess emission and parameter exceedances reports*	*Yes.*	*Except that §63.10(e)(3)(i) (C) is reserved.*
§63.10(e)(4)	*Reporting COMS data*	*No*	*Subpart ZZZZ does not require COMS.*
§63.10(f)	*Waiver for recordkeeping/reporting*	*Yes.*	
§63.11	*Flares*	*No.*	
§63.12	*State authority and delegations*	*Yes.*	
§63.13	*Addresses*	*Yes.*	
§63.14	*Incorporation by reference*	*Yes.*	
§63.15	*Availability of information*	*Yes.*	

Permit Condition 7.6.7 includes the requirements of this section.

Refer to the Federal Requirements Applicability Analyses section in Appendix C for additional information concerning MACT applicability.

CAM Applicability (40 CFR 64)

The facility is not classified as a major source (refer to Title V Classification section). Because the facility does not require a Title V permit, the requirements of CAM are not applicable.

Permit Conditions Review

As presented in the FEC permit renewal application, this section summarizes the requirements of the permit and explains the compliance demonstrations.

Facility Emissions Cap

As provided by the FEC rule, MTI proposed to establish FECs for criteria air pollutants that will constitute preconstruction approval and allow flexibility to reconfigure and install new fabrication tools, related pollution control equipment, new boilers, and emergency generators without performing individual PTC applicability determinations for each project. The FEC rule describes three potential components of a FEC: (1) baseline actual emissions, (2) an operational variability component and (3) an optional growth component.

Proposed Facility Emission Cap

Table 1 in the emission inventories section in this statement of basis summarizes MTI's proposed baseline, growth, and operational variability components for the FEC for each criteria air pollutant from all sources at the facility. Details of the calculation of the growth component are provided in the FEC permit renewal application. The proposed conditions presented in the Semiconductor Manufacturing Operations of the statement of basis consider appropriate recordkeeping and reporting requirements to ensure compliance with the FEC. In addition, the FEC limits hazardous air pollutant emissions below major source thresholds.

Baseline Actual Emissions

Combustion emissions result from the operation of natural gas-fired boilers, diesel-fueled emergency generators, VOC abatement devices, and process safety equipment. The diesel IC engines are routinely operated for testing and maintenance (typically about 12 hours per year per generator). All boilers are used, but due to operational constraints, they are not operating at full capacities. The VOC abatement units and process safety equipment are small sources of combustion emissions because the gas firing rates are very low.

The manufacturing process emits particulate matter and VOCs. In addition, small quantities of particulate matter are emitted by fugitive process sources and cooling towers. The 2007-2009 average facility-wide baseline actual estimated emissions of criteria pollutants are summarized in Table 1 of the statement of basis. Details of the baseline actual emission calculations are provided in Appendix A of the permit application.

Operational Variability Component

As defined in the FEC rule, the allowance for operational variability may be up to the significant emission rate minus one ton per year. If the significant emission rate is less than ten tons per year, then DEQ and the applicant must negotiate the operational variability component of the FEC.

MTI has chosen not to request the maximum operational variability for any of the criteria pollutants except VOCs. MTI proposed a FEC on lead emissions of 60 pounds per year, which is five percent of the 1,200 pounds per year significant emission rate for lead.

As discussed in the application, the semiconductor manufacturing process is constantly changing, and operational variability is the norm. Consequently, MTI has requested an operational variability component for process changes that could occur even without adding additional equipment.

The proposed operational variability components of the FEC for relevant criteria pollutants are included in Table 1 of the statement of basis.

Growth Component

The FEC rule includes a growth component "to allow for potential future business growth or facility changes that may increase emissions." The combo Tier II PTC and PTC permit allows for the installation of one additional boiler, one additional diesel IC engine generator, and one additional cooling tower. In addition, the permit allows for additional manufacturing capacity and for changes in process technology and chemistry by establishing emission limits that are higher than existing actual emissions. Table 1 of the statement of basis identifies anticipated emission increases attributable to installation of the proposed boiler, generator, cooling tower, and the manufacturing process.

Specific Proposed Conditions

This section identifies appropriate permit conditions relevant to monitoring requirements and operation of emission control devices to demonstrate compliance with the proposed FEC.

Criteria Pollutant Facility Emissions Cap

The PM_{10}, SO_2, NO_X, CO, VOC, Pb, and HAP emissions from the MTI facility shall not exceed any corresponding facility emissions cap (FEC) limits listed in Table 3 below.

TABLE 3 FEC EMISSIONS LIMITS

Source Description	PM_{10}	SO_2	NO_X	CO	VOC	Pb	Individual HAPs	Aggregate HAPs
	T/yr	T/yr	T/yr	T/yr	T/yr	T/yr	T/yr	T/yr
Total Facility Emissions Cap	11	6	26	26	53	0.020	<10	<25

Compliance with the criteria pollutant emissions cap will be determined by determining the rolling 12-month emissions from the boilers and generators based on fuel consumption emissions factors and adding the estimated emissions determined from the cooling towers and manufacturing process using material usage and disposal records with associated control efficiencies from wet scrubbers and VOC abatement units.

For facility changes that comply with the terms and conditions of the permit establishing the FEC, but were not included in the estimate of ambient concentration analysis approved for the permit establishing the FEC, the permittee shall review the estimate of ambient concentration analysis. In the event the facility change would result in a significant contribution above the design concentration determined by the estimate of ambient concentration analysis approved for the permit establishing the FEC, but does not cause or significantly contribute to a violation to any ambient air quality standard, the permittee shall provide notice to the Department at least seven days in advance of the proposed change in accordance with IDAPA 58.01.01.181.01.b. The permittee shall record and maintain documentation of the review on site.

MTI shall report to the Department the rolling 12-month total criteria pollutant and HAP estimated emissions annually in accordance with IDAPA 58.01.01.178.04(b).

HAP Facility Emissions Cap

Hazardous air pollutant (HAP) emissions shall not exceed 10 tons per year for any individual HAP and 25 tons per year for the aggregate of all HAPs. Hazardous air pollutants are those listed in or pursuant to Section 112(b) of the Clean Air Act.

Compliance with the HAP FEC will be determined in the same manner as the criteria pollutant emissions. HAP emissions from the boilers, generators, and manufacturing process will be calculated on a rolling 12-month basis using combustion emissions factors for the boilers and generators and material usage records with associated scrubber and abatement unit control efficiencies for the manufacturing process.

Semiconductor Manufacturing Operations

Section 4 of the FEC permit contains conditions specific to the semiconductor manufacturing processes and related pollution control equipment. The requirements of this section of the permit must be followed in order to take credit for the pollution control efficiency in the emissions calculations used to demonstrate compliance with the FEC and the toxic air pollutant emissions calculations in Section 5 of the permit.

Wet Scrubber Permit Conditions

Wet scrubbers are used throughout the facility to control emissions of acids, bases, and water-soluble constituents that are predominantly emitted from the process cleaning steps but also from the etch steps. The recirculating contact liquid in the scrubbers is water with a controlled pH. Water flow rate, pH, and media packing depth are directly related to efficiency. Instruments to measure liquid flow rate, pH, and pump operational status are installed and maintained for each scrubber. The liquid pH and pump operational status will be monitored and recorded at least once every 15 minutes. MTI uses a digital monitoring system which takes recordings multiple times per minute. Once per calendar month, MTI will monitor and record the scrubbing liquid flow rate (gpm) to ensure the scrubbers are operating within design parameters to obtain the expected control efficiency.

As an alternative to an operations and maintenance manual for each wet scrubber, MTI proposed to develop a log containing the minimum scrubber liquid recirculation flow rate and pH range required to maintain proper performance for each of the wet scrubbers based on manufacturer's data or applicable engineering data. The log will be continually updated as new scrubbers are added or existing scrubbers are modified. The log will be maintained on site and made available to DEQ representatives upon request.

VOC Abatement Devices Permit Conditions

All coat track units at the facility must be controlled by VOC thermal-oxidation units, identified as VOC abatement units. "Coat track" means a semiconductor manufacturing tool that performs a process called coat bake in the photolithography area of the facility. Operating and monitoring requirements for the VOC abatement units are included in the permit.

MTI is required to operate the VOC abatement units according to manufacturers' recommendations as follows:

a) Oxidation temperature shall be 1,350 degrees F or greater.

b) Desorption temperature shall be 340 degrees F or greater.

c) Each unit shall not be operated outside of the manufacturer's design capacity.

MTI must monitor the oxidation and desorption temperatures and record them once per day to demonstrate compliance with the manufacturer's control efficiency. MTI uses a digital monitoring system which takes recordings multiple times per minute.

Pollutants Regulated By IDAPA 58.01.01.585-586

MTI proposed to revise the methodology listed in Section 4 of the 2006 permit slightly, to match the methodology of MTI, Boise's FEC permit. The 2006 PTC did not include baseline emissions, because the facility was new and baseline emissions were considered zero. MTI, Nampa facility has now collected sufficient data on usage to generate a site-specific basline (*Mu*), using the maximum annually averaged hourly emission rate for each substance from the latest available four year. Therefore, this section of the permit was revised to accommodate the facility's request.

If MTI follows the requirements in the permit for documenting TAP emissions MTI does not need to perform or document a permit exemption for any individual semiconductor process modification that may result in an increase in TAP emissions under IDAPA 58.01.01.223. Compliance with the permit conditions provides a level of

tracking TAP emissions that is more stringent than required by IDAPA 58.01.01.223 because the permit limits any additional emissions increases to the AAC or AACC. That is, the permit restricts toxic emissions to the permit exemption levels. This provides reasonable assurance of compliance with IDAPA 58.01.01.161 (toxic contaminants shall not be emitted in quantities that would injure or unreasonably affect human or animal life or vegetation) and the monitoring and recordkeeping burden for MTI is decreased because they do not have to document exemptions for every process change.

MTI, Nampa facility has implemented an extensive system for tracking raw materials used at the facility. This system, which is based on the MSDS for each raw material, will enable MTI to track chemicals by CAS number and common name. Some raw materials result in emissions of substances listed at IDAPA 58.01.01.585 and 586.

The permit includes a requirement to monitor and record monthly average hourly toxic air pollutant emissions estimates and a method for demonstrating on-going compliance with TAP standards. The compliance demonstration method included in the permit allows MTI to increase TAP emissions up to the respective AAC or AACC for each TAP by:

1. Using the equations in the permit to determine the hourly emissions rate (E_{ia}) that results in an ambient concentration of 80% of the AAC or AACC. The equations in the permit use a Chi/Q value developed through conservative modeling presented in the permit application that predicts the ambient impact of a one pound per hour emissions rate for either a 24-hour averaging period ($CQ_{24\text{-}hr}$) or an annual averaging period (CQ_{annual}).
2. If the monthly average emissions rate increase (E_i) exceeds the hourly emissions rate from the respective E_{ia} equation that is equal to 80% of the AAC or AACC, then MTI must conduct refined modeling to demonstrate compliance with the respective AAC or AACC. MTI determines the monthly average emissions rate increase (E_i) by: (1) summing the total usage of that pollutant for the month, (2) dividing by the hours of operation, and, (3) if included in the permit, subtracting the maximum hourly emissions rate from four recent calendar years (2007-2009), which is identified as the baseline hourly emission rate (M_u).

Changes that result in calculated emissions that exceed 80% of the AAC/AACC are not violations provided that MTI can demonstrate, through the appropriate modeling analysis, that the ambient concentrations remain less than the AAC/AACC.

NSPS Boiler Permit Conditions

Currently, three existing 8.37 MMBtu/hr boilers and one 8.17 MMBtu/hr are on site. Should a new boiler be installed, and is rated between 10 and 29 MMBtu/hr it will be an NSPS Subpart Dc affected unit and MTI will need to comply with the recordkeeping, reporting, and notification requirements of Subpart Dc.

Emergency Stationary CI Engines

The MTI facility currently has two existing emergency diesel generator units. These units have rated capacities ranging of 1490 and 2220 horsepower (HP). This equipment usually burns ASTM no. 2 diesel fuel oil, but no. 1 diesel can be used during cold weather to prevent the fuel from gelling. The sulfur content in the fuel must be 15 ppm (0.0015%). One additional generator is proposed in the Growth Component of the FEC permit in the application. This generator was also proposed in the 2006 PTC but was not installed during the previous permit term. In the application, the proposed generator unit is to be installed at the site with a capacity of 2220 and will be using distillate fuel oil (no. 1 or 2 or mixed). Emission Factors for the proposed generator were taken from Table 2 to NSPS Subpart IIII.

The permit requires MTI to monitor and record the hours of operation of each generator because that information is used to calculate annual emissions for the FEC compliance demonstration. The hours of operation are multiplied by emissions factors to determine monthly and annual estimated emissions. MTI provided in the application the manufacturer specifications for the existing generator units.

The existing CI engine generators are subject to 40 CFR 63, Subpart ZZZZ (National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.) The requirements of Subpart ZZZZ are included in the permit.

Additionally, the proposed generator is subject to 40 CFR 60, Subpart IIII (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.) The requirements of this subpart are included in the permit.

Tier II Permit to Operate Cover page, Facility-wide conditions, and General Provisions

DEQ included a NAICS (North America Industry Classification System) code on the cover page of this permit to reflect changes that have been made to DEQ's combo Tier II operating permit and Permit to Construct template. The NAICS code for this facility is 334413, *Semiconductor and Related Device Manufacturing.*

Also, the most updated Tier II operating permit Facility-wide conditions and Tier II permit to operate General Provisions are included in this permit.

PUBLIC REVIEW

Public Comment Opportunity

This permitting action does not result in increase in emissions, an opportunity for public comment period was not required or provided in accordance with IDAPA 58.01.01.209.04 or IDAPA 58.01.01.404.04.

APPENDIX A – EMISSIONS INVENTORIES

Table A-1: Emission Factors, Unit Ratings, and Resulting Per-Unit Emission Rates

Boilers (AP-42 Natural gas combustion emission factors, Tables 1.4-1 and 1.4-2)												
Quantity	**Assumptions**		**NOx**		**CO**		**SO2**		**PM10**		**VOC**	
3 Kewanee L3W-200-G	8.37	MMBtu/hr	100	lb/MMscf	84	lb/MMscf	0.60	lb/MMscf	7.6	lb/MMscf	5.50	lb/MMscf
	8,760	hr/yr	3.5	T/yr	2.9	T/yr	0.021	T/yr	0.27	T/yr	0.192	T/yr
	1,050	Btu/scf	0.8	lb/hr	0.7	lb/hr	0.005	lb/hr	0.061	lb/hr	0.044	lb/hr
1 Cleaver-Brooks ICB 700-200-125W	8.165	MMBtu/hr	100	lb/MMscf	84	lb/MMscf	0.60	lb/MMcf	7.6	lb/MMcf	5.50	lb/MMscf
	8,760	hr/yr	3.41	T/yr	2.86	T/yr	0.020	T/yr	0.26	T/yr	0.19	T/yr
	1,050	Btu/scf	0.8	lb/hr	0.7	lb/hr	0.005	lb/hr	0.059	lb/hr	0.043	lb/hr
Generators (Manufacturer-supplied for NOx, CO PM10 and VOC; AP-42 Large stationary diesel engines, Table 3.4-1 for SO2)												
Quantity	**Assumptions**		**NOx**		**CO**		**SO2**		**PM10**		**VOC**	
1 Cummins QST30-G4	1,490	hp	7.58	g/hp-hr	0.2	g/hp-hr	1.21E-06	lb/bhp-hr	0.08	g/hp-hr	0.19	g/hp-hr
	200	hr/yr	2.488	T/yr	0.069	T/yr	0.0002	T/yr	0.026	T/yr	0.062	T/yr
	0.015%	Sulfur	24.9	lb/hr	0.7	lb/hr	0.002	lb/hr	0.3	lb/hr	0.6	lb/hr
1 Cummins KTA50-G9	2,220	hp	8.5	g/hp-hr	1.3	lb/bhp-hr	1.21E-06	lb/bhp-hr	0.11	g/hp-hr	0.17	g/hp-hr
	200	hr/yr	4.156	T/yr	0.636	T/yr	0.0003	T/yr	0.054	T/yr	0.083	T/yr
	0.015%	Sulfur	41.6	lb/hr	6.4	lb/hr	0.003	lb/hr	0.5	lb/hr	0.8	lb/hr
1 Proposed	2,220	hp	6.9	g/hp-hr	8.5	g/hp-hr	1.21E-06	lb/bhp-hr	0.4	g/hp-hr	1.0	g/hp-hr
	200	hr/yr	3.374	T/yr	4.156	T/yr	0.0003	T/yr	0.196	T/yr	0.489	T/yr
	0.015%	Sulfur	33.7	lb/hr	41.6	lb/hr	0.003	lb/hr	2.0	lb/hr	4.9	lb/hr

Table A-1: Emission Factors, Unit Ratings, and Resulting Per-Unit Emission Rates

VOC Unit (AP-42 Natural gas combustion emission factors, Tables 1.4-1 and 1.4-2)

Quantity	Assumptions		NOx		CO		SO2		PM10		VOC	
2	2.0	MMBtu/hr	100	lb/MMscf	84	lb/MMscf	0.57	lb/MMscf	7.6	lb/MMscf	5.50	lb/MMscf
	8,760	hr/yr	50.0	lb/MMBtu	42.0	lb/MMBtu	0.285	lb/MMBtu	3.80	lb/MMBtu	2.75	lb/MMBtu
	1,000	Btu/scf	0.876	T/yr	0.736	T/yr	0.005	T/yr	0.067	T/yr	0.048	T/yr
	0.002	MMscf/hr	0.200	lb/hr	0.168	lb/hr	0.001	lb/hr	0.015	lb/hr	0.011	lb/hr

Cooling Towers (AP-42 Wet cooling towers, Section 13.4)

Quantity	Assumptions		NOx		CO		SO2		PM10		VOC	
3 (six stacks each)	1,150	gal H2O/min							750	ppm TDS		
	8.34	lb/gal H2O							0.02%	drift loss		
	8,760	hr/yr							0.378	T/yr		
									0.086	lb/hr		
Quantity	**Assumptions**		**NOx**		**CO**		**SO2**		**PM10**		**VOC**	
2 (two stacks each)	1,694	gal H2O/min							750.0	ppm TDS		
	8.34	lb/gal H2O							0.001%	drift loss		
	8,760	hr/yr							0.028	T/yr		
									0.006	lb/hr		
Quantity	**Assumptions**		**NOx**		**CO**		**SO2**		**PM10**		**VOC**	
1 (Proposed two stacks)	1,694	gal H2O/min							750.0	ppm TDS		
	8.34	lb/gal H2O							0.001%	drift loss		
	8,760	hr/yr							0.028	T/yr		
									0.006	lb/hr		

Table A-1: Emission Factors, Unit Ratings, and Resulting Per-Unit Emission Rates												
Manufacturing												
	Assumptions		**NOx**		**CO**		**SO2**		**PM10**		**VOC**	
	Tracking System								0.17	T/yr	5	T/yr
	8,760	hr/yr							0.039	lb/hr	1.142	lb/hr

Table B-1: Maximum annual IDAPA 585/586 emission rates

CAS No.	Material	Emission Rate (lb/yr)	Emission Rate (lb/hr)	IDAPA EL (lb/hr)	Over EL ?	Percent of EL
7722-84-1	HYDROGEN PEROXIDE	602.7	6.9E-02	0.1	No	69
101-68-8	METHYLENE BISPHENYL ISOCYANATE	7.4	8.5E-04	0.003	No	28
7664-41-7	AMMONIA	1580.6	0.18	1.2	No	15
7664-39-3	HYDROFLUORIC ACID	49.0	5.6E-03	0.167	No	3
7697-37-2	NITRIC ACID	74.3	8.5E-03	0.333	No	3
7664-38-2	PHOSPHORIC ACID	13.7	1.6E-03	0.067	No	2
123-91-1	1,4-DIOXANE	0.8	8.9E-05	0.0048	No	2
7664-93-9	SULFURIC ACID	9.9	1.1E-03	0.067	No	2
67-63-0	ISOPROPANOL	9332.1	1.07	65.3	No	2
108-65-6	1-METHOXY-2-PROPANOL ACETATE	3073.4	0.35	24	No	1
75-21-8	ETHYLENE OXIDE	8.3E-03	9.5E-07	0.000067	No	1
111-42-2	DIETHANOLAMINE	118.7	1.4E-02	1	No	1
67-64-1	ACETONE	13110.0	1.50	119	No	1
7647-01-0	HYDROCHLORIC ACID	4.4	5.1E-04	0.05	No	1
64-19-7	ACETIC ACID	47.9	5.5E-03	1.67	No	0
7783-54-2	NITROGEN TRIFLUORIDE	37.4	4.3E-03	1.93	No	0
50-00-0	FORMALDEHYDE	8.0E-03	9.1E-07	0.00051	No	0
108-94-1	CYCLOHEXANONE	84.2	9.6E-03	6.67	No	0
1330-20-7	XYLENE	197.1	2.3E-02	29	No	0
7782-50-5	CHLORINE	1.0	1.1E-04	0.2	No	0
64-17-5	ETHANOL	217.7	2.5E-02	125	No	0
123-42-2	DIACETONE ALCOHOL	13.3	1.5E-03	16	No	0
109-99-9	TETRAHYDROFURAN	16.1	1.8E-03	39.3	No	0
128-37-0	BHT	0.2	2.5E-05	0.667	No	0
108-88-3	TOLUENE	7.6	8.7E-04	25	No	0
78-93-3	METHYL ETHYL KETONE	8.9	1.0E-03	39.3	No	0
71-36-3	1-BUTANOL	1.9	2.2E-04	10	No	0
71-43-2	BENZENE	1.1E-04	1.3E-08	0.0008	No	0
1344-28-1	ALUMINUM OXIDE	8.6E-02	9.9E-06	0.667	No	0
137-26-8	THIRAM	3.8E-02	4.4E-06	0.333	No	0
111-76-2	2-BUTOXY ETHANOL	0.8	9.0E-05	8	No	0
108-05-4	VINYL ACETATE	0.2	2.4E-05	2.3	No	0
67-56-1	METHANOL	1.4	1.6E-04	17.3	No	0
107-98-2	2-PROPANOL, 1-METHOXY-	1.8	2.1E-04	24	No	0
8052-41-3	STODDARD SOLVENT	2.4	2.7E-04	35	No	0

CAS No.	Material	Emission Rate (lb/yr)	Emission Rate (lb/hr)	IDAPA EL (lb/hr)	Over EL ?	Percent of EL
107-87-9	2-PENTANONE	3.0	3.4E-04	46.7	No	0
100-41-4	ETHYLBENZENE	1.7	2.0E-04	29	No	0
110-54-3	HEXANE	0.7	7.8E-05	12	No	0
80-62-6	METHYL METHACRYLATE	1.5	1.7E-04	27.3	No	0
110-43-0	2-HEPTANONE	0.8	9.3E-05	15.7	No	0
141-43-5	2-AMINOETHANOL	2.7E-02	3.0E-06	0.533	No	0
108-10-1	METHYL ISOBUTYL KETONE	0.5	6.0E-05	13.7	No	0
142-82-5	HEPTANE	4.1	4.6E-04	109	No	0
107-15-3	1,2-ETHANEDIAMINE	5.4E-02	6.2E-06	1.67	No	0
1319-77-3	CRESOL (MIXED ISOMERS)	4.7E-02	5.4E-06	1.47	No	0
141-78-6	ETHYL ACETATE	2.3	2.6E-04	93.3	No	0
628-63-7	ACETIC ACID, PENTYL ESTER	0.9	9.8E-05	35.3	No	0
98-00-0	2-FURANMETHANOL	4.6E-02	5.3E-06	2.67	No	0
34590-94-8	DIPROPYLENE GLYCOL METHYL ETHER	0.4	4.1E-05	40	No	0
108-87-2	METHYLCYCLOHEXANE	0.5	6.0E-05	107	No	0
123-86-4	ACETIC ACID, BUTYL ESTER	0.1	1.5E-05	47.3	No	0
75-56-9	PROPYLENE OXIDE	8.3E-03	9.5E-07	3.2	No	0
79-09-4	PROPONIC ACID	4.4E-03	5.0E-07	2	No	0
106-89-8	EPICHLOROHYDRIN	4.4E-07	5.0E-11	0.0056	No	0
105-60-2	CAPROLACTAM	0.0E+00	0.0E+00	1.33	No	0
107-21-1	ETHYLENE GLYCOL	0.0E+00	0.0E+00	0.846	No	0
108-03-2	1-NITROPROPANE	0.0E+00	0.0E+00	6	No	0
118-52-5	1,3-DICHLORO-5,5 DIMETHYLHYDANTOIN	0.0E+00	0.0E+00	0.013	No	0
12125-02-9	AMMONIUM CHLORIDE	0.0E+00	0.0E+00	0.667	No	0
123-31-9	HYDROQUINONE	0.0E+00	0.0E+00	0.133	No	0
1303-96-4	BORAX	0.0E+00	0.0E+00	0.067	No	0
1305-62-0	CALCIUM HYDROXIDE	0.0E+00	0.0E+00	0.333	No	0
1305-78-8	CALCIUM OXIDE	0.0E+00	0.0E+00	0.133	No	0
1309-37-1	FERRIC OXIDE	0.0E+00	0.0E+00	0.333	No	0
1309-48-4	MAGNESIUM OXIDE	0.0E+00	0.0E+00	0.667	No	0
1310-58-3	POTASSIUM HYDROXIDE	0.0E+00	0.0E+00	0.133	No	0
1310-73-2	SODIUM HYDROXIDE	0.0E+00	0.0E+00	0.133	No	0
1314-13-2	ZINC OXIDE	0.0E+00	0.0E+00	0.333	No	0
1333-86-4	CARBON BLACK	0.0E+00	0.0E+00	0.23	No	0
141-32-2	BUTYL ACRYLATE	0.0E+00	0.0E+00	3.67	No	0
14464-46-1	CRYSTALLINE SILICA,	0.0E+00	0.0E+00	0.0033	No	0

CAS No.	Material	Emission Rate (lb/yr)	Emission Rate (lb/hr)	IDAPA EL (lb/hr)	Over EL ?	Percent of EL
	CRISTOBALITE					
14808-60-7	SAND	0.0E+00	0.0E+00	0.0067	No	0
2921-88-2	CHLORPYRIFOS	0.0E+00	0.0E+00	0.013	No	0
7429-90-5	ALUMINUM	0.0E+00	0.0E+00	0.667	No	0
7439-96-5	MANGANESE	0.0E+00	0.0E+00	0.333	No	0
7440-21-3	SILICON	0.0E+00	0.0E+00	0.667	No	0
7440-22-4	SILVER	0.0E+00	0.0E+00	0.001	No	0
7440-31-5	TIN	0.0E+00	0.0E+00	0.133	No	0
7440-36-0	ANTIMONY	0.0E+00	0.0E+00	0.033	No	0
7440-39-3	BARIUM	0.0E+00	0.0E+00	0.033	No	0
7440-50-8	COPPER	0.0E+00	0.0E+00	0.067	No	0
7681-57-4	SODIUM METABISULFITE	0.0E+00	0.0E+00	0.333	No	0
7723-14-0	PHOSPHORUS	0.0E+00	0.0E+00	0.007	No	0
79-41-4	2-PROPENOIC ACID, 2-METHYL-	0.0E+00	0.0E+00	4.67	No	0
91-20-3	NAPHTHALENE	0.0E+00	0.0E+00	3.33	No	0
94-36-0	BENZOYL PEROXIDE	0.0E+00	0.0E+00	0.333	No	0
7440-38-2	ARSENIC	0.0E+00	0.0E+00	0.0000015	No	0
75-07-0	ACETALDEHYDE	0.0E+00	0.0E+00	0.003	No	0

Email Correspondance between DEQ and Micron's consultant (Environ)

Hi Cheryl,

I see my mistake: I entered the ultra-low sulfur value wrong – a dumb mistake. Given that the maximum impacts from the whole facility are about 5% of the NAAQS, do we really need to re-model?

And have you completed your review of emission rates? I'd like to wait until all others are done, in case there are more corrections.

Bart

Bart Brashers, PhD | Atmospheric Scientist Senior Manager, ENVIRON | www.environcorp.com 19020 33rd Ave W Ste 310 | Lynnwood WA 98036 Voice: 425-412-1812 | Mobile: 206-550-2606 | bbrashers@environcorp.com

From: Cheryl.Robinson@deq.idaho.gov [mailto:Cheryl.Robinson@deq.idaho.gov] **Sent:** Wednesday, February 09, 2011 12:00 PM **To:** Bart Brashers **Cc:** Eric Hansen; Harbi.Elshafei@deq.idaho.gov **Subject:** Micron Nampa - Emergency Generator SO2 Emissions

Hi Bart/Eric:

Emissions from natural gas-fired units were done correctly, but the modeled SO_2 emissions from the emergency generators are unfortunately too low by a factor of 10. Could you provide revised ambient impact analyses for each of the SO_2 averaging periods?

Using the corrected emissions, the total SO2 emissions from all sources (baseline + growth) = 0.1 TPY. Because actual emissions were rounded up to the nearest whole number, no change is needed to the operational variability component.

		SO2 3hr (g/s)	SO2 24 hr (4 hr/day) (g/s)	SO2 8760 hr (200 hr/yr) (g/s)			
NGEN01	New EG - Max 2220 bhp (Emissions based on engine < 37 kW)	3.39E-04	5.66E-05	7.75E-06			
	Corrected value	3.39E-03	5.66E-04	7.75E-05			
GEN02	EG - 1490 bhp Cummins QST30-G4	2.28E-04	3.80E-05	5.20E-06			
	Corrected value	2.28E-03	3.80E-04	5.20E-05			
GEN03	EG - 2220 bhp Cummins KTA50-G9	3.39E-04	5.66E-05	7.75E-06			
	Corrected value	3.39E-03	5.66E-04	7.75E-05			
			%S	hp	hr/sec	g/lb	= g/sec
AP-42 Table 3.4.1: EXAMPLE	SOx = 8.09E-03 x S lb/hp-hr S = 15 ppm = 0.0015%	8.09E-03	0.0015	2220	1/3600	453.5924	3.39E-03

List of chemicals listed in IDAPA 58.01.01.585 and 586 that MTI's Nampa facility has emitted

Table B-1: Maximum annual IDAPA 585/586 emission rates

CAS No.	Material	Emission Rate (lb/yr)	Emission Rate (lb/hr)	IDAPA EL (lb/hr)	Over EL ?	Percent of EL
7722-84-1	HYDROGEN PEROXIDE	602.7	6.9E-02	0.1	No	69
101-68-8	METHYLENE BISPHENYL ISOCYANATE	7.4	8.5E-04	0.003	No	28
7664-41-7	AMMONIA	1580.6	0.18	1.2	No	15
7664-39-3	HYDROFLUORIC ACID	49.0	5.6E-03	0.167	No	3
7697-37-2	NITRIC ACID	74.3	8.5E-03	0.333	No	3
7664-38-2	PHOSPHORIC ACID	13.7	1.6E-03	0.067	No	2
123-91-1	1,4-DIOXANE	0.8	8.9E-05	0.0048	No	2
7664-93-9	SULFURIC ACID	9.9	1.1E-03	0.067	No	2
67-63-0	ISOPROPANOL	9332.1	1.07	65.3	No	2
108-65-6	1-METHOXY-2-PROPANOL ACETATE	3073.4	0.35	24	No	1
75-21-8	ETHYLENE OXIDE	8.3E-03	9.5E-07	0.000067	No	1
111-42-2	DIETHANOLAMINE	118.7	1.4E-02	1	No	1
67-64-1	ACETONE	13110.0	1.50	119	No	1
7647-01-0	HYDROCHLORIC ACID	4.4	5.1E-04	0.05	No	1
64-19-7	ACETIC ACID	47.9	5.5E-03	1.67	No	0
7783-54-2	NITROGEN TRIFLUORIDE	37.4	4.3E-03	1.93	No	0
50-00-0	FORMALDEHYDE	8.0E-03	9.1E-07	0.00051	No	0
108-94-1	CYCLOHEXANONE	84.2	9.6E-03	6.67	No	0
1330-20-7	XYLENE	197.1	2.3E-02	29	No	0
7782-50-5	CHLORINE	1.0	1.1E-04	0.2	No	0
64-17-5	ETHANOL	217.7	2.5E-02	125	No	0
123-42-2	DIACETONE ALCOHOL	13.3	1.5E-03	16	No	0
109-99-9	TETRAHYDROFURAN	16.1	1.8E-03	39.3	No	0
128-37-0	BHT	0.2	2.5E-05	0.667	No	0
108-88-3	TOLUENE	7.6	8.7E-04	25	No	0
78-93-3	METHYL ETHYL KETONE	8.9	1.0E-03	39.3	No	0
71-36-3	1-BUTANOL	1.9	2.2E-04	10	No	0
71-43-2	BENZENE	1.1E-04	1.3E-08	0.0008	No	0
1344-28-1	ALUMINUM OXIDE	8.6E-02	9.9E-06	0.667	No	0
137-26-8	THIRAM	3.8E-02	4.4E-06	0.333	No	0
111-76-2	2-BUTOXY ETHANOL	0.8	9.0E-05	8	No	0
108-05-4	VINYL ACETATE	0.2	2.4E-05	2.3	No	0
67-56-1	METHANOL	1.4	1.6E-04	17.3	No	0
107-98-2	2-PROPANOL, 1-METHOXY-	1.8	2.1E-04	24	No	0
8052-41-3	STODDARD SOLVENT	2.4	2.7E-04	35	No	0

Table 4-2: Proposed Generator IDAPA 585/586 Emissions

		Engine Size	2220	hp			24-Hour Chi/Q	7.78374	(µg/m³) / (lb/hr)		
		Max Operation	200	hr/yr			Annual Chi/Q	1.05352	(µg/m³) / (lb/hr)		
CAS Number	Pollutant	Emission Factor (lb / hp-hr)[a]	lb/hr	TPY	Screening Emission Level (lb/hr)	Over the Screening Emission Level?	Averaging Period	Maximum Predicted Impact (µg/m³)	IDAPA AACC (µg/m³)	Over AACC ?	% of AACC
106-99-0	1,3-Butadiene	2.74E-07	6.08E-04	6.08E-05	2.40E-05	Yes	Annual	2.53E-05	0.0036	No	0.7%
75-07-0	Acetaldehyde	5.37E-06	1.19E-02	1.19E-03	3.00E-03	Yes	Annual	3.16E-03	0.45	No	0.7%
107-02-8	Acrolein	6.48E-07	1.44E-03	1.44E-04	0.017		24-Hour				
71-43-2	Benzene	6.53E-06	1.45E-02	1.45E-03	8.00E-04	Yes	Annual	8.43E-04	0.12	No	0.7%
50-00-0	Formaldehyde	8.26E-06	1.83E-02	1.83E-03	5.10E-04	Yes	Annual	5.37E-04	0.077	No	0.7%
91-20-3	Naphthalene	5.94E-07	1.32E-03	1.32E-04	3.33		24-Hour				
78-87-5	Propylene Dichloride	1.81E-05	4.01E-02	4.01E-03	23.133		24-Hour				
108-88-3	Toluene	2.86E-06	6.36E-03	6.36E-04	25		24-Hour				
1330-20-7	Xylenes	2.00E-06	4.43E-03	4.43E-04	29		24-Hour				
	PAH Total	1.18E-08	2.61E-05	2.61E-06	9.10E-05		Annual				

(a) AP-42 Table 3.3-2 (10/96): Uncontrolled Diesel Engines, adjusted for 0.394 MMBtu/hr

APPENDIX B – AMBIENT AIR QUALITY IMPACT ANALYSES

MEMORANDUM

DATE: March 10, 2011

TO: Harbi Elshafei, Permit Engineer, Air Quality Division

FROM: Cheryl Robinson, P.E., Air Quality Engineer/Modeling Analyst, Air Quality Division

PROJECT: Permit No. T2-2010.0185, Project No. 60671

SUBJECT: **Facility ID No. 027-00095, Micron Technology, Inc., Nampa Modeling Review Convert PTC to Tier II Operating Permit & Facility Emission Cap (FEC) Renewal**

1.0 Summary

On December 20, 2010, the Department of Environmental Quality (DEQ) received a Tier II operating permit application to renew the permit to construct (PTC) FEC permit for Micron Technology, Inc.'s Nampa fabrication facility (MTI Nampa), to convert the PTC to a Tier II operating permit, and to standardize the permit language where possible to mimic the existing permit for MTI's Boise fabrication facility. Supplemental modeling information was received on February 8 and February 10, 2011.

Air quality analyses involving atmospheric dispersion modeling of emissions associated with the facility were performed to demonstrate the facility would not cause or significantly contribute to a violation of any ambient air quality standard (IDAPA 58.01.01.203.02 [Idaho Air Rules Section 203.02]) or Toxic Air Pollutant (TAP) increment (Idaho Air Rules Section 203.03). ENVIRON, MTI's consultant, performed the ambient air quality impact analyses.

A technical review of the submitted analyses was conducted by DEQ. The submitted analyses: 1) utilized appropriate methods and models; 2) were conducted using reasonably accurate or conservative model parameters and input data; 3) adhered to established DEQ guidelines for new source review dispersion modeling; 4) showed either a) that predicted pollutant concentrations from emissions associated with the facility were below significant contribution levels (SCLs) or other applicable regulatory thresholds; or b) that predicted pollutant concentrations from emissions associated with the facility, when appropriately combined with background concentrations, were below applicable air quality standards at all locations outside of the facility's property boundary. Key assumptions and results that should be considered in the development of the permit are shown in Table 1.

Table 1. KEY ASSUMPTIONS USED IN MODELING ANALYSES

Criteria/Assumption/Result	Explanation/Consideration
Continuous Operation Assumed Each of the four boilers (each ~ 8 MMBtu/hr), two of the three acid scrubbers, two 2 MMBtu/hr VOC/oxidizer units, three older cooling towers (each with 6 vents), three newer cooling towers (each with two vents), and manufacturing emissions of PM_{10} were modeled presuming continuous operation, i.e., 8,760 hours per year. Emergency Generators: Maximum of 4 hr/day and 200 hr/yr each for routine testing and maintenance.	Modeled impacts were based on continuous operations at rated equipment capacities. **Compliance with 1-hour NOx NAAQS was not demonstrated for this project. In consideration of that standard, however, it is strongly recommended that generators are not tested concurrently, avoid testing during inversion conditions, avoid testing during commuting rush hours, and are tested during daytime hours.**

Table 1. KEY ASSUMPTIONS USED IN MODELING ANALYSES	
Criteria/Assumption/Result	**Explanation/Consideration**
Combustion Source Fuel The four boilers and both VOC/oxidizer units are fueled by natural gas, exclusively. The emergency generators are fueled by ASTM No. 1, 2, or mix of No. 1 & No. 2 diesel, max. sulfur content 15 ppm (0.0015%).	The compliance demonstration for criteria pollutants and TAPs was based on using only natural gas fuel. The compliance demonstration for criteria pollutants and TAPs was based on these assumptions.
New Diesel Emergency Generator Emissions not to exceed those calculated using a maximum rating of 2220 bhp for EPA Tier 1 certified engine.	The compliance demonstration for criteria pollutants was based on these assumptions.
FEC Variation "Modeling": **Combustion (boiler) Operability Variation, CO, NO_x, and SO_2** 1-hr: 89.43 (BOI04); 3-hr: 58.40 (BOI04); 8-hr: 31.16 (BOI04); 24-hr: 17.47 (BOI01); Monthly: ----; Annual: 3.33 (BOI04) **Manufacturing Process Operability Variation, PM and TAPs** Chi/Q: 24-hr: 15.04 (FS01); Annual: 3.06 (FS01)	Boiler stacks BOI04 and BOI01 produce the highest ambient impacts per unit emission rate for CO, NO_x, and SO_2. Wet scrubber stack FS01 produces the highest ambient impacts per unit emission rate for PM and TAPs. Note: Not clear why application reports 24-hr Chi/Q = 15.70445.
FEC Limits (TPY) / PM_{10} / CO / NOx / SO_2 / VOC / Lead (lb/yr) Proposed: 11 / 26 / 26 / 6 / 53 / 60 Modeled: 12.9 / 140 / 46 / 5.1 / --- / 60 Recommended: 11 / 26 / 26 / **6** / 53 / **0.6**	The applicant rounded up the modeled value to the nearest TPY for SO_2. However, SO_2 impacts were less than 35% of the NAAQS for all averaging periods. Full impacts for lead (Chi/Q) based on emitting 60 lb/yr were about 40% of the air quality standard set based on inhalation. Actual lead emissions from the facility were reported to be 0.02 lb/yr. Because lead deposition onto soils and water from atmospheric releases can also produce negative impacts on human health and the environment, the permit writer may want to consider whether it is reasonable to authorize emissions at 3,000 times greater than the current emission rate.

2.0 Background Information

2.1 Applicable Air Quality Impact Limits and Modeling Requirements

This section identifies applicable ambient air quality limits and analyses used to demonstrate compliance for this facility located at 1401 N. Kings Road in Nampa, Idaho. Approximate UTM coordinates for this facility are 537.5 km Easting and 4827.2 km Northing, in UTM Zone 11.

2.1.1 Area Classification

The Micron Nampa facility is located within Canyon County which is designated as an attainment or unclassifiable area for carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone, particulate matter with an aerodynamic diameter less than or equal to 10 micrometers (PM_{10}) and 2.5 micrometers ($PM_{2.5}$), and sulfur oxides (SO_x). There are no Class I areas within 10 kilometers of this location.

2.1.2 Significant and Cumulative NAAQS Impact Analyses

If estimated maximum pollutant impacts to ambient air from the emissions sources associated with the existing unpermitted facility exceed the significant contribution levels (SCLs) of Section 006 of IDAPA 58.01.01, Rules for the Control of Air Pollution in Idaho (Idaho Air Rules), then a cumulative impact analysis is necessary to demonstrate compliance with National Ambient Air Quality Standards (NAAQS) and Idaho Air Rules Section 203.02 for Permits to Construct and Section 204.02 for Tier II Operating Permits. A cumulative NAAQS impact analysis for attainment area pollutants involves adding ambient impacts from facility-wide emissions, and emissions from any nearby co-contributing sources, to DEQ-

approved background concentration values that are appropriate for the criteria pollutant/averaging-time at the facility location and the area of significant impact. The resulting maximum pollutant concentrations in ambient air are then compared to the NAAQS listed in Table 2. The SCLs and the modeled value that must be used for comparison to the NAAQS are also listed in Table 2.

Table 2. APPLICABLE REGULATORY LIMITS

Pollutant	Averaging Period	Significant Contribution Levels[c] ($\mu g/m^3$)[d]	Regulatory Limit[e] ($\mu g/m^3$)	Modeled Value Used[h, i]
PM_{10}[a]	Annual	1.0[j]	50[f, j]	Maximum 1st highest
	24-hour	5.0	150[g]	Maximum 6th highest[k]
$PM_{2.5}$[b]	Annual	0.3[c]	15[f]	$PM_{2.5}$ –Maximum 1st high[l]
	24-hour	1.2[c]	35	$PM_{2.5}$ –Maximum 1st high[l]
Carbon monoxide (CO)	8-hour	500	10,000[g]	Maximum 2nd highest
	1-hour	2,000	40,000[g]	Maximum 2nd highest
Sulfur Dioxide (SO_2) *SO_2 is the indicator species for SOx*	Annual	1.0	80[f]	Maximum 1st highest
	24-hour	5	365[g]	Maximum 2nd highest
	3-hour	25	1,300[g]	Maximum 2nd highest
	1-hour[o]	EPA Interim: 3 ppb[n, p] (~7.8 $\mu g/m^3$)	0.075 ppm[o, p] (~195.5 $\mu g/m^3$)	Maximum 6th highest[o, p]
Nitrogen Dioxide (NO_2) *NO_2 is the indicator species for NOx*	Annual	1.0	100[f]	Maximum 1st highest
	1-hour[n]	EPA Interim: 4 ppb[n, p] (~7.5 $\mu g/m^3$)	0.100 ppm[n, p] (~188.7 $\mu g/m^3$)	Maximum 8th highest[n]
Lead (Pb)	Quarterly	NA	1.5[f]	Maximum 1st highest
	Rolling 3-month average	NA	0.15[f, m]	Maximum 1st highest

[a] Particulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers.

[b] Particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers.

[c] SCLs are defined in Idaho Air Rules Section 006. Class II $PM_{2.5}$ SCLs (signed 9/30/10, 75 FR 64864, October 20, 2010).

[d] Micrograms per cubic meter.

[e] Federal NAAQS (see 40 CFR 50) in effect as of July 1 of each year are incorporated by reference during the legislative session the following spring. See Idaho Air Rules Section 107.

[f] Never expected to be exceeded in any calendar year.

[g] Never expected to be exceeded more than once in any calendar year. The 3-hr and 24-hr SO_2 standards were revoked (see 75 FR 35520, June 22, 2010) but will remain in effect until one year after the effective date (~late 2012) of initial area designations for the new 1-hour SO_2 NAAQS (i.e., in effect until ~late 2013).

[h] Concentration at any modeled receptor.

[i] The maximum 1st highest modeled value is always used for significant impact analyses.

[j] The annual PM_{10} standard was revoked in 2006. The standard is still listed because compliance with the annual $PM_{2.5}$ standard, if justified by the applicant, may be demonstrated by a PM_{10} analysis that demonstrates compliance with the revoked PM_{10} standard.

[k] PM_{10} concentration at any modeled receptor when using five years of meteorological data. Use the maximum 2nd highest value for analyses with less than five years of meteorological data or one year of site-specific met data.

[l] $PM_{2.5}$ concentration at any modeled receptor when using a single year of site-specific meteorological data or a concatenated file with five years of meteorological data. EPA recommends using the high 8th high 3-year average monitored value for background, and using the highest 24-hr average and highest annual averages across five years of met data for the modeled result (Steven Page memo, Modeling Procedures for Demonstrating Compliance with $PM_{2.5}$ NAAQS, March 23, 2010).

[m] Pb: The EPA's October 15, 2008 standard became effective in Idaho's NSR program when it was incorporated by reference into the Idaho Air Rules, i.e., when the Idaho Legislature adjourned *sine die* on March 29, 2010.

[n] NO_2 concentration at any modeled receptor when using complete year(s) of site-specific met data or five consecutive years of meteorological data. Compliance is based on the 3-year average of the 98th percentile of the annual distribution of 1-hour average daily

Table 2. APPLICABLE REGULATORY LIMITS				
Pollutant	**Averaging Period**	**Significant Contribution Levels[c] ($\mu g/m^3$)[d]**	**Regulatory Limit[e] ($\mu g/m^3$)**	**Modeled Value Used[h, i]**
maximum concentrations. EPA Interim SIL, Page memo, dated June 29, 2010.				
[o] SO_2 concentration at any modeled receptor when using five consecutive years of meteorological data. Compliance is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. EPA Interim SIL, Page memo, dated August 23, 2010.				
[p] EPA's February 10, 2010 1-hour NO_2 standard (75 FR 6474) and June 22, 2010 1-hour SO_2 standard (75 FR 35520) will not be incorporated by reference (IBR'd) in Idaho's NSR program until the Idaho Legislature adjourns *sine die* in Spring 2011. Air quality permit applications submitted on or after January 3, 2011 must demonstrate compliance with these standards.				

EPA has asserted through a policy memorandum that compliance with $PM_{2.5}$ standards may be assured through an air quality analysis for the corresponding PM_{10} standard. Although the PM_{10} annual standard was revoked in 2006, compliance with the revoked PM_{10} annual standard may be demonstrated as a surrogate to the annual $PM_{2.5}$ standard. DEQ currently allows the use of the surrogate policy only for applications received before January 3, 2011 for which the permit is likely to be issued prior to the 2011 *sine die* adjournment of the Idaho legislature.

$PM_{2.5}$, 1-hour NO_2, and 1-hour SO_2 modeling will be required for this project if the permit is not issued before the legislature adjourns in 2011.

2.1.3 Toxic Air Pollutant Analyses

Emissions of toxic substances are generally addressed by Idaho Air Rules Section 161:

> *Any contaminant which is by its nature toxic to human or animal life or vegetation shall not be emitted in such quantities or concentrations as to alone, or in combination with other contaminants, injure or unreasonably affect human or animal life or vegetation.*

Permit requirements for toxic air pollutants (TAPs) from new or modified sources are specifically addressed by Idaho Air Rules Section 203.03 and require the applicant to demonstrate to the satisfaction of DEQ the following:

> *Using the methods provided in Section 210, the emissions of toxic air pollutants from the stationary source or modification would not injure or unreasonably affect human or animal life or vegetation as required by Section 161. Compliance with all applicable toxic air pollutant carcinogenic increments and toxic air pollutant non-carcinogenic increments will also demonstrate preconstruction compliance with Section 161 with regards to the pollutants listed in Sections 585 and 586.*

Per Section 210, if the emissions increase associated with a new source or modification exceeds screening emission levels (ELs) of Idaho Air Rules Section 585 or 586, then the ambient impact of the emissions increase must be estimated. If ambient impacts are less than applicable Acceptable Ambient Concentrations (AACs) for non-carcinogens of Idaho Air Rules Section 585 and Acceptable Ambient Concentrations for Carcinogens (AACCs) of Idaho Air Rules Section 586, then compliance with TAP requirements has been demonstrated.

2.2 Background Concentrations

Background concentrations are used in the cumulative NAAQS impact analyses to account for impacts from sources not explicitly modeled. Background concentrations were revised for all areas of Idaho by DEQ in March 2003[1]. Background concentrations in areas where no monitoring data are available were

[1] Hardy, Rick and Schilling, Kevin. *Background Concentrations for Use in New Source Review Dispersion Modeling*. Memorandum to Mary Anderson, March 14, 2003.

based on monitoring data from areas with similar population density, meteorology, and emissions sources. For this facility, DEQ recommended using monitoring data for PM_{10} and default suburban background concentrations for other pollutants, as shown in Table 3. As noted in DEQ's November 18, 2010 modeling protocol approval letter, these recommended background values include modeled impacts associated with emissions from the neighboring Amalgamated Sugar Company (TASCO) Nampa facility.

Table 3. BACKGROUND CONCENTRATIONS		
Pollutant	**Averaging Period**	**Background Concentration ($\mu g/m^3$)[a]**
PM_{10}[b]	24-hour	108
	Annual	29
Carbon monoxide (CO)	1-hour	18,000
	8-hour	5,600
Sulfur dioxide (SO_2)	3-hour	351
	24-hour	106
	Annual	20
Nitrogen dioxide (NO_2)	Annual	38
Lead (Pb)	Rolling 3-month average[c]	0.03

[a] Micrograms per cubic meter.
[b] Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers.
[c] Demonstration of compliance with this standard became required by the Idaho NSR program when the Idaho Legislature adjourned *sine die* on March 29, 2010.

3.0 Modeling Impact Assessment

3.1 Modeling Methodology

This section describes the modeling methods used by the applicant to demonstrate compliance with applicable air quality standards.

3.1.1 Overview of Analyses

ENVIRON performed the air quality analyses in support of the submitted permit application.. A brief description of parameters used in the modeling analyses is provided in Table 4.

Table 4. MODELING PARAMETERS		
Parameter	**Description/Values**	**Documentation/Addition Description**
Model	AERMOD	AERMOD with the PRIME downwash algorithm, version 090292
Meteorological data	2003-2007 Surface: Boise Upper Air: Boise	2003-2007 surface data and upper air collected at the Boise airport were obtained from online sources maintained by the National Climatic Data Center (NCDC) and the National Oceanic and Atmospheric Administration (NOAA). Surface characteristics were determined using AERSURFACE version 08009. Met data was processed using AERMET version 06341.
Terrain	Considered	Terrain elevations were assigned to buildings, emission sources, and receptors using AERMAP (version 09040) to extract elevations from a 1/3-arc second National Elevation Dataset (NED) file, datum NAD27. The horizontal spatial resolution for these data is about 10 meters. Default rural dispersion was used.
Building downwash	Considered	Downwash impacts were calculated using BPIP-PRIME.
Receptor Grid	Receptors	Receptor locations are defined in UTM (NAD27) coordinates.
	Fenceline Grid	Maximum 10-meter (m) spacing along the property boundary.
	Grid 1	25-meter spacing in a 1 km x 1 km grid centered on the facility
	Grid 2	200-meter spacing in a 5 km x 5 km grid centered on the facility
	Grid 3	500-meter spacing covering entire modeling domain

3.1.2 Modeling Protocol and Methodology

DEQ received a modeling protocol for this project on November 3, 2010, which was approved with comments on November 18, 2010. Modeling was generally conducted using methods described in the *State of Idaho Air Quality Modeling Guideline*.

3.1.3 Model Selection

Idaho Air Rules Section 202.02 requires that estimates of ambient concentrations be based on air quality models specified in 40 CFR 51, Appendix W (Guideline on Air Quality Models). The refined, steady state, multiple source, Gaussian dispersion model AERMOD was promulgated as the replacement model for ISCST3 in December 2005. EPA provided a one-year transition period during which either ISCST3 or AERMOD could be used at the discretion of the permitting agency. AERMOD must be used for all air impact analyses, performed in support of air quality permitting, conducted after November 2006.

AERMOD retains the single straight line trajectory of ISCST3, but includes more advanced algorithms to assess turbulent mixing processes in the planetary boundary layer for both convective and stable stratified layers. AERMOD offers the following improvements over ISCST3:

- Improved dispersion in the convective boundary layer and the stable boundary layer.
- Improved plume rise and buoyancy calculations.
- Improved treatment of terrain affects on dispersion.
- New vertical profiles of wind, turbulence, and temperature.

AERMOD was used for the submitted analyses for this project.

3.1.4 Meteorological Data

ENVIRON obtained and processed representative meteorological data for this project. Their approach is described in the application as follows: ENVIRON used a meteorological database constructed using available surface and upper air data for the dispersion modeling analysis. The meteorological data set were prepared using surface and upper air data observations obtained from Boise (KBOI). The five year period 2003-2007 was used.

The surface data was obtained from the National Climatic Data Center (NCDC) data set DS3505, "Integrated Surface Hourly (ISH)--worldwide stations."[2] The upper air data were collected from the National Oceanic and Atmospheric Administration (NOAA) Forecast Systems Laboratory Radiosonde Databases.[3]

EPA guidance indicates that three surface characteristics (albedo, Bowen ratio, and surface roughness) surrounding the meteorological data collection site should be used when applying AERMET to construct the meteorological profiles used by AERMOD. The AERSURFACE preprocessor (Version 08009) was used to ensure that realistic and reproducible surface characteristic values were provided to AERMET. AERSURFACE uses publicly available national land cover datasets and look-up tables of surface characteristics that vary by land cover type and season.[4] The USGS National Land Cover Data 1992 archive (NLCD92) for Idaho was obtained from the internet.[5]

In addition to the land cover data, AERSURFACE requires location and climatological information regarding the primary meteorological site. The following information was used to process seasonal surface parameters:

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[2] DS3505 data can be accessed at http://www.ncdc.noaa.gov/oa/climate/rcsg/datasets.html

[3] FSL can be accessed at http://raob.fsl.noaa.gov

[4] The AERMOD Implementation Guide (EPA, 2008) and the AERSURFACE User's Guide (EPA-454/6-08-001, January 2008)

[5] NLCD92 data can be accessed at http://landcover.usgs.gov

- The site was assumed to not have continuous snow cover for most of the winter. The average snow depth during winter (December - February) is less than one inch.[6] *AERSURFACE file surf_params.log shows that surface parameters were based on the presence of continuous snow cover for most of the winter.*

  Supplemental modeling results were submitted by ENVIRON on February 8, 2011 demonstrating that the change in the albedo associated with and without continuous snow cover during winter months made little difference in the modeled results. As shown in Table 5, selecting continuous snow cover in AERMET (as in the initially submitted analyses) produces the same or slightly higher maximum ambient impacts compared to the "no snow cover" option for surface meteorological data collected at the Boise airport.

Table 5. COMPARISON OF MODELED VALUES: AERMET PROCESSING WITH/WITHOUT SNOW COVER

Pollutant	Source Group	Averaging Period	Continuous Snow Cover?	Maximum Modeled Value ($\mu g/m^3$)	X	Y	Time (YY-MM-DD,End_hr)
SO_2	all	ANNUAL	Yes	3.89	537540.3	4827024.87	2006
SO_2	all	ANNUAL	No	3.86	537540.3	4827024.87	2006
Comparison: Snow cover vs. No snow cover				*-0.82%*	*- no change -*	*- no change -*	*- no change -*
SO_2	all	24-HR	Yes	22.8	537758.74	4826932.46	03-01-20,24:00
SO_2	all	24-HR	No	22.7	537758.74	4826932.46	03-01-20,24:00
Comparison: Snow cover vs. No snow cover				*-0.84%*	*- no change -*	*- no change -*	*- no change -*
SO_2	all	03-HR	Yes	69.6	537758.74	4826932.46	03-07-24,06:00
SO_2	all	03-HR	No	69.6	537758.74	4826932.46	03-07-24,06:00
Comparison: Snow cover vs. No snow cover				*0.00%*	*- no change -*	*- no change -*	*- no change -*
PM_{10}	all	ANNUAL	Yes	8.62	537758.84	4826942.46	2007
PM_{10}	all	ANNUAL	No	8.61	537758.84	4826942.46	2007
Comparison: Snow cover vs. No snow cover				*-0.09%*	*- no change -*	*- no change -*	*- no change -*
PM_{10}	all	24-HR	Yes	38.9	537758.84	4826942.46	03-03-06,24:00
PM_{10}	all	24-HR	No	38.9	537758.84	4826942.46	03-03-06,24:00
Comparison: Snow cover vs. No snow cover				*0.00%*	*- no change -*	*- no change -*	*- no change -*
NO_x	all	ANNUAL	Yes	32.8	537540.3	4827024.87	2006
NO_x	all	ANNUAL	No	32.6	537540.3	4827024.87	2006
Comparison: Snow cover vs. No snow cover				*-0.51%*	*- no change -*	*- no change -*	*- no change -*
CO	all	08-HR	Yes	714	537758.74	4826932.46	05-12-06,08:00
CO	all	08-HR	No	708	537758.74	4826932.46	05-12-06,08:00
Comparison: Snow cover vs. No snow cover				*-0.89%*	*- no change -*	*- no change -*	*- no change -*
CO	all	01-HR	Yes	3,191	537759.12	4826972.45	06-10-21,06:00
CO	all	01-HR	No	3,191	537759.12	4826972.45	06-10-21,06:00
Comparison: Snow cover vs. No snow cover				*0.00%*	*- no change -*	*- no change -*	*- no change -*

- The site is located at an airport. *Boise Airport Terminal.*
- The site was assumed to not be located in an arid region. *This option affects only surface characteristics calculated for Shrubland (Class 51) and the Bare Rock/Sand/Clay (Class 31) categories in the NLCD92 data. The area within a 1-km radius of the Boise met tower, particularly south of the airport, is classed as shrubland. Boise's climate is considered semi-arid rather than arid.*

[6] Western U.S. Climate Historical Summaries can be accessed at http://www.wrcc.dri.edu

- The surface moisture condition at the site was assumed to be average. *DEQ reviewed NCDC precipitation data (annual water equivalent) for KBOI for the 30-year period from 1980 through 2009. The upper 30th percentile included annual values greater than or equal to 13.37 inches, the lower 30th percentile included annual values less than or equal to 9.92 inches. The average annual water equivalent for the years 2003 through 2007 was 11.1 inches. This value is within the "middle 40th percentile," and per EPA guidance,[7] the surface moisture condition during the modeled data period was correctly considered "average."*

DEQ reviewed the AERSURFACE and AERMET input and output files submitted with the application. AERSURFACE input parameters used included:

- The KBOI meteorological tower location was given as 43.567 degrees (North) latitude and -116.217 degrees longitude (Datum NAD83). The study center was located at:
  - Albers projection x-coordinate: -1613690,
  - Albers projection y-coordinate: 2458309, with
  - Rotation of Albers grid to true North (deg): 12.18889
- Study radius was equal to 1 kilometer. Surface roughness was varied by sector, using 30-degree sectors.

3.1.5 Terrain Effects

Terrain effects on dispersion were considered in these site-specific analyses. ENVIRON used AERMAP (version 09040) to extract building, emission source, and receptor elevations and determine the controlling hill height elevation from a National Elevation Dataset (NED)[8] digital elevation model (DEM) 1/3 arc-second (10-meter resolution) tiff file, datum NAD83. The modeling domain includes the area between 43.497 and 43.694 degrees latitude and -116.399 and -116.673 degrees longitude, shown in Figure 3-1. Default rural dispersion was used.

Figure 3-1. MODELING DOMAIN

[7] EPA 2008. AERSURFACE User's Guide, U.S. EPA, EPA-454/B-08-001, January 2008.
[8] NED data can be accessed at http://seamless.usgs.gov/

3.1.6 Facility Layout

The facility layout is shown in Figure 3-2 (Figure E-3 in the December 20, 2010 Micron application), showing the location of the modeled point sources. The location of the FEC modeling point source locations for CO, NOx, and SO_2 emissions (OPERVARI, same parameters as boiler BOI04) and PM_{10} emissions (OPERVARPM, same parameters as acid scrubber FS01), and BLDG1 and BLDG2 were added to the figure by DEQ.

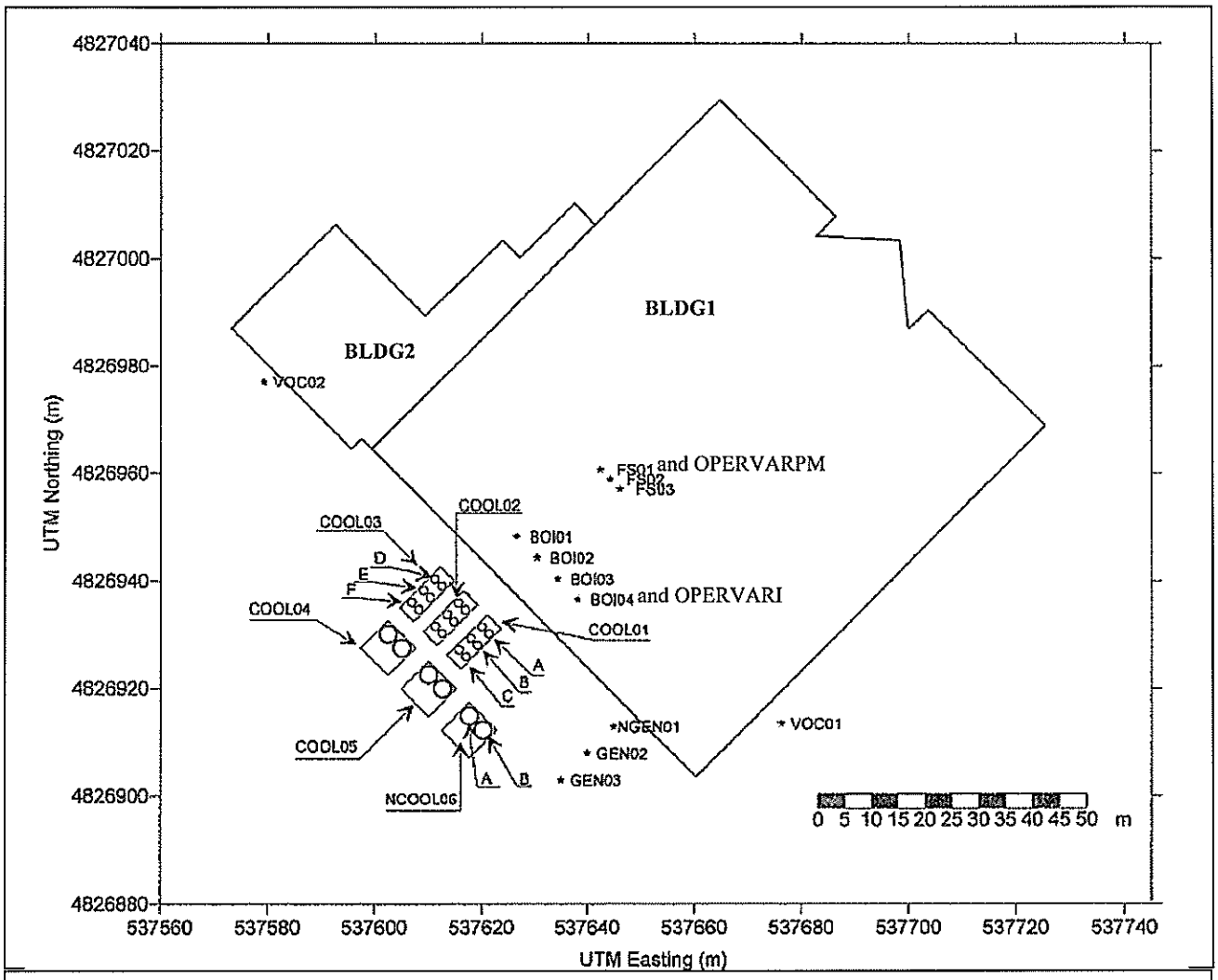

Figure 3-2. MICRON NAMPA FACILITY LAYOUT

3.1.7 Building Downwash

Building downwash effects were calculated using BPIP-PRIME. Building parameters taken from the submitted BPIP files are summarized in Table 6.

Table 6. BUILDING PARAMETERS						
Building ID	**Height (ft)**	**Length (ft)**	**Width (ft)**	**Base Elevation (m)**	**Easting (x, m)**	**Northing (y, m)**
BLDG1	32 (9.75 m)	Irregular shape	Irregular shape	777.6	537,599.39	4,826,964.52
					537,660.44	4,826,903.58
					537,725.48	4,826,968.86
					537,703.76	4,826,990.46
					537,700.02	4,826,986.96
					537,698.39	4,827,003.38
					537,682.72	4,827,004.17
					537,686.39	4,827,007.84
					537,664.74	4,827,029.44
BLDG2	20 (6.10 m)	Irregular shape	Irregular shape	777.6	537,599.39	4,826,964.52
					537,597.54	4,826,966.40
					537,595.55	4,826,964.53
					537,573.10	4,826,987.15
					537,592.58	4,827,006.30
					537,609.37	4,826,989.35
					537,623.95	4,827,003.44
					537,627.15	4,827,000.25
					537,637.55	4,827,010.26
					537,641.37	4,827,006.23
COOL01	16 (4.88 m)	12 (3.66 m)	12 (3.66 m)	777.6	537,621.06	4,826,933.80
					537,623.64	4,826,931.21
					537,616.10	4,826,923.67
					537,613.51	4,826,926.25
COOL02	16 (4.88 m)	12 (3.66 m)	12 (3.66 m)	777.6	537,616.64	4,826,938.21
					537,619.23	4,826,935.63
					537,611.69	4,826,928.08
					537,609.10	4,826,930.67
COOL03	16 (4.88 m)	12 (3.66 m)	12 (3.66 m)	777.6	537,612.23	4,826,942.63
					537,614.81	4,826,940.04
					537,607.27	4,826,932.50
					537,604.68	4,826,935.08
COOL04	16 (4.88 m)	24 (7.32 m)	24 (7.32 m)	777.6	537,617.69	4,826,917.50
					537,622.87	4,826,912.33
					537,617.69	4,826,907.16
					537,612.52	4,826,912.33
COOL05	16 (4.88 m)	24 (7.32 m)	24 (7.32 m)	777.6	537,610.08	4,826,925.11
					537,615.26	4,826,919.94
					537,610.08	4,826,914.77
					537,604.91	4,826,919.94
COOL06	16 (4.88 m)	24 (7.32 m)	24 (7.32 m)	777.6	537,602.47	4,826,932.72
					537,607.64	4,826,927.55
					537,602.47	4,826,922.38
					537,597.30	4,826,927.55

3.1.8 Ambient Air Boundary

Ambient air is defined in Section 006 of the Idaho Air Rules as "that portion of the atmosphere, external to buildings, to which the general public has access." For area sources, the ambient air boundary is typically defined as the property boundary. The "new" property boundary after the sale of a portion of the Micron Nampa property is shown in Figure 3-3 (Figure E-2 from the December 20, 2010 application). The new boundary was used as the ambient air boundary for the dispersion modeling.

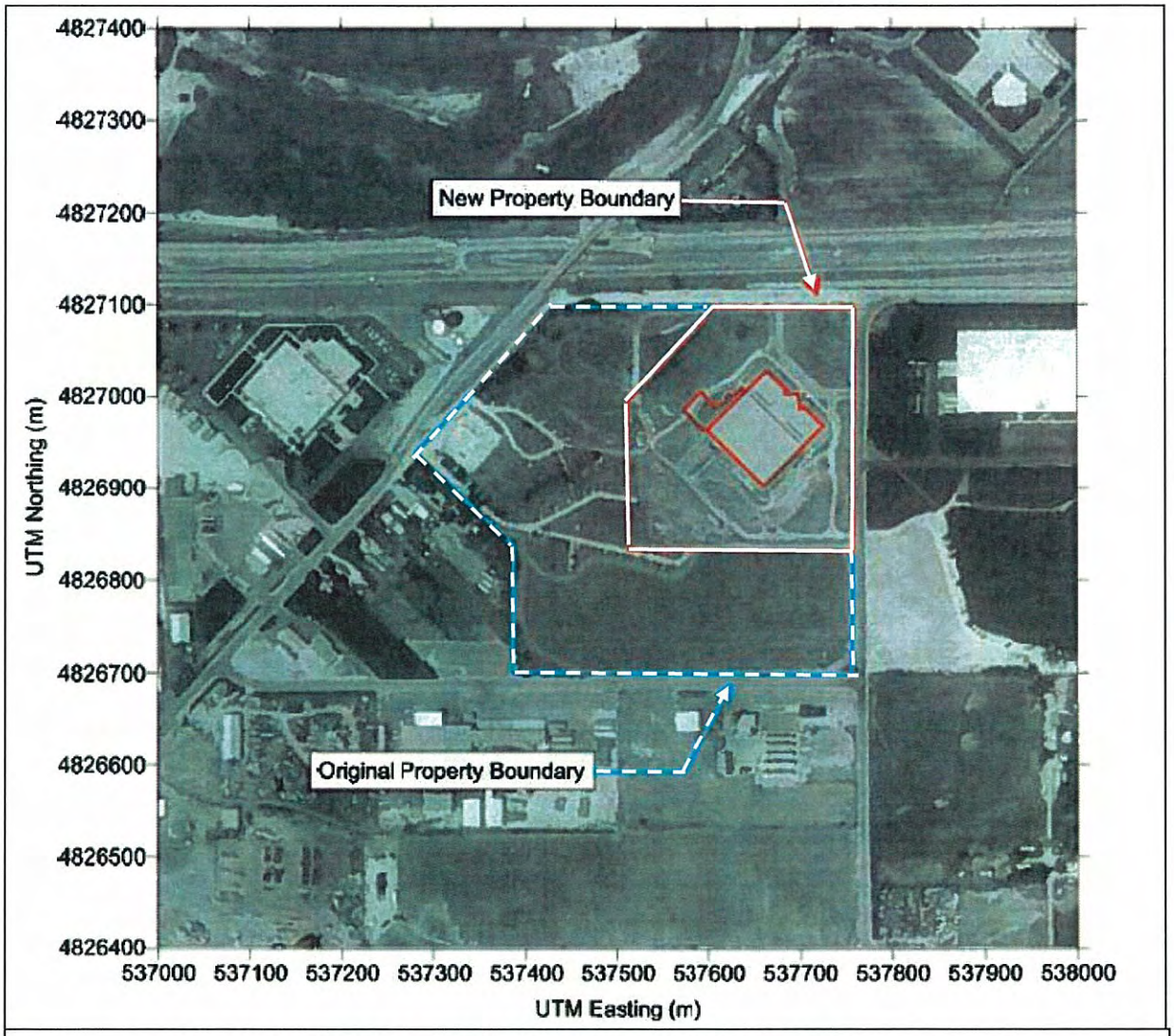

Figure 3-3. MICRON NAMPA "ORIGINAL" AND "NEW" AMBIENT AIR BOUNDARY

3.1.9 Receptor Network

The receptor grids spacing is described in Table 4. The receptor spacing for the current project is in accordance with the spacing recommended in the modeling protocol approval and is less than or equal to the maximum grid receptor spacing recommended in the *State of Idaho Air Quality Modeling Guideline*.

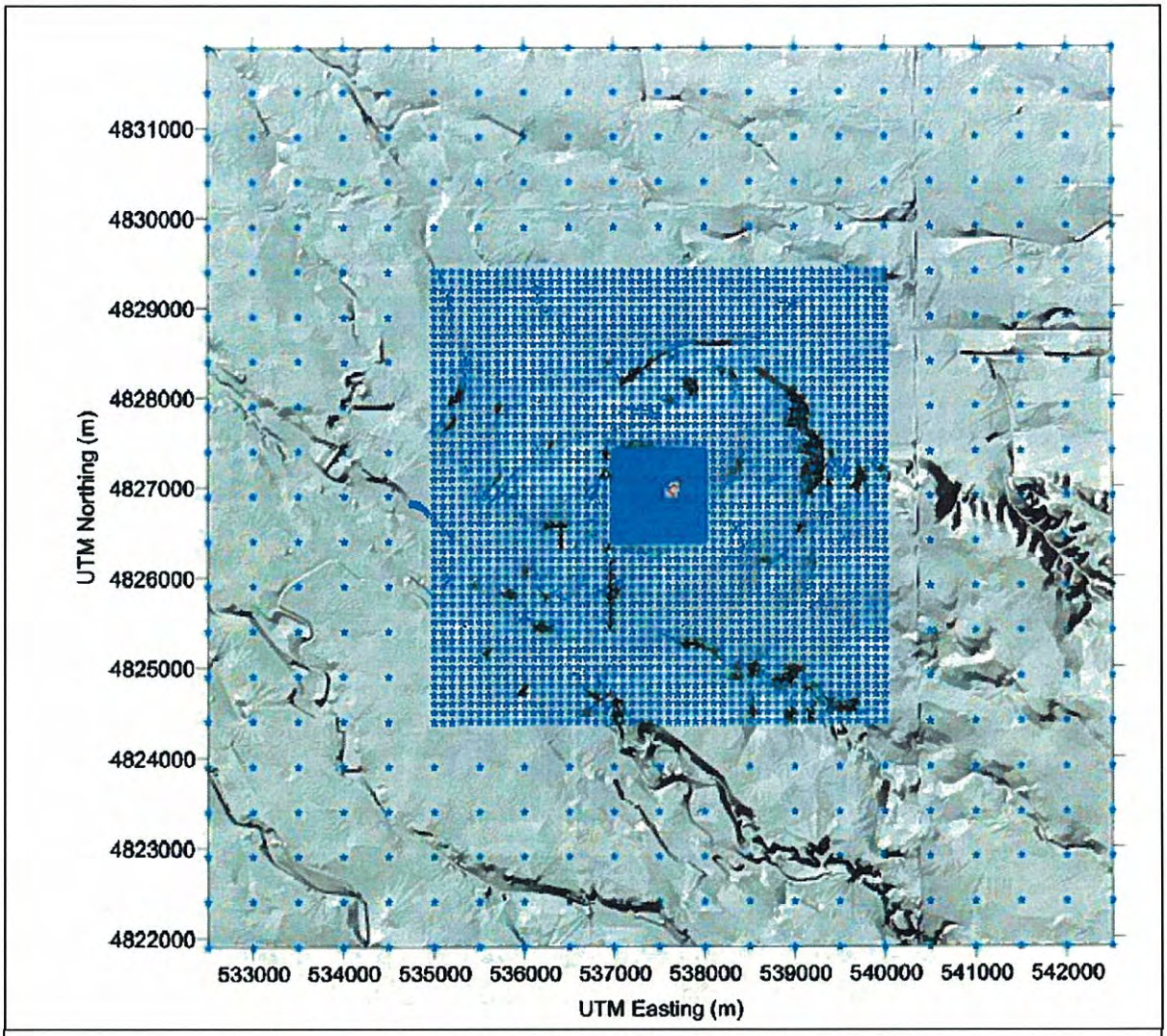

Figure 3-4. RECEPTOR GRID (Figure E-2 from the application)

3.2 Emission Release Parameters and Emission Rates

3.2.1 Emission Release Parameters

Point source release parameters were based on the existing configuration of the facility. Emission release parameters for all point sources are shown in Table 7.

The November 18, 2010 protocol approval letter from DEQ for this project noted "Historically, poor data have been submitted to DEQ for internal combustion engines (unrealistic release velocities and stack gas temperatures). In most cases, applicants have used values that were representative of conditions at the exhaust manifold rather than at the end of a stack Substantial cooling will occur through a muffler and exhaust stack, thereby reducing both temperature and actual flow. In general, release velocities from engines in excess of 50 *m/sec* will be considered suspect and DEQ may require more justification of values." As shown in Table 7, the submitted modeling used generator exit velocities well in excess of 50 m/sec, with no discussion or justification provided in the application. The maximum exit velocity for each generator was set to 50 m/sec in DEQ's verification modeling.

Table 7. EMISSION RELEASE PARAMETERS									
Source ID	Description	UTM Zone 11 (NAD27)		Base Elev. (m)	Stack Height (m)	Exit Temp. (K)	Exit Velocity (m/s)	Stack Dia. (m)	Stack Orient. [d]
		Easting X (m)	Northing Y (m)						
OPERVARI	FEC Stack: CO, NO_x, and SO_2 (same as BOI04)	537638.2	4826936.6	777.4	10.97 (36 ft)	520.93 (478°F)	5.19	0.55 (1.8 ft)	CAP
OPVARPM	FEC Stack for PM_{10} (same as FS01)	537642.5	4826960.7	777.6	14.94 (49 ft)	288.71 (60°F)	12.13	1.22 (4.0 ft)	Default
BOI01	8.37 MMBtu Boiler	537626.6	4826948.1	777.4	10.97 (36 ft)	520.93 (478°F)	6.99	0.55 (1.8 ft)	CAP
BOI02	8.37 MMBtu Boiler	537630.4	4826944.3	777.4	10.97 (36 ft)	520.93 (478°F)	6.99	0.55 (1.8 ft)	CAP
BOI03	8.37 MMBtu Boiler	537634.3	4826940.4	777.4	10.97 (36 ft)	520.93 (478°F)	6.99	0.55 (1.8 ft)	CAP
BOI04	8.165 MMBtu Boiler	537638.2	4826936.6	777.4	10.97 (36 ft)	520.93 (478°F)	5.19	0.55 (1.8 ft)	CAP
NGEN01	New EG, max 2220 bhp	537645	4826913	777.1	3.66 (12 ft)	735.93 (865°F)	115.78 **(50)**	0.22 (0.7 ft)[a]	Default
GEN02	Cummins QST30-G4, 1490 bhp	537640	4826908	777.1	3.66 (12 ft)	753.71 (897°F)	89.84 **(50)**	0.22 (0.7 ft)[a]	Default
GEN03	Cummins KTA50-G9, 2220 bhp	537635	4826903	776.9	3.66 (12 ft)	735.93 (865°F)	115.78 **(50)**	0.22 (0.7 ft)[a]	Default
FS01	Acid Scrubber 1	537642.5	4826960.7	777.6	14.94 (49 ft)	288.71 (60°F)	12.13	1.22 (4.0 ft)	Default
FS02	Acid Scrubber 2	537644.3	4826958.8	777.6	14.94 (49 ft)	288.71 (60°F)	12.13	1.22 (4.0 ft)	Default
FS03	Acid Scrubber - Standby (Not modeled)	---	---	---	---	---	---	---	Default
MANUF1	PM from Mfr Process (emitted from FS01)	537642.5	4826960.7	777.6	14.94 (49 ft)	288.71 (60°F)	12.13	1.22 (4.0 ft)	Default
MANUF2	PM from Mfr Process (emitted from FS02)	537644.3	4826958.8	777.6	14.94 (49 ft)	288.71 (60°F)	12.13	1.22 (4.0 ft)	Default
VOC01	VOC Oxidizer	537676.3	4826913.6	777.1	3.66 (12 ft)	510.93 (460°F)	6.47	0.3 (1.0 ft)	Default
VOC02	VOC Oxidizer	537579.2	4826977	777.2	3.66 (12 ft)	510.93 (460°F)	2.44	0.41 (1.3 ft)	Default
COOL01A	Cooling Tower 1, Exhst A (older tower) [b]	537620.1	4826931.5	777.3	4.88 (16 ft)	Ambient	16.14	1.22 (4.0 ft)	Default
COOL01B	Cooling Tower 1, B	537617.9	4826929.4	777.3	4.88 (16 ft)	Ambient	16.14	1.22 (4.0 ft)	Default
COOL01C	Cooling Tower 1, C	537615.8	4826927.2	777.2	4.88 (16 ft)	Ambient	16.14	1.22 (4.0 ft)	Default
COOL01D	Cooling Tower 1, D	537621.4	4826930.2	777.3	4.88 (16 ft)	Ambient	16.14	1.22 (4.0 ft)	Default
COOL01E	Cooling Tower 1, E	537619.2	4826928.1	777.3	4.88 (16 ft)	Ambient	16.14	1.22 (4.0 ft)	Default
COOL01F	Cooling Tower 1, F	537617.1	4826925.9	777.2	4.88 (16 ft)	Ambient	16.14	1.22 (4.0 ft)	Default
COOL02A	Cooling Tower 2, Exhst A (older tower) [b]	537615.7	4826936	777.3	4.88 (16 ft)	Ambient	16.14	1.22 (4.0 ft)	Default
COOL02B	Cooling Tower 2, B	537613.5	4826933.8	777.3	4.88 (16 ft)	Ambient	16.14	1.22 (4.0 ft)	Default

Table 7. EMISSION RELEASE PARAMETERS									
Source ID	Description	UTM Zone 11 (NAD27)		Base Elev. (m)	Stack Height (m)	Exit Temp. (K)	Exit Velocity (m/s)	Stack Dia. (m)	Stack Orient. [d]
		Easting X (m)	Northing Y (m)						
COOL02C	Cooling Tower 2, C	537611.4	4826931.6	777.2	4.88 (16 ft)	Ambient	16.14	1.22 (4.0 ft)	Default
COOL02D	Cooling Tower 2, D	537617	4826934.7	777.3	4.88 (16 ft)	Ambient	16.14	1.22 (4.0 ft)	Default
COOL02E	Cooling Tower 2, E	537614.8	4826932.5	777.3	4.88 (16 ft)	Ambient	16.14	1.22 (4.0 ft)	Default
COOL02F	Cooling Tower 2, F	537612.7	4826930.3	777.2	4.88 (16 ft)	Ambient	16.14	1.22 (4.0 ft)	Default
COOL03A	Cooling Tower 3, Exhst A (older tower) [b]	537611.3	4826940.4	777.3	4.88 (16 ft)	Ambient	16.14	1.22 (4.0 ft)	Default
COOL03B	Cooling Tower 3, B	537609.1	4826938.2	777.3	4.88 (16 ft)	Ambient	16.14	1.22 (4.0 ft)	Default
COOL03C	Cooling Tower 3, C	537606.9	4826936.1	777.2	4.88 (16 ft)	Ambient	16.14	1.22 (4.0 ft)	Default
COOL03D	Cooling Tower 3, D	537612.6	4826939.1	777.3	4.88 (16 ft)	Ambient	16.14	1.22 (4.0 ft)	Default
COOL03E	Cooling Tower 3, E	537610.4	4826936.9	777.3	4.88 (16 ft)	Ambient	16.14	1.22 (4.0 ft)	Default
COOL03F	Cooling Tower 3, F	537608.2	4826934.8	777.2	4.88 (16 ft)	Ambient	16.14	1.22 (4.0 ft)	Default
COOL04A	Cooling Tower 4, Exhst A (newer tower) [c]	537602.5	4826930.1	777.1	6.71 (22 ft)	Ambient	11.19	3.35 (11 ft)	Default
COOL04B	Cooling Tower 4, B	537605.1	4826927.6	777.1	6.71 (22 ft)	Ambient	11.19	3.35 (11 ft)	Default
COOL05A	Cooling Tower 5, Exhst A (newer tower) [c]	537610.1	4826922.5	777.1	6.71 (22 ft)	Ambient	11.19	3.35 (11 ft)	Default
COOL05B	Cooling Tower 5, B	537612.7	4826919.9	777	6.71 (22 ft)	Ambient	11.19	3.35 (11 ft)	Default
NCOOL06A	Cooling Tower 6, Exhst A (proposed) [c]	537617.7	4826914.9	777	6.71 (22 ft)	Ambient	11.19	3.35 (11 ft)	Default
NCOOL06B	Cooling Tower 6, B	537620.3	4826912.3	776.9	6.71 (22 ft)	Ambient	11.19	3.35 (11 ft)	Default

[a] Two 0.5-ft diameter stacks, modeled as a single merged stack. 2 [¼ π(0.5)^2] = ¼ π(D_{merged})^2 D_{merged} = 0.707 ft
[b] Each older cooling tower has six 4-foot diameter exhausts.
[c] Each newer cooling tower has two 11-foot diameter exhausts.
[d] Default stack type is vertical and uncapped
m = meters, ft = feet
m/s = meters per second
K = Kelvin, °F = degrees Fahrenheit

3.2.2 Chi /Q Unit Emissions Modeling – Determination of "Worst-case" Stack Parameters

In order to reduce the recordkeeping burden,"worst-case" stack parameters were determined by modeling a unit emission rate of 1.0 lb/hr from each stack and identifying which stack or stack produced the highest off-site impacts. The ratio of the modeled concentration ("chi") and the emission rate ("Q") can then be used to estimate off-site impacts when emission rates are varied. The results of the submitted Chi over Q (Chi/Q) analyses are shown in Table 8.

Table 8. UNIT EMISSION RATE MODELING RESULTS (CHI/Q) AND WORST-CASE STACKS							
		Chi/Q ($\mu g/m^3$ per lb/hr)					
	Averaging Period:	**1-hr**	**3-hr**	**8-hr**	**24-hr**	**Monthly**	**Annual**
Source ID	**Description**						
BOI01	8.37 MMBtu Boiler	83.28	57.98	31.06	17.47	4.99	3.20
BOI02	8.37 MMBtu Boiler	81.55	58.37	29.92	17.04	4.96	3.13
BOI03	8.37 MMBtu Boiler	82.81	56.52	29.16	16.37	4.92	3.13
BOI04	8.165 MMBtu Boiler	89.43	58.40	31.16	16.85	5.43	3.33
Combustion (Boiler) Variation CO, NO_x, and SO_2 emissions		**89.43 (BOI04)**	**58.40 (BOI04)**	**31.16 (BOI04)**	**17.47 (BOI01)**	---	**3.33 (BOI04)**
VOC01	VOC Oxidizer	93.15	70.95	43.96	23.48	9.33	5.01
VOC02	VOC Oxidizer	158.6	110.2	82.06	68.43	27.63	16.93
- no oxidizer variability anticipated -		---	---	---	---	---	---
FS01	Acid Scrubber 1	54.14	36.81	29.21	15.04	4.78	3.06
FS02	Acid Scrubber 2	56.24	36.40	29.96	14.80	4.74	3.04
FS03	Acid Scrubber - Standby	58.09	36.38	30.78	14.81	4.76	3.01
Manufacturing Process Emissions PM and TAPs		---	---	---	**15.04 (FS01)**	---	**3.06 (FS01)**
NGEN01	New EG, max 2220 bhp	58.66	32.55	21.18	9.82	4.29	2.54
GEN02	Cummins QST30-G4, 1490 bhp	66.94	34.77	20.46	9.36	3.57	1.94
GEN03	Cummins KTA50-G9, 2220 bhp	56.23	30.09	16.37	8.61	2.45	1.14
- no generator variability anticipated -		---	---	---	---	---	---
COOL01A	Cooling Tower 1, A	98.17	59.08	33.08	18.67	6.04	3.68
COOL01B	Cooling Tower 1, B	275.2	129.6	78.18	34.92	8.86	4.78
COOL01C	Cooling Tower 1, C	273.3	136.9	80.76	38.58	9.17	5.32
COOL01D	Cooling Tower 1, D	97.57	58.52	32.77	18.58	6.06	3.68
COOL01E	Cooling Tower 1, E	272.8	128.7	79.44	34.91	8.94	4.81
COOL01F	Cooling Tower 1, F	270.6	134.8	82.03	37.98	9.31	5.27
COOL02A	Cooling Tower 2, A	96.54	59.48	33.68	17.90	5.92	3.61
COOL02B	Cooling Tower 2, B	282.9	143.0	83.19	39.68	9.18	5.08
COOL02C	Cooling Tower 2, C	282.2	144.0	79.84	40.77	9.17	5.14
COOL02D	Cooling Tower 2, D	97.63	59.79	33.60	18.26	5.97	3.64
COOL02E	Cooling Tower 2, E	280.7	140.9	82.02	39.10	9.15	5.20
COOL02F	Cooling Tower 2, F	279.6	141.9	78.79	40.12	9.18	5.28
COOL03A	Cooling Tower 3, A	95.01	60.09	34.37	17.98	5.75	3.52
COOL03B	Cooling Tower 3, B	289.9	150.6	77.53	41.68	7.62	4.29
COOL03C	Cooling Tower 3, C	290.6	151.4	79.67	42.98	7.67	4.37
COOL03D	Cooling Tower 3, D	96.02	58.91	34.18	18.00	5.81	3.55
COOL03E	Cooling Tower 3, E	287.9	148.3	86.12	41.08	9.11	4.82
COOL03F	Cooling Tower 3, F	288.2	149.2	82.39	42.33	9.09	4.92
COOL04A	Cooling Tower 4, A	182.3	130.2	65.10	33.55	13.25	6.06
COOL04B	Cooling Tower 4, B	176.3	85.69	56.25	32.27	13.08	5.94
COOL05A	Cooling Tower 5, A	166.8	84.54	58.06	30.40	12.62	5.70
COOL05B	Cooling Tower 5, B	166.8	83.75	59.08	31.22	12.50	5.57
NCOOL06A	Cooling Tower 6, A	173.6	81.92	60.95	33.04	12.02	5.34
NCOOL06B	Cooling Tower 6, B	176.1	83.35	61.86	34.05	12.01	5.33
Cooling Tower Operational Variability (PM, none anticipated)					42.98 (COOL03C)		6.06 (COOL04A)

3.2.3 Criteria Pollutant Emissions Rates

Criteria pollutant emission rates were comprised of three components: baseline emissions estimated from 2007, 2008, or 2009 annual emissions, proposed growth, and operational variability, as shown in Table 9 (adapted from Table A-2 in the application, with correct values shown in parentheses). The total modeled emissions from Table 9 are shown for comparison.

Table 9. COMPARISON OF TOTAL FEC AND MODELED EMISSIONS

	PM_{10} (TPY)	CO (TPY)	NO_x (TPY)	SO_2 (TPY)	VOC (TPY)	Lead (lb/yr)
Baseline Emissions (maximum of 2007, 2008, or 2009 annual emissions)						
Combustion Emissions	0.2	1.8	2.2	0.07 (0.09)[a]	5.9	4.0E-05
Manufacturing Emissions (site-wide)	0.2	---	---	---	5.0	0.02
Three Existing "Older" Cooling Towers	0.4	---	---	---	0.1	
Two Existing "Newer" Cooling Towers	0.03	---	---	---	---	---
Total Baseline	0.8	1.8	2.2	0.07 (0.09)[a]	11	0.02
Proposed Growth Component						
Manufacturing Emissions (site-wide)	3.0				8.9	---
One Emergency Generator	0.2	4.2	3.4	3.0E-04 (3.0E-03)[a]	0.5	---
One Cooling Tower	0.03	---	---	---	---	---
Total Growth Component	3.23	4.2	3.4		9.4	0.0
Operational Variability Component	7	20	20	5	32	60
Total FEC	**11**	**26**	**26**	**6**	**53**	**60**
Total Modeled Emissions	**12.9**	**140**	**46**	**5.1**	---	**60**[b]

[a] Emergency generator SO_2 emissions were revised to reflect 15 ppm fuel sulfur content, up from 1.5 ppm used in the submitted application.

[b] Ambient impact was determined using monthly Chi/Q of 4.78 $\mu g/m^3$ per lb/hr for the worst case scrubber (FS01). 60 lb/yr = 0.007 lb/hr, presuming emissions are emitted continuously throughout the year.

Criteria pollutant emission rates shown in Table 10 were estimated based on the following assumptions:

- Each of the four small boilers is fueled by natural gas. The three 8.37 MMBtu/hr boilers and the 8.165 MMBtu/hr boiler are each operated continuously, i.e., 24 hours per day and 8,760 hours per year.
- All emergency generators are electrically heated year-round to reduce startup times and startup emissions.
- Each emergency generator is operated a maximum of 4 hours per day and 200 hours per year for routine testing and maintenance.
- Existing emergency generators consist of a 1,490 bhp and a 2220 bhp Cummins engine generators. AP-42 Section 1.4 used for SO_2 emissions. Emissions of other pollutants were based on manufacturer specifications.
- The maximum rating of a new emergency generator will be 2220 bhp. Emissions were estimated using emission factors from Table 1 of 40 CFR 89 for an EPA Tier 1 certified engine generator rated at 560 kW or greater, although any new gen-set will be required to meet at least Tier 2 emission limits for large engine generators (shown in the table for comparison).
- Each of two 2 MMBtu/hr VOC treatment units (oxidizers) are fueled by natural gas.
- Water circulated through the cooling towers is maintained with a maximum total dissolved solids (TDS) concentration of 750 ppm. Worst-case emissions were modeled based on operating each of the three "older towers" at 1,150 gpm with air flows of 239,500 acfm and each of the two "newer" towers and one proposed new tower at 1,694 gpm and 418,800 acfm continuously, i.e., 24 hours per day and 8,760 hours per year. Drift loss was estimated at 0.02% of circulating water flow for the older towers and 0.001% for the newer towers.

Table 10. MODELED EMISSION RATES									
Source ID	Source Description	PM_{10}		CO		NO_x	SO_2		
		lb/hr, 24-hr avg.	lb/hr, annual avg.	lb/hr, 1-hr avg.	lb/hr, 8-hr avg.	lb/hr, annual avg.	lb/hr, 3-hr avg.	lb/hr, 24-hr avg.	lb/hr, annual avg.
OPERVARI	FEC Stack: CO, NO_x, and SO_2	---	---	4.57	4.57	4.57	1.14	1.14	1.14
OPVARPM	FEC Stack for PM_{10}	1.60	1.60	---	---	---	---	---	---
BOI01	8.37 MMBtu Boiler	0.061	0.061	0.67	0.67	0.80	4.78E-03	4.78E-03	4.78E-03
BOI02	8.37 MMBtu Boiler	0.061	0.061	0.67	0.67	0.80	4.78E-03	4.78E-03	4.78E-03
BOI03	8.37 MMBtu Boiler	0.061	0.061	0.67	0.67	0.80	4.78E-03	4.78E-03	4.78E-03
BOI04	8.165 MMBtu Boiler	0.059	0.059	0.65	0.65	0.78	4.67E-03	4.67E-03	4.67E-03
NGEN01	New, 2220 bhp, Tier 1 [b]	0.326	0.045	41.6	20.8	0.77	2.69E-02[a]	4.49E-03[a]	6.15E-04[a]
	40 CFR 89.112, Tier 2 [b]	*0.122*	*0.017*	*12.8*	*6.39*	*0.53*	---	---	---
GEN02	Cummins QST30-G4 1490 bhp	0.044	5.99E-03	0.69	0.34	0.57	1.81E-02[a]	3.02E-03[a]	4.13E-04[a]
GEN03	Cummins KTA50-G9 2220 bhp	0.090	1.23E-02	6.36	3.18	0.95	2.69E-02[a]	4.49E-03[a]	6.15E-04[a]
FS01	Acid Scrubber 1	1.94E-02	1.94E-02	---	---	---	---	---	---
FS02	Acid Scrubber 2	1.94E-02	1.94E-02	---	---	---	---	---	---
FS03	Acid Scrubber - Standby (Not modeled)	---	---	---	---	---	---	---	---
VOC01	VOC Oxidizer	1.52E-02	1.52E-02	0.17	0.17	0.20	1.14E-03	1.14E-03	1.14E-03
VOC02	VOC Oxidizer	1.52E-02	1.52E-02	0.17	0.17	0.20	1.14E-03	1.14E-03	1.14E-03
MANUF1	PM from Mfr Process	0.342	0.342	---	---	---	---	---	---
MANUF2	PM from Mfr Process	0.342	0.342	---	---	---	---	---	---
COOL01A	Cooling Tower 1, Exhst A (older tower)	1.44E-02	1.44E-02	---	---	---	---	---	---
COOL01B	Cooling Tower 1, B	1.44E-02	1.44E-02	---	---	---	---	---	---
COOL01C	Cooling Tower 1, C	1.44E-02	1.44E-02	---	---	---	---	---	---
COOL01D	Cooling Tower 1, D	1.44E-02	1.44E-02	---	---	---	---	---	---
COOL01E	Cooling Tower 1, E	1.44E-02	1.44E-02	---	---	---	---	---	---
COOL01F	Cooling Tower 1, F	1.44E-02	1.44E-02	---	---	---	---	---	---
COOL02A	Cooling Tower 2, Exhst A (older tower)	1.44E-02	1.44E-02	---	---	---	---	---	---
COOL02B	Cooling Tower 2, B	1.44E-02	1.44E-02	---	---	---	---	---	---
COOL02C	Cooling Tower 2, C	1.44E-02	1.44E-02	---	---	---	---	---	---
COOL02D	Cooling Tower 2, D	1.44E-02	1.44E-02	---	---	---	---	---	---
COOL02E	Cooling Tower 2, E	1.44E-02	1.44E-02	---	---	---	---	---	---
COOL02F	Cooling Tower 2, F	1.44E-02	1.44E-02	---	---	---	---	---	---
COOL03A	Cooling Tower 3, Exhst A (older tower)	1.44E-02	1.44E-02	---	---	---	---	---	---
COOL03B	Cooling Tower 3, B	1.44E-02	1.44E-02	---	---	---	---	---	---
COOL03C	Cooling Tower 3, C	1.44E-02	1.44E-02	---	---	---	---	---	---
COOL03D	Cooling Tower 3, D	1.44E-02	1.44E-02	---	---	---	---	---	---
COOL03E	Cooling Tower 3, E	1.44E-02	1.44E-02	---	---	---	---	---	---
COOL03F	Cooling Tower 3, F	1.44E-02	1.44E-02	---	---	---	---	---	---
COOL04A	Cooling Tower 4, Exhst A (newer tower)	3.18E-03	3.18E-03	---	---	---	---	---	---
COOL04B	Cooling Tower 4, B	3.18E-03	3.18E-03	---	---	---	---	---	---

Table 10. MODELED EMISSION RATES									
Source ID	Source Description	PM_{10}		CO		NO_x	SO_2		
		lb/hr, 24-hr avg.	lb/hr, annual avg.	lb/hr, 1-hr avg.	lb/hr, 8-hr avg.	lb/hr, annual avg.	lb/hr, 3-hr avg.	lb/hr, 24-hr avg.	lb/hr, annual avg.
COOL05A	Cooling Tower 5, Exhst A (newer tower)	3.18E-03	3.18E-03	---	---	---	---	---	---
COOL05B	Cooling Tower 5, B	3.18E-03	3.18E-03	---	---	---	---	---	---
NCOOL06A	Cooling Tower 6, Exhst A (proposed)	3.18E-03	3.18E-03	---	---	---	---	---	---
NCOOL06B	Cooling Tower 6, B	3.18E-03	3.18E-03	---	---	---	---	---	---
TOTALS									
Combustion Emissions		---	0.336 (1.5 TPY)	31.9 (140 TPY)	---	10.4 (46 TPY)	---	---	1.16 (5.1 TPY)
Manufacturing Emissions		---	2.32 (10.2 TPY)	---	---	---	---	---	---
Cooling Towers		---	0.28 (1.2 TPY)	---	---	---	---	---	---
Total		---	**12.9 TPY**	**140 TPY**	---	**46 TPY**	---	---	**5.1 TPY**

[a] Modeling received on December 20, 2010 inadvertently modeled SO_2 emissions at one-tenth the projected emission rate. Modeling results received on February 10, 2011 used the corrected values shown in this table.

[b] Emission rates for the new generator correctly used Table 1 of 40 CFR 89.112, except used emission factors for Tier 1 certified engines. Engines built after 2006 must meet Tier 2 emission limits.

3.2.4 TAPs Emissions Rates

For this project, the evaluation of impacts associated with TAPs emissions was limited to emissions from proposed or new units, i.e., the proposed 2220 bhp diesel emergency generator and the proposed new cooling tower. The applicant has asserted that no chromium-containing compounds are added to the water circulated through the cooling tower(s), and that no other TAPs might be emitted with the cooling tower mist. For the proposed emergency generator, the emissions of four TAPs were predicted to exceed the EL. Ambient impacts associated with TAPs emissions were determined using a 24-hour or annual Chi/Q value from the worst case scrubber (FS01). TAPs emission rates and estimated ambient impacts for these four TAPs are shown in Section 3.4 of this memo.

3.3 Results for Full-Impact Analyses

The results of the submitted full-impact analyses are shown in Table 11. Results from DEQ's verification analyses are shown in parentheses.

Table 11. RESULTS FOR FULL-IMPACT ANALYSES						
Pollutant	Averaging Period	Modeled Ambient Impact ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Total Ambient Impact ($\mu g/m^3$)	NAAQS ($\mu g/m^3$)	Percent of NAAQS
PM_{10}	24-hour	39 (24.5) [b]	108	147	150	98%
	Annual	9	29	38	50	75%
CO	1-hour	3,191	18,000	21,191	40,000	53%
	8-hour	714	5,600	6,314	10,000	63%
SO_2	3-hour	71 [a]	351	422	1,300	33%
	24-hour	23 [a]	106	129	365	35%

Table 11. RESULTS FOR FULL-IMPACT ANALYSES						
Pollutant	**Averaging Period**	**Modeled Ambient Impact ($\mu g/m^3$)**	**Background Concentration ($\mu g/m^3$)**	**Total Ambient Impact ($\mu g/m^3$)**	**NAAQS ($\mu g/m^3$)**	**Percent of NAAQS**
	Annual	4 [a]	20	24	80	30%
NO_x	Annual	25 (27) [b]	38	63 (65)	100	63% (65%)
Lead	Rolling 3-month average	0.03 [c]	0.03	0.06	0.15	40%

[a] From revised analyses received on February 10, 2011, using the correct generator fuel sulfur content.
[b] DEQ verification analyses set all generator exhaust velocities to a maximum of 50 m/sec.
[c] Monthly impact, not 3-month average. Determined as follows:
Chi/Q = 4.78 $\mu g/m^3$ per lb/hr x 0.007 lb/hr = 0.033 $\mu g/m^3$

3.4 Results for TAPs Analyses

Ambient impacts associated with TAPs emissions from the proposed emergency generator NGEN01 are summarized in Table 12. Ambient impacts were reportedly estimated in the application using the 24-hour and annual Chi/Q values for the existing similarly sized generator, GEN03, presuming an exit velocity of 115.78 m/sec. The values used to calculate the impacts, however, do not match the GEN03 modeling output, and it is unclear why the Chi/Q values produced for NGEN01 were not used.

	24-Hour	Annual
Submitted Chi/Q:	7.78374	1.05352
Chi/Q for GEN03 (model output)	8.61	1.14
Chi/Q for NGEN01 (model output)	9.82	2.54

The Chi/Q values estimated using exit velocities considerably in excess of 50 m/sec are somewhat suspect. DEQ did not rerun the generator Chi/Q values with generator exit velocities set to 50 m/sec because modeling was not actually required for these TAPs. The 24-hour and annual pound-per-hour average emissions are less than the applicable screening emission level (EL) if generator operations for routine maintenance and testing are limited to 4 hours per day and 200 hours per year.

Table 12. RESULTS FOR NEW EMERGENCY GENERATOR TAPS MODELING ANALYSES								
CAS No.	**Pollutant**	**Averaging Period**	**Emission Rate (lb/hr)**	**EL (lb/hr)**	**Exceeds EL?**	**Ambient Impact ($\mu g/m^3$)**	**AAC or AACC ($\mu g/m^3$)**	**Percent of AAC or AACC**
75-07-0	Acetaldehyde	Annual	1.19E-02 2.72E-04 [a]	3.0E-03	Yes No [a]	3.16E-03 --- [a]	0.45	0.7% --- [a]
71-43-2	Benzene	Annual	1.45E-03 3.31E-05 [a]	8.0E-04	Yes No [a]	8.43E-04 --- [a]	0.12	0.7% --- [a]
106-99-0	1,3-Butadiene	Annual	6.08E-04 1.39E-05 [a]	2.4E-05	Yes No [a]	2.53E-05 --- [a]	0.0036	0.7% --- [a]
50-00-0	Formaldehyde	Annual	1.83E-02 4.18E-04 [a]	5.1E-04	Yes No [a]	5.37E-04 --- [a]	0.077	0.7% --- [a]
107-02-8	Acrolein	24-hour	1.44E-03 2.40E-04 [a]	0.017	No No [a]			
91-20-3	Naphthalene	24-hour Annual	1.32E-03 3.10E-05 [b]	3.33 9.1E-05 [b]	No No [b]			
78-87-5	Propylene Dichloride	24-hour	4.01E-02 6.68E-03 [a]	23.133	No No [a]			

Table 12. RESULTS FOR NEW EMERGENCY GENERATOR TAPS MODELING ANALYSES								
CAS No.	**Pollutant**	**Averaging Period**	**Emission Rate (lb/hr)**	**EL (lb/hr)**	**Exceeds EL?**	**Ambient Impact ($\mu g/m^3$)**	**AAC or AACC ($\mu g/m^3$)**	**Percent of AAC or AACC**
108-88-3	Toluene	24-hour	6.36E-03 1.06E-03[a]	25	No No [a]			
1330-20-7	Xylenes	24-hour	4.43E-03 7.38E-04[a]	29	No No [a]			
---	Total PAH	Annual	2.61E-05 4.35E-06[a]	9.1E-05	No No [a]			

[a] Submitted analyses compared the 1-hour average lb/hr rate to the EL. The annual average values are found by multiplying this value by 200 hours / 8760 hours. 24-hour averages by multiplying by 4 hr/ 24 hr.
[a] Naphthalene has been determined to be a probable human carcinogen. Compare to the EL for PAH.

4.0 Conclusions

The submitted ambient air impact analyses, in combination with DEQ's verification analyses, demonstrated to DEQ's satisfaction that emissions from the Micron Nampa facility will not cause a violation of any applicable air quality standard.

APPENDIX C – NESHAP 40 CFR 63, SUBPART ZZZZ (FRA FORM)

Micron Technology, Inc.
8000 S. Federal Way
P.O. Box 6
Boise, ID 83707-0006
208.368.4000

VIA HAND DELIVERY

January 19, 2011

Mike Simon
Idaho Department of Environmental Quality
1445 North Orchard
Boise, Idaho 83706-2238

RE: NSPS/NESHAP Regulatory Review and Applicability Form – Nampa, Idaho Permit Application

Dear Mr. Simon:

As requested by Harbi Elshafei, Idaho Department of Environmental Quality, (IDEQ), Air Permit Engineer, on January 19, 2011, attached is the requested Form FRA, NSPS/NESHAP Regulatory Review and Applicability Form, for the Micron Technology, Inc. (MTI) facility located in Nampa, Idaho.

MTI appreciates the opportunity to provide this supplemental information and looks forward to working with the Department on renewing the facility's operating permit. If you have any questions or comments regarding the attached review of applicable requirements, please contact Beth Elroy at (208) 363-2235 or Leslie Swann at (208) 363-3548.

Based on my review, the information provided in this letter is true, accurate, and complete.

Sincerely,

T2 – 2010.0185
Proj 60671

Jay Hawkins
Vice President, Back End Manufacturing

REVIEWED
MTI Legal
1/19/11

Cc: Harbi Elshafei, IDEQ

Attachments

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

AIR PERMIT APPLICATION

Revision 6
10/7/09

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

IDENTIFICATION	
1. Company Name: Micron Technology, Inc.	2. Facility Name: Nampa Facility - 1401 N. Kings Road, Nampa, ID
3. Brief Project Description: Tier II Operating Permit Application (submitted December 20, 2010)	
APPLICABILITY DETERMINATION	
4. List applicable subparts of the New Source Performance Standards (NSPS) (40 CFR part 60). Examples of NSPS affected emissions units include internal combustion engines, boilers, turbines, etc. The applicant must thoroughly review the list of affected emissions units.	List of applicable subpart(s): **40 CFR 60 subpart IIII** - Proposed emergency stationary CI ICE will be subject if installed. There are currently no plans to install this generator, regulatory review will be completed if install is scheduled and when generator specifications are known. **40 CFR 60 subpart Dc** – not applicable because all boilers are < 10 MMBtu/hr. ☑ Not Applicable
5. List applicable subpart(s) of the National Emission Standards for Hazardous Air Pollutants (NESHAP) found in 40 CFR part 61 and 40 CFR part 63. Examples of affected emission units include solvent cleaning operations, industrial cooling towers, paint stripping and miscellaneous surface coating. EPA has a web page dedicated to NESHAP that should be useful to applicants.	List of applicable subpart(s): **40 CFR 63 subpart ZZZZ** - Emergency stationary RICE (existing and proposed) will be subject. The existing emergency stationary RICE must comply by May 3, 2013. ☐ Not Applicable **40 CFR 63 subpart BBBB** – not applicable to area sources. **40 CFR 63 subpart WWWWWW** – Plating chemistries used are not listed in this subpart and the plating tool is currently used for R&D. Subpart WWWWWW is only for Cd, Cr, Mn, Ni, and Pb, § 63.11504, and does not apply to R&D process units, § 63.11505(d)(2),.

6. For each subpart identified above, conduct a complete a regulatory analysis using the instructions and referencing the example provided on the following pages. **Note** - Regulatory reviews must be submitted with sufficient detail so that DEQ can verify applicability and document in legal terms why the regulation applies. Regulatory reviews that are submitted with insufficient detail will be determined incomplete.	☑ A detailed regulatory review is provided (Follow instructions and example). ☐ DEQ has already been provided a detailed regulatory review. Give a reference to the document including the date.

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 what those requirements are prior to the application being submitted but that DEQ will not perform the required technical or regulatory analysis on the applicant's behalf.

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

Source: 69 FR 33506, June 15, 2004, unless otherwise noted.

What This Subpart Covers

§ 63.6580 What is the purpose of subpart ZZZZ?

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations. [73 FR 3603, Jan. 18, 2008]

§ 63.6585 Am I subject to this subpart?

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand. [69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008]

➢ ***Micron's two emergency stationary RICE are subject to subpart ZZZZ. Micron's proposed emergency stationary RICE will be subject to subpart ZZZZ. Micron's Nampa facility is an area source.***

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

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

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

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

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

§ 63.6590 What parts of my plant does this subpart cover?

This subpart applies to each affected source.

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

(1) *Existing stationary RICE.*

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

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

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

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

➢ ***Micron's two emergency stationary RICE are existing sources.***

(2) *New stationary RICE.*

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

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

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

➢ ***Micron's proposed emergency stationary RICE would be a new source.***

(3) *Reconstructed stationary RICE.*

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

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

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

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

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

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

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

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

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

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

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

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

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

(vi) Existing residential emergency stationary RICE located at an area source of HAP emissions;

(vii) Existing commercial emergency stationary RICE located at an area source of HAP emissions; or

(viii) Existing institutional emergency stationary RICE located at an area source of HAP emissions.

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

(1) A new or reconstructed stationary RICE located at an area source;

➢ ***Micron's proposed emergency stationary RICE would be subject to subpart IIII.***

(2) A new or reconstructed 2SLB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(3) A new or reconstructed 4SLB stationary RICE with a site rating of less than 250 brake HP located at a major source of HAP emissions;

(4) A new or reconstructed spark ignition 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(5) A new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(6) A new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(7) A new or reconstructed compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9674, Mar. 3, 2010; 75 FR 37733, June 30, 2010; 75 FR 51588, Aug. 20, 2010]

§ 63.6595 When do I have to comply with this subpart?

(a) *Affected sources.*

(1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than May 3, 2013. If you have an existing stationary SI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary SI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than October 19, 2013.

- ***Micron's two emergency stationary RICE must comply no later than May 3, 2013.***

(2) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart no later than August 16, 2004.

(3) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions after August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

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

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

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

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

- ***Micron's proposed emergency stationary RICE must comply upon startup of the engine. There are currently no plans to install the proposed engine.***

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

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

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

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

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010]

Emission and Operating Limitations

§ 63.6600 What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

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

(a) If you own or operate an existing, new, or reconstructed spark ignition 4SRB stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 1a to this subpart and the operating limitations in Table 1b to this subpart which apply to you.

(b) If you own or operate a new or reconstructed 2SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, a new or reconstructed 4SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, or a new or reconstructed CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

(c) If you own or operate any of the following stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the emission limitations in Tables 1a, 2a, 2c, and 2d to this subpart or operating limitations in Tables 1b and 2b to this subpart: an existing 2SLB stationary RICE; an existing 4SLB stationary RICE; a stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis; an emergency stationary RICE; or a limited use stationary RICE.

(d) If you own or operate an existing non-emergency stationary CI RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010]

➢ ***Does not apply, Micron is not a major source of HAP emissions.***

§ 63.6601 What emission limitations must I meet if I own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than or equal to 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart. If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at major source of HAP emissions manufactured on or after January 1, 2008, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you. [73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010]

➢ ***Does not apply, Micron is not a major source of HAP emissions.***

§ 63.6602 What emission limitations must I meet if I own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions?

If you own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c to this subpart which apply to you. Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart. [75 FR 51589, Aug. 20, 2010]

➢ ***Does not apply, Micron is not a major source of HAP emissions.***

§ 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?

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

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

- ***Micron's two emergency stationary RICE must comply with the requirements in Tables 2b and 2d as applicable. Table 2b requires Micron to comply with any operating limitations approved by the Administrator, as the two existing emergency generators do not have oxidation catalysts. Table 2d requires that the oil and filters be changed every 500 hours, or annually; the air cleaner must be inspected every 1,000 hours, or annually; and all hoses and belts must be inspected every 500 hours, or annually.***

(b) If you own or operate an existing stationary non-emergency CI RICE greater than 300 HP located at area sources in areas of Alaska not accessible by the Federal Aid Highway System (FAHS) you do not have to meet the numerical CO emission limitations specified in Table 2d to this subpart. Existing stationary non-emergency CI RICE greater than 300 HP located at area sources in areas of Alaska not accessible by the FAHS must meet the management practices that are shown for stationary non-emergency CI RICE less than or equal to 300 HP in Table 2d to this subpart.

[75 FR 9675, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010]

§ 63.6604 What fuel requirements must I meet if I own or operate an existing stationary CI RICE?

If you own or operate an existing non-emergency, non-black start CI stationary RICE with a site rating of more than 300 brake HP with a displacement of less than 30 liters per cylinder that uses diesel fuel, you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel. Existing non-emergency CI stationary RICE located in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, or at area sources in areas of Alaska not accessible by the FAHS are exempt from the requirements of this section.

[75 FR 51589, Aug. 20, 2010]

- ***Does not apply, Micron does not operate any existing non-emergency CI stationary RICE.***

General Compliance Requirements

§ 63.6605 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitations and operating limitations in this subpart that apply to you at all times.

(b) At all times you 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. 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.

[75 FR 9675, Mar. 3, 2010]

- ***Micron's emergency stationary RICE will be subject to the general requirements.***

Testing and Initial Compliance Requirements

§ 63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

If you own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct the initial performance test or other initial compliance demonstrations in Table 4 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must demonstrate initial compliance with either the proposed emission limitations or the promulgated emission limitations no later than February 10, 2005 or no later than 180 days after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(c) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, and you chose to comply with the proposed emission limitations when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emission limitations by December 13, 2007 or after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(d) An owner or operator is not required to conduct an initial performance test on units for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (d)(1) through (5) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

(5) The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3605, Jan. 18, 2008]

➢ ***Does not apply, Micron is not a major source of HAP emissions.***

§ 63.6611 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a new or reconstructed 4SLB SI stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions?

If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must conduct an initial performance test within 240 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions specified in Table 4 to this subpart, as appropriate. [73 FR 3605, Jan. 18, 2008, as amended at 75 FR 51589, Aug. 20, 2010]

➢ ***Does not apply, Micron is not a major source of HAP emissions.***

§ 63.6612 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?

If you own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

- ***Micron's two emergency stationary RICE must comply with the requirements in Tables 4 and 5 as applicable. There are no applicable testing requirements for emergency stationary RICE.***

(b) An owner or operator is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (b)(1) through (4) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

[75 FR 9676, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010]

§ 63.6615 When must I conduct subsequent performance tests?

If you must comply with the emission limitations and operating limitations, you must conduct subsequent performance tests as specified in Table 3 of this subpart.

- ***Micron's two emergency stationary RICE must comply with the requirements in Table 3 as applicable. There are no applicable testing requirements for emergency stationary RICE.***

§ 63.6620 What performance tests and other procedures must I use?

(a) You must conduct each performance test in Tables 3 and 4 of this subpart that applies to you.

- ***Micron's two emergency stationary RICE must comply with the requirements in Tables 3 and 4 as applicable. There are no applicable testing requirements for emergency stationary RICE.***

(b) Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again.

(c) [Reserved]

(d) You must conduct three separate test runs for each performance test required in this section, as specified in §63.7(e)(3). Each test run must last at least 1 hour.

(e)(1) You must use Equation 1 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \qquad \text{(Eq. 1)}$$

Where:
C_i= concentration of CO or formaldehyde at the control device inlet,
C_o= concentration of CO or formaldehyde at the control device outlet, and
R = percent reduction of CO or formaldehyde emissions.

(2) You must normalize the carbon monoxide (CO) or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO_2). If pollutant concentrations are to be corrected to 15 percent oxygen and CO_2concentration is measured in lieu of oxygen concentration measurement, a CO_2correction factor is needed. Calculate the CO_2correction factor as described in paragraphs (e)(2)(i) through (iii) of this section.

(i) Calculate the fuel-specific $F_o$value for the fuel burned during the test using values obtained from Method 19, section 5.2, and the following equation:

$$F_o = \frac{0.209\, F_d}{F_c} \qquad \text{(Eq. 2)}$$

Where:
F_o= Fuel factor based on the ratio of oxygen volume to the ultimate CO_2volume produced by the fuel at zero percent excess air.
0.209 = Fraction of air that is oxygen, percent/100.
F_d= Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm^3 /J (dscf/10^6 Btu).
F_c= Ratio of the volume of CO_2produced to the gross calorific value of the fuel from Method 19, dsm^3 /J (dscf/10^6 Btu).

(ii) Calculate the CO_2correction factor for correcting measurement data to 15 percent oxygen, as follows:

$$X_{co_2} = \frac{5.9}{F_o} \qquad \text{(Eq. 3)}$$

Where:
X_{co2}= CO_2correction factor, percent.
5.9 = 20.9 percent O_2–15 percent O_2, the defined O_2correction value, percent.

(iii) Calculate the $NO_X$and SO_2gas concentrations adjusted to 15 percent O_2using CO_2as follows:

$$C_{adj} = C_d \frac{X_{co_2}}{\%CO_2} \qquad \text{(Eq. 4)}$$

Where:
$\%CO_2$= Measured CO_2concentration measured, dry basis, percent.

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during

the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

(g) If you petition the Administrator for approval of operating limitations, your petition must include the information described in paragraphs (g)(1) through (5) of this section.

(1) Identification of the specific parameters you propose to use as operating limitations;

(2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;

(3) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(5) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in paragraphs (h)(1) through (7) of this section.

(1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally (*e.g.,* operator adjustment, automatic controller adjustment, etc.) or unintentionally (*e.g.,* wear and tear, error, etc.) on a routine basis or over time;

(2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;

(3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions;

(4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;

(5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;

(6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and

(7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.

(i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9676, Mar. 3, 2010]

§ 63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either oxygen or CO_2at both the inlet and the outlet of the control device according to the requirements in paragraphs (a)(1) through (4) of this section.

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

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

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

(4) The CEMS data must be reduced as specified in §63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO_2concentration.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) through (8) of this section.

(1) The CPMS must complete a minimum of one cycle of operation for each successive 15-minute period. You must have a minimum of four successive cycles of operation to have a valid hour of data.

(2) Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), you must conduct all monitoring in continuous operation at all times that the unit is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(3) For purposes of calculating data averages, you must not use data recorded during monitoring malfunctions, associated repairs, out of control periods, or required quality assurance or control activities. You must use all the data collected during all other periods in assessing compliance. Any 15-minute period for which the monitoring system is out-of-control and data are not available for required calculations constitutes a deviation from the monitoring requirements.

(4) Determine the 3-hour block average of all recorded readings, except as provided in paragraph (b)(3) of this section.

(5) Record the results of each inspection, calibration, and validation check.

(6) You must develop a site-specific monitoring plan that addresses paragraphs (b)(6)(i) through (vi) of this section.

(i) Installation of the CPMS sampling probe or other interface at the appropriate location to obtain representative measurements;

(ii) Performance and equipment specifications for the sample interface, parametric signal analyzer, and the data collection and reduction systems;

(iii) Performance evaluation procedures and acceptance criteria (*e.g.,* calibrations);

(iv) Ongoing operation and maintenance procedures in accordance with the general requirements of §63.8(c)(1), (c)(3), and (c)(4)(ii);

(v) Ongoing data quality assurance procedures in accordance with the general requirements of §63.8(d); and

(vi) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of §63.10(c), (e)(1), and (e)(2)(i). .

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

(8) You must operate and maintain the CPMS in continuous operation according to the site-specific monitoring plan.

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

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

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

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

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

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

- ***Micron's two emergency stationary RICE must have a maintenance plan that ensures management practices to minimize emissions. This maintenance plan is due by May 3, 2013 as required by this part.***

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

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

(6) An existing non-emergency, non-black start landfill or digester gas stationary RICE located at an area source of HAP emissions;

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

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

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

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

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

- ***Micron's two emergency stationary RICE must have non-resettable hour meters installed by May 3, 2013 as required by this part.***

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

(1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or

(2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates, and metals.

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

- ***Micron's two emergency stationary RICE must be operated so as to minimize the engines' time spent at idle during startup and minimize the engines' startup time. There are no applicable emission standards for emergency stationary RICE located at area sources, but there are applicable management requirements outlined in Table 2d.***

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

- ***Micron's two emergency stationary RICE are subject to the requirements in Table 2d, so Micron has the option of utilizing an oil analysis program.***

(j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to this subpart or in items 5, 6, 7, 9, or 11 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 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 owner or operator must keep records of the

parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

(k) If you have an operating limitation that requires the use of a temperature measurement device, you must meet the requirements in paragraphs (k)(1) through (4) of this section.

(1) Locate the temperature sensor and other necessary equipment in a position that provides a representative temperature.

(2) Use a temperature sensor with a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit), or 1.0 percent of the temperature value, whichever is larger, for a noncryogenic temperature range.

(3) Use a temperature sensor with a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit), or 2.5 percent of the temperature value, whichever is larger, for a cryogenic temperature range.

(4) Conduct a temperature measurement device calibration check at least every 3 months.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010]

§ 63.6630 How do I demonstrate initial compliance with the emission limitations and operating limitations?

(a) You must demonstrate initial compliance with each emission and operating limitation that applies to you according to Table 5 of this subpart.

(b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.6645.

➢ ***Micron's two emergency stationary RICE are not subject to the requirements of Table 5 because there are no requirements for emergency stationary RICE.***

Continuous Compliance Requirements

§ 63.6635 How do I monitor and collect data to demonstrate continuous compliance?

(a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.

(b) Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), you must monitor continuously at all times that the stationary RICE is operating.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

➢ ***Micron's two emergency stationary RICE are not subject to emission and operating limitations because there are no requirements for emergency stationary RICE.***

§ 63.6640 How do I demonstrate continuous compliance with the emission limitations and operating limitations?

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

- ***Micron's two emergency stationary RICE are not subject to emission limitations because there are no requirements for emergency stationary RICE. The two emergency stationary RICE are subject to the operating requirements of Tables 2b and 2d as outlined previously.***

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

(c) [Reserved]

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

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

(f) *Requirements for emergency stationary RICE.*

(1) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that was installed on or after June 12, 2006, or an existing emergency stationary RICE located at an area source of HAP emissions, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1)(i) through (iii) of this section. Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1)(i) through (iii) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1)(i) through (iii) of this section, the engine will not be considered an emergency engine under this subpart and will need to meet all requirements for non-emergency engines.

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

(ii) You may operate your 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) You may operate your 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 owners and operators 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 (f)(1)(iii), as long as the power provided by the financial arrangement is limited to emergency power.

- ***Micron's two emergency stationary RICE will be operating only for emergency situations and required testing and maintenance. Hours of operation for maintenance activities will be monitored to ensure operation times are less than 100 hours per year.***

(2) If you own or operate an emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that was installed prior to June 12, 2006, you must operate the engine according to the conditions described in paragraphs (f)(2)(i) through (iii) of this section. If you do not operate the engine according to the requirements in paragraphs (f)(2)(i) through (iii) of this section, the engine will not be considered an emergency engine under this subpart and will need to meet all requirements for non-emergency engines.

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

(ii) You may operate your emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by the manufacturer, the vendor, or the insurance company associated with the engine. Required testing of such units should be minimized, but there is no time limit on the use of emergency stationary RICE in emergency situations and for routine testing and maintenance.

(iii) You may operate your emergency stationary RICE for an additional 50 hours per year in non-emergency situations. 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.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010]

Notifications, Reports, and Records

§ 63.6645 What notifications must I submit and when?

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

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

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

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

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

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

➢ ***Micron's two existing emergency stationary RICE are not required to submit notifications above.***

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

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

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

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

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

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

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

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

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

[73 FR 3606, Jan. 18, 2008, as amended at 75 FR 9677, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010]

§ 63.6650 What reports must I submit and when?

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

➢ ***Micron's two emergency stationary RICE are not required to report because there are no requirements for emergency stationary RICE.***

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

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

whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in §63.6595.

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

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

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

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

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

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

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

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

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

(1) Company name and address.

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

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

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

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

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

(d) For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in this subpart, the Compliance report must

contain the information in paragraphs (c)(1) through (4) of this section and the information in paragraphs (d)(1) and (2) of this section.

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

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

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

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

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

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

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

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

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

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

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

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

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

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

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

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

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

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

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

[69 FR 33506, June 15, 2004, as amended at 75 FR 9677, Mar. 3, 2010]

§ 63.6655 What records must I keep?

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

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in §63.10(b)(2)(xiv).

(2) Records of the occurrence and duration of each malfunction of operation (*i.e.,* process equipment) or the air pollution control and monitoring equipment.

(3) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii).

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

- ***Micron must keep records for the two existing emergency stationary RICE as applicable, emergency stationary RICE at area sources are not subject to emission and operating limitations.***

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

(1) Records described in §63.10(b)(2)(vi) through (xi).

(2) Previous (*i.e.,* superseded) versions of the performance evaluation plan as required in §63.8(d)(3).

(3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in §63.8(f)(6)(i), if applicable.

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

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

- ***Micron must keep records for the two existing emergency stationary RICE as applicable, this includes operating and maintaining the stationary RICE according to the manufacturer's instructions or Micron could develop and follow their own maintenance plan.***

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

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

(2) An existing stationary emergency RICE.

- ***Micron must keep records for the two existing emergency stationary RICE as applicable, this includes operating and maintaining the stationary RICE according to the manufacturer's instructions or Micron could develop and follow their own maintenance plan.***

(3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.

(f) If you own or operate any of the stationary RICE in paragraphs (f)(1) or (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for demand response operation, the owner or operator must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response.

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

(2) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.

- ***Micron must keep records of hours of operation for emergency use and non-emergency use for the two existing emergency stationary RICE as applicable.***

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010]

§ 63.6660 In what form and how long must I keep my records?

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

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

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

- ***Micron must keep records for the two existing emergency stationary RICE as outlined above.***

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010]

Other Requirements and Information

§ 63.6665 What parts of the General Provisions apply to me?

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

not need to comply with the requirements in the General Provisions specified in Table 8 except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

- ***Micron must keep comply with the General Provision requirements as applicable.***

[75 FR 9678, Mar. 3, 2010]

§ 63.6670 Who implements and enforces this subpart?

(a) This subpart is implemented and enforced by the U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out whether this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are:

(1) Approval of alternatives to the non-opacity emission limitations and operating limitations in §63.6600 under §63.6(g).

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(3) Approval of major alternatives to monitoring under §63.8(f) and as defined in §63.90.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

(5) Approval of a performance test which was conducted prior to the effective date of the rule, as specified in §63.6610(b).

§ 63.6675 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act (CAA); in 40 CFR 63.2, the General Provisions of this part; and in this section as follows:

- ***Micron has read and understands these definitions and used them in providing this regulatory analysis.***

Area source means any stationary source of HAP that is not a major source as defined in part 63.

Associated equipment as used in this subpart and as referred to in section 112(n)(4) of the CAA, means equipment associated with an oil or natural gas exploration or production well, and includes all equipment from the well bore to the point of custody transfer, except glycol dehydration units, storage vessels with potential for flash emissions, combustion turbines, and stationary RICE.

Black start engine means an engine whose only purpose is to start up a combustion turbine.

CAA means the Clean Air Act (42 U.S.C. 7401 *et seq.*, as amended by Public Law 101–549, 104 Stat. 2399).

Commercial emergency stationary RICE means an emergency stationary RICE used in commercial establishments such as office buildings, hotels, stores, telecommunications facilities, restaurants, financial institutions such as banks, doctor's offices, and sports and performing arts facilities.

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Custody transfer means the transfer of hydrocarbon liquids or natural gas: After processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation. For the purposes of this subpart, the point at which such liquids or natural gas enters a natural gas processing plant is a point of custody transfer.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless or whether or not such failure is permitted by this subpart.

(4) Fails to satisfy the general duty to minimize emissions established by §63.6(e)(1)(i).

Diesel engine means any stationary RICE in which a high boiling point liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition. This process is also known as compression ignition.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2. Diesel fuel also includes any non-distillate fuel with comparable physical and chemical properties (*e.g.* biodiesel) that is suitable for use in compression ignition engines.

Digester gas means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and CO_2.

Dual-fuel engine means any stationary RICE in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel.

Emergency stationary RICE means any stationary internal combustion engine whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, *etc.* Stationary RICE used for peak shaving are not considered emergency stationary RICE. Stationary RICE used to supply power to an electric grid or that supply non-emergency power as part of a financial arrangement with another entity are not considered to be emergency engines, except as permitted under §63.6640(f). All emergency stationary RICE must comply with the requirements specified in §63.6640(f) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in §63.6640(f), then it is not considered to be an emergency stationary RICE under this subpart.

Engine startup means the time from initial start until applied load and engine and associated equipment reaches steady state or normal operation. For stationary engine with catalytic controls, engine startup means the time from initial start until applied load and engine and associated equipment, including the catalyst, reaches steady state or normal operation.

Four-stroke engine means any type of engine which completes the power cycle in two crankshaft revolutions, with intake and compression strokes in the first revolution and power and exhaust strokes in the second revolution.

Gaseous fuel means a material used for combustion which is in the gaseous state at standard atmospheric temperature and pressure conditions.

Gasoline means any fuel sold in any State for use in motor vehicles and motor vehicle engines, or nonroad or stationary engines, and commonly or commercially known or sold as gasoline.

Glycol dehydration unit means a device in which a liquid glycol (including, but not limited to, ethylene glycol, diethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and absorbs water in a contact tower or absorption column (absorber). The glycol contacts and absorbs water vapor and other gas stream constituents from the natural gas and becomes "rich" glycol. This glycol is then regenerated in the glycol dehydration unit reboiler. The "lean" glycol is then recycled.

Hazardous air pollutants (HAP) means any air pollutants listed in or pursuant to section 112(b) of the CAA.

Institutional emergency stationary RICE means an emergency stationary RICE used in institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, correctional facilities, elementary and secondary schools, libraries, religious establishments, police stations, and fire stations.

ISO standard day conditions means 288 degrees Kelvin (15 degrees Celsius), 60 percent relative humidity and 101.3 kilopascals pressure.

Landfill gas means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and CO_2.

Lean burn engine means any two-stroke or four-stroke spark ignited engine that does not meet the definition of a rich burn engine.

Limited use stationary RICE means any stationary RICE that operates less than 100 hours per year.

Liquefied petroleum gas means any liquefied hydrocarbon gas obtained as a by-product in petroleum refining of natural gas production.

Liquid fuel means any fuel in liquid form at standard temperature and pressure, including but not limited to diesel, residual/crude oil, kerosene/naphtha (jet fuel), and gasoline.

Major Source, as used in this subpart, shall have the same meaning as in §63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment (as defined in this section)) and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units, to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) For oil and gas production facilities, emissions from processes, operations, or equipment that are not part of the same oil and gas production facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated;

(3) For production field facilities, only HAP emissions from glycol dehydration units, storage vessel with the potential for flash emissions, combustion turbines and reciprocating internal combustion engines shall be aggregated for a major source determination; and

(4) Emissions from processes, operations, and equipment that are not part of the same natural gas transmission and storage facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Natural gas means a naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in geologic formations beneath the Earth's surface, of which the principal constituent is methane. Natural gas may be field or pipeline quality.

Non-selective catalytic reduction (NSCR) means an add-on catalytic nitrogen oxides (NO_X) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, NO_X, CO, and volatile organic compounds (VOC) into CO_2, nitrogen, and water.

Oil and gas production facility as used in this subpart means any grouping of equipment where hydrocarbon liquids are processed, upgraded (*i.e.,* remove impurities or other constituents to meet contract specifications), or stored prior to the point of custody transfer; or where natural gas is processed, upgraded, or stored prior to entering the natural gas transmission and storage source category. For purposes of a major source determination, facility (including a building, structure, or installation) means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in this section. Equipment that is part of a facility will typically be located within close proximity to other equipment located at the same facility. Pieces of production equipment or groupings of equipment located on different oil and gas leases, mineral fee tracts, lease tracts, subsurface or surface unit areas, surface fee tracts, surface lease tracts, or separate surface sites, whether or not connected by a road, waterway, power line or pipeline, shall not be considered part of the same facility. Examples of facilities in the oil and natural gas production source category include, but are not limited to, well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

Oxidation catalyst means an add-on catalytic control device that controls CO and VOC by oxidation.

Peaking unit or engine means any standby engine intended for use during periods of high demand that are not emergencies.

Percent load means the fractional power of an engine compared to its maximum manufacturer's design capacity at engine site conditions. Percent load may range between 0 percent to above 100 percent.

Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. For oil and natural gas production facilities subject to subpart HH of this part, the potential to emit provisions in §63.760(a) may be used. For natural gas transmission and storage facilities subject to subpart HHH of this part, the maximum annual facility gas throughput for storage facilities may be determined according to §63.1270(a)(1) and the maximum annual throughput for transmission facilities may be determined according to §63.1270(a)(2).

Production field facility means those oil and gas production facilities located prior to the point of custody transfer.

Production well means any hole drilled in the earth from which crude oil, condensate, or field natural gas is extracted.

Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure C_3H_8.

Residential emergency stationary RICE means an emergency stationary RICE used in residential establishments such as homes or apartment buildings.

Responsible official means responsible official as defined in 40 CFR 70.2.

Rich burn engine means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to December 19, 2002 with passive emission control technology for NO_X(such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

Site-rated HP means the maximum manufacturer's design capacity at engine site conditions.

Spark ignition means relating to either: A gasoline-fueled engine; or any other type of engine a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle.

Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

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

Stationary RICE test cell/stand means an engine test cell/stand, as defined in subpart PPPPP of this part, that tests stationary RICE.

Stoichiometric means the theoretical air-to-fuel ratio required for complete combustion.

Storage vessel with the potential for flash emissions means any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio equal to or greater than 0.31 cubic meters per liter and an American Petroleum Institute gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per day. Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced.

Subpart means 40 CFR part 63, subpart ZZZZ.

Surface site means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

Two-stroke engine means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3607, Jan. 18, 2008; 75 FR 9679, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010]

Table 1ato Subpart ZZZZ of Part 63— Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations at 100 percent load plus or minus 10 percent for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 4SRB stationary RICE	a. Reduce formaldehyde emissions by 76 percent or more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007 or	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]
	b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2	

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9679, Mar. 3, 2010, as amended at 75 FR 51592, Aug. 20, 2010]

Table 1bto Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed Spark Ignition 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions and Existing Spark Ignition 4SRB Stationary RICE >500 HP Located at an Area Source of HAP Emissions

As stated in §§63.6600, 63.6630 and 63.6640, you must comply with the following operating limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions and existing 4SRB stationary RICE >500 HP located at an area source of HAP emissions that operate more than 24 hours per calendar year:

For each . . .	You must meet the following operating limitation . . .
1. 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR; or	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus; 10 percent from the pressure drop across the catalyst measured during the initial performance test and
4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent $O_2$and using NSCR; or	b. maintain the termperature of your stationary RICE exhaust so the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F.
4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 2.7 ppmvd or less at 15 percent $O_2$and using NSCR.	
2. 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR; or	Comply with any operating limitations approved by the Administrator.
4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent $O_2$and not using NSCR; or	
4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 2.7 ppmvd or less at 15 percent $O_2$and using NSCR.	

[75 FR 51592, Aug. 20, 2010]

Table 2ato Subpart ZZZZ of Part 63—Emission Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP and New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 2SLB stationary RICE	a. Reduce CO emissions by 58 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent O_2. If	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe

	you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent O_2until June 15, 2007	loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]
2. 4SLB stationary RICE	a. Reduce CO emissions by 93 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O_2	
3. CI stationary RICE	a. Reduce CO emissions by 70 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O_2	

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9680, Mar. 3, 2010]

Table 2bto Subpart ZZZZ of Part 63— Operating Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP Located at a Major Source of HAP Emissions, New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions, Existing Compression Ignition Stationary RICE >500 HP, and Existing 4SLB Stationary RICE >500 HP Located at an Area Source of HAP Emissions

As stated in §§63.6600, 63.6601, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed 2SLB and compression ignition stationary RICE located at a major source of HAP emissions; new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions; existing compression ignition stationary RICE >500 HP; and existing 4SLB stationary RICE >500 HP located at an area source of HAP emissions that operate more than 24 hours per calendar year:

For each . . .	You must meet the following operating limitation . . .
1. 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an oxidation catalyst; or 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of CO in the stationary RICE exhaust and using an oxidation catalyst	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.[1]
2. 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and not using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst; or 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst	Comply with any operating limitations approved by the Administrator.

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(g) for a different temperature range.

[75 FR 51593, Aug. 20, 2010]

Table 2cto Subpart ZZZZ of Part 63—Requirements for Existing Compression Ignition Stationary RICE Located at a Major Source of HAP Emissions and Existing Spark Ignition Stationary RICE ≤500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600, 63.6602, and 63.6640, you must comply with the following requirements for existing compression ignition stationary RICE located at a major source of HAP emissions and existing spark ignition stationary RICE ≤500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Emergency stationary CI RICE and black start stationary CI RICE.[1]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[2] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[3]
2. Non-Emergency, non-black start stationary CI RICE <100 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first;[2]	
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first;	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
3. Non-Emergency, non-black start CI stationary RICE 100 ≤HP ≤300 HP	Limit concentration of CO in the stationary RICE exhaust to 230 ppmvd or less at 15 percent O_2	
4. Non-Emergency, non-black start CI stationary RICE 300<HP ≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	
5. Non-Emergency, non-black start stationary CI RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	
6. Emergency stationary SI RICE and black start stationary SI RICE.[1]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[2]	

	b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first;	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
7. Non-Emergency, non-black start stationary SI RICE <100 HP that are not 2SLB stationary RICE	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[2]	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first;	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
8. Non-Emergency, non-black start 2SLB stationary SI RICE <100 HP	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;[2]	
	b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first;	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
9. Non-emergency, non-black start 2SLB stationary RICE 100 ≤HP ≤500	Limit concentration of CO in the stationary RICE exhaust to 225 ppmvd or less at 15 percent O_2	
10. Non-emergency, non-black start 4SLB stationary RICE 100 ≤HP ≤500	Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd or less at 15 percent O_2	
11. Non-emergency, non-black start 4SRB stationary RICE 100 ≤HP ≤500	Limit concentration of formaldehyde in the stationary RICE exhaust to 10.3 ppmvd or less at 15 percent O_2	
12. Non-emergency, non-black start landfill or digester gas-fired stationary RICE 100 ≤HP ≤500	Limit concentration of CO in the stationary RICE exhaust to 177 ppmvd or less at 15 percent O_2	

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

[2]Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Table 2c of this subpart.

[3]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 51593, Aug. 20, 2010]

Table 2dto Subpart ZZZZ of Part 63— Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions

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

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Non-Emergency, non-black start CI stationary RICE ≤300 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first;[1]	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
2. Non-Emergency, non-black start CI stationary RICE 300<HP≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	
3. Non-Emergency, non-black start CI stationary RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	
4. Emergency stationary CI RICE and black start stationary CI RICE.[2]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[1]	
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and	

	replace as necessary.	
5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE >500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE >500 HP that operate 24 hours or less per calendar year.[2]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[1] b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first; and c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
6. Non-emergency, non-black start 2SLB stationary RICE	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.	
7. Non-emergency, non-black start 4SLB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
8. Non-emergency, non-black start 4SLB stationary RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd at 15 percent O_2; or	
	b. Reduce CO emissions by 93 percent or more.	
9. Non-emergency, non-black start 4SRB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first; and	

	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
10. Non-emergency, non-black start 4SRB stationary RICE >500 HP	a. Limit concentration of formaldehyde in the stationary RICE exhaust to 2.7 ppmvd at 15 percent O_2; or	
	b. Reduce formaldehyde emissions by 76 percent or more.	
11. Non-emergency, non-black start landfill or digester gas-fired stationary RICE	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	

[1]Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Table 2d of this subpart.

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

[75 FR 51595, Aug. 20, 2010]

Table 3 to Subpart ZZZZ of Part 63—Subsequent Performance Tests

As stated in §§63.6615 and 63.6620, you must comply with the following subsequent performance test requirements:

For each . . .	Complying with the requirement to . . .	You must . . .
1. New or reconstructed 2SLB stationary RICE with a brake horsepower >500 located at major sources; new or reconstructed 4SLB stationary RICE with a brake horsepower ≥250 located at major sources; and new or reconstructed CI stationary RICE with a brake horsepower >500 located at major sources	Reduce CO emissions and not using a CEMS	Conduct subsequent performance tests semiannually.[1]
2. 4SRB stationary RICE with a brake horsepower ≥5,000 located at major sources	Reduce formaldehyde	Conduct subsequent performance tests

	emissions	semiannually.[1]
3. Stationary RICE with a brake horsepower >500 located at major sources and new or reconstructed 4SLB stationary RICE with a brake horsepower 250 ≤HP ≤500 located at major sources	Limit the concentration of formaldehyde in the stationary RICE exhaust	Conduct subsequent performance tests semiannually.[1]
4. Existing non-emergency, non-black start CI stationary RICE with a brake horsepower >500 that are not limited use stationary RICE; existing non-emergency, non-black start 4SLB and 4SRB stationary RICE located at an area source of HAP emissions with a brake horsepower >500 that are operated more than 24 hours per calendar year that are not limited use stationary RICE	Limit or reduce CO or formaldehyde emissions	Conduct subsequent performance tests every 8,760 hrs. or 3 years, whichever comes first.
5. Existing non-emergency, non-black start CI stationary RICE with a brake horsepower >500 that are limited use stationary RICE; existing non-emergency, non-black start 4SLB and 4SRB stationary RICE located at an area source of HAP emissions with a brake horsepower >500 that are operated more than 24 hours per calendar year and are limited use stationary RICE	Limit or reduce CO or formaldehyde emissions	Conduct subsequent performance tests every 8,760 hrs. or 5 years, whichever comes first.

[1]After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[75 FR 51596, Aug. 20, 2010]

Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests

As stated in §§63.6610, 63.6611, 63.6612, 63.6620, and 63.6640, you must comply with the following requirements for performance tests for stationary RICE:

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
1. 2SLB, 4SLB, and CI stationary RICE	a. Reduce CO emissions	i. Measure the O_2at the inlet and outlet of the control device; and	(1) Portable CO and O_2analyzer	(a) Using ASTM D6522–00 (2005)[a](incorporated by reference, see §63.14). Measurements to determine O_2must be made at the same time as the measurements for CO concentration.
		ii. Measure the CO at the inlet and the outlet of the control device	(1) Portable CO and O_2analyzer	(a) Using ASTM D6522–00 (2005)[ab](incorporated by reference, see §63.14) or Method 10 of 40 CFR appendix A. The CO concentration must be at 15 percent O_2, dry basis.
2. 4SRB stationary RICE	a. Reduce formaldehyde emissions	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A §63.7(d)(1)(i)	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O_2at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522–	(a) Measurements to determine O_2concentration must be made at the same time as the

			00m (2005)	measurements for formaldehyde concentration.
		iii. Measure moisture content at the inlet and outlet of the control device; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration.
		iv. Measure formaldehyde at the inlet and the outlet of the control device	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348–03,[c]provided in ASTM D6348–03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
3. Stationary RICE	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A §63.7(d)(1)(i)	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2concentration of the stationary RICE exhaust at the sampling port location; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522–00 (2005)	(a) Measurements to determine O_2concentration must be made at the same time and location as the measurements for formaldehyde concentration.
		iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration.
		iv. Measure formaldehyde at the exhaust of the stationary RICE; or	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348–03,[c]provided in ASTM D6348–03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. Measure CO at the exhaust of the stationary RICE	(1) Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522–00 (2005),[a]Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03	(a) CO Concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour longer runs.

[a]You may also use Methods 3A and 10 as options to ASTM–D6522–00 (2005). You may obtain a copy of ASTM–D6522–00 (2005) from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106. ASTM–D6522–00 (2005) may be used to test both CI and SI stationary RICE.

[b]You may also use Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03.

[c]You may obtain a copy of ASTM–D6348–03 from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

[75 FR 51597, Aug. 20, 2010]

Table 5 to Subpart ZZZZ of Part 63—Initial Compliance With Emission Limitations and Operating Limitations

As stated in §§63.6612, 63.6625 and 63.6630, you must initially comply with the emission and operating limitations as required by the following:

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Reduce CO emissions and using oxidation catalyst, and using a CPMS	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
2. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Reduce CO emissions and not using oxidation catalyst	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Reduce CO emissions, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O2 or CO2 at both the inlet and outlet of the oxidation catalyst according to the requirements in §63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and iii. The average reduction of CO calculated using §63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period.
4. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP, and existing non-emergency 4SRB stationary RICE	a. Reduce formaldehyde emissions and using	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater

>500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	NSCR	than the required formaldehyde percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
5. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Reduce formaldehyde emissions and not using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.
6. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250 ≤HP ≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
7. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250 ≤HP ≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.
8. Existing non-emergency stationary RICE 100 ≤HP ≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP ≤500 located at an area source of HAP	a. Reduce CO or formaldehyde emissions	i. The average reduction of emissions of CO or formaldehyde, as applicable determined from the initial performance test is equal to or greater than the required CO or formaldehyde, as applicable, percent reduction.
9. Existing non-emergency stationary RICE 100 ≤HP ≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP ≤500 located at an area source of HAP	a. Limit the concentration of formaldehyde or CO in the stationary RICE	i. The average formaldehyde or CO concentration, as applicable, corrected to 15 percent O2, dry basis, from the three test runs is less than or equal to the

	exhaust	formaldehyde or CO emission limitation, as applicable.

[75 FR 51598, Aug. 20, 2010]

Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, Operating Limitations, Work Practices, and Management Practices

As stated in §63.6640, you must continuously comply with the emissions and operating limitations and work or management practices as required by the following:

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved;[a] and ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
2. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved;[a] and ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, new or reconstructed non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP, existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Reduce CO emissions and using a CEMS	i. Collecting the monitoring data according to §63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction of CO emissions according to §63.6620; and ii. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period; and iii. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in

		accordance with 40 CFR part 60, appendix F, procedure 1.
4. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and using NSCR	i. Collecting the catalyst inlet temperature data according to §63.6625(b); and ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
5. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. Collecting the approved operating parameter (if any) data according to §63.6625(b); and ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
6. Non-emergency 4SRB stationary RICE with a brake HP ≥5,000 located at a major source of HAP	a. Reduce formaldehyde emissions	Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved.[a]
7. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250 ≤HP ≤500 located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit;[a]and ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
8. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250 ≤HP ≤500 located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit;[a]and ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling

		averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
9. Existing emergency and black start stationary RICE ≤500 HP located at a major source of HAP, existing non-emergency stationary RICE <100 HP located at a major source of HAP, existing emergency and black start stationary RICE located at an area source of HAP, existing non-emergency stationary CI RICE ≤300 HP located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency landfill or digester gas stationary SI RICE located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE ≤500 HP located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate 24 hours or less per calendar year	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
10. Existing stationary CI RICE >500 HP that are not limited use stationary RICE, and existing 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year and are not limited use stationary RICE	a. Reduce CO or formaldehyde emissions, or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and using oxidation catalyst or NSCR	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
11. Existing stationary CI RICE >500 HP that are not limited use stationary RICE, and existing 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year and are not limited use stationary RICE	a. Reduce CO or formaldehyde emissions, or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and not using oxidation catalyst or NSCR	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and

		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
12. Existing limited use CI stationary RICE >500 HP and existing limited use 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year	a. Reduce CO or formaldehyde emissions or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and using an oxidation catalyst or NSCR	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
13. Existing limited use CI stationary RICE >500 HP and existing limited use 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year	a. Reduce CO or formaldehyde emissions or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and using an oxidation catalyst or NSCR	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.

[a]After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary

RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[75 FR 51600, Aug. 20, 2010]

Table 7 to Subpart ZZZZ of Part 63—Requirements for Reports

As stated in §63.6650, you must comply with the following requirements for reports:

For each ...	You must submit a ...	The report must contain ...	You must submit the report ...
1. Existing non-emergency, non-black start stationary RICE 100 ≤HP ≤500 located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >500 HP located at a major source of HAP; existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >300 HP located at an area source of HAP; existing non-emergency, non-black start 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP and operated more than 24 hours per calendar year; new or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP; and new or reconstructed non-emergency 4SLB stationary RICE 250 ≤HP ≤500 located at a major source of HAP	Compliance report	a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in §63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), the information in §63.6650(e); or c. If you had a malfunction during the reporting period, the information in §63.6650(c)(4)	i. Semiannually according to the requirements in §63.6650(b)(1)–(5) for engines that are not limited use stationary RICE subject to numerical emission limitations; and ii. Annually according to the requirements in §63.6650(b)(6)–(9) for engines that are limited use stationary RICE subject to numerical emission limitations. i. Semiannually according to the requirements in §63.6650(b). i. Semiannually according to the requirements in §63.6650(b).
2. New or reconstructed non-emergency stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	Report	a. The fuel flow rate of each fuel and the heating values that were used in your calculations, and you must demonstrate that the percentage of heat input provided by landfill gas or digester gas, is equivalent to 10 percent or more of the gross heat input on an annual basis; and	i. Annually, according to the requirements in §63.6650.
		b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and	i. See item 2.a.i.
		c. Any problems or errors suspected with the meters.	i. See item 2.a.i.

[75 FR 51603, Aug. 20, 2010]

Table 8 to Subpart ZZZZ of Part 63—Applicability of General Provisions to Subpart ZZZZ.

As stated in §63.6665, you must comply with the following applicable general provisions.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.1	General applicability of the General Provisions	Yes.	
§63.2	Definitions	Yes	Additional terms defined in §63.6675.
§63.3	Units and abbreviations	Yes.	
§63.4	Prohibited activities and circumvention	Yes.	
§63.5	Construction and reconstruction	Yes.	
§63.6(a)	Applicability	Yes.	
§63.6(b)(1)–(4)	Compliance dates for new and reconstructed sources	Yes.	
§63.6(b)(5)	Notification	Yes.	
§63.6(b)(6)	[Reserved]		
§63.6(b)(7)	Compliance dates for new and reconstructed area sources that become major sources	Yes.	
§63.6(c)(1)–(2)	Compliance dates for existing sources	Yes.	
§63.6(c)(3)–(4)	[Reserved]		
§63.6(c)(5)	Compliance dates for existing area sources that become major sources	Yes.	
§63.6(d)	[Reserved]		
§63.6(e)	Operation and maintenance	No.	
§63.6(f)(1)	Applicability of standards	No.	
§63.6(f)(2)	Methods for determining compliance	Yes.	
§63.6(f)(3)	Finding of compliance	Yes.	
§63.6(g)(1)–(3)	Use of alternate standard	Yes.	
§63.6(h)	Opacity and visible emission standards	No	Subpart ZZZZ does not contain opacity or visible emission standards.
§63.6(i)	Compliance extension procedures and criteria	Yes.	
§63.6(j)	Presidential compliance exemption	Yes.	
§63.7(a)(1)–(2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at §§63.6610, 63.6611, and 63.6612.
§63.7(a)(3)	CAA section 114 authority	Yes.	
§63.7(b)(1)	Notification of performance test	Yes	Except that §63.7(b)(1) only applies as specified in §63.6645.
§63.7(b)(2)	Notification of rescheduling	Yes	Except that §63.7(b)(2) only applies as specified in §63.6645.
§63.7(c)	Quality assurance/test plan	Yes	Except that §63.7(c) only applies as

			specified in §63.6645.
§63.7(d)	Testing facilities	Yes.	
§63.7(e)(1)	Conditions for conducting performance tests	No.	Subpart ZZZZ specifies conditions for conducting performance tests at §63.6620.
§63.7(e)(2)	Conduct of performance tests and reduction of data	Yes	Subpart ZZZZ specifies test methods at §63.6620.
§63.7(e)(3)	Test run duration	Yes.	
§63.7(e)(4)	Administrator may require other testing under section 114 of the CAA	Yes.	
§63.7(f)	Alternative test method provisions	Yes.	
§63.7(g)	Performance test data analysis, recordkeeping, and reporting	Yes.	
§63.7(h)	Waiver of tests	Yes.	
§63.8(a)(1)	Applicability of monitoring requirements	Yes	Subpart ZZZZ contains specific requirements for monitoring at §63.6625.
§63.8(a)(2)	Performance specifications	Yes.	
§63.8(a)(3)	[Reserved]		
§63.8(a)(4)	Monitoring for control devices	No.	
§63.8(b)(1)	Monitoring	Yes.	
§63.8(b)(2)–(3)	Multiple effluents and multiple monitoring systems	Yes.	
§63.8(c)(1)	Monitoring system operation and maintenance	Yes.	
§63.8(c)(1)(i)	Routine and predictable SSM	Yes.	
§63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan	Yes.	
§63.8(c)(1)(iii)	Compliance with operation and maintenance requirements	Yes.	
§63.8(c)(2)–(3)	Monitoring system installation	Yes.	
§63.8(c)(4)	Continuous monitoring system (CMS) requirements	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§63.8(c)(6)–(8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.
§63.8(d)	CMS quality control	Yes.	
§63.8(e)	CMS performance evaluation	Yes	Except for §63.8(e)(5)(ii), which applies to COMS.
		Except that §63.8(e) only applies as specified in §63.6645.	

§63.8(f)(1)–(5)	Alternative monitoring method	Yes	Except that §63.8(f)(4) only applies as specified in §63.6645.
§63.8(f)(6)	Alternative to relative accuracy test	Yes	Except that §63.8(f)(6) only applies as specified in §63.6645.
§63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§63.6635 and 63.6640.
§63.9(a)	Applicability and State delegation of notification requirements	Yes.	
§63.9(b)(1)–(5)	Initial notifications	Yes	Except that §63.9(b)(3) is reserved.
		Except that §63.9(b) only applies as specified in §63.6645.	
§63.9(c)	Request for compliance extension	Yes	Except that §63.9(c) only applies as specified in §63.6645.
§63.9(d)	Notification of special compliance requirements for new sources	Yes	Except that §63.9(d) only applies as specified in §63.6645.
§63.9(e)	Notification of performance test	Yes	Except that §63.9(e) only applies as specified in §63.6645.
§63.9(f)	Notification of visible emission (VE)/opacity test	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(1)	Notification of performance evaluation	Yes	Except that §63.9(g) only applies as specified in §63.6645.
§63.9(g)(2)	Notification of use of COMS data	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(3)	Notification that criterion for alternative to RATA is exceeded	Yes	If alternative is in use.
		Except that §63.9(g) only applies as specified in §63.6645.	
§63.9(h)(1)–(6)	Notification of compliance status	Yes	Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. §63.9(h)(4) is reserved.
			Except that §63.9(h) only applies as specified in §63.6645.
§63.9(i)	Adjustment of submittal deadlines	Yes.	
§63.9(j)	Change in previous information	Yes.	
§63.10(a)	Administrative provisions for recordkeeping/reporting	Yes.	
§63.10(b)(1)	Record retention	Yes.	
§63.10(b)(2)(i)–(v)	Records related to SSM	No.	
§63.10(b)(2)(vi)–(xi)	Records	Yes.	

§63.10(b)(2)(xii)	Record when under waiver	Yes.	
§63.10(b)(2)(xiii)	Records when using alternative to RATA	Yes	For CO standard if using RATA alternative.
§63.10(b)(2)(xiv)	Records of supporting documentation	Yes.	
§63.10(b)(3)	Records of applicability determination	Yes.	
§63.10(c)	Additional records for sources using CEMS	Yes	Except that §63.10(c)(2)–(4) and (9) are reserved.
§63.10(d)(1)	General reporting requirements	Yes.	
§63.10(d)(2)	Report of performance test results	Yes.	
§63.10(d)(3)	Reporting opacity or VE observations	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.10(d)(4)	Progress reports	Yes.	
§63.10(d)(5)	Startup, shutdown, and malfunction reports	No.	
§63.10(e)(1) and (2)(i)	Additional CMS Reports	Yes.	
§63.10(e)(2)(ii)	COMS-related report	No	Subpart ZZZZ does not require COMS.
§63.10(e)(3)	Excess emission and parameter exceedances reports	Yes.	Except that §63.10(e)(3)(i) (C) is reserved.
§63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require COMS.
§63.10(f)	Waiver for recordkeeping/reporting	Yes.	
§63.11	Flares	No.	
§63.12	State authority and delegations	Yes.	
§63.13	Addresses	Yes.	
§63.14	Incorporation by reference	Yes.	
§63.15	Availability of information	Yes.	

[75 FR 9688, Mar. 3, 2010]

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 Web site: 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 your 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 subject to the section, or why the source is not subject to 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 that the applicant has provided. An example NSPS regulatory analysis is attached. The applicant must provide all necessary information needed to determine applicability. If information is lacking or the analysis is incomplete the application will be determined incomplete.

   EPA provides a web site dedicated to NSPS/NESHAP applicability determinations that may be useful to applicants. Follow this link to the applicability determination index 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. It also benefits facilities to document a non-applicability determination on federal air regulations which 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.**

APPENDIX D – PROCESSING FEE

Tier II Fee Calculation

Instructions:
Insert the following information and answer the following questions either Y or N. Insert the permitted emissions in tons per year into the table. TAPS only apply when the Tier II is being used for New Source Review.

Company:	**Micron Technology-Nampa Facility**
Address:	**PO Box 6 MS 01-602**
City:	**Boise**
State:	**ID**
Zip Code:	**83707-0006**
Facility Contact:	**Beth Elroy**
Title:	**Environmental Manager**
AIRS No.:	**027-00095**

N	Did this permit meet the requirements of IDAPA 58.01.01.407.02 for a fee exemption Y/N?
N	Does this facility qualify for a general permit (i.e. concrete batch plant, hot-mix asphalt plant)? Y/N
Y	Is this a synthetic minor permit? Y/N

Emissions Inventory	
Pollutant	Permitted Emissions (T/yr)
NO_X	26.0
PM10	11.0
PM	0.0
SO_2	6.0
CO	26.0
VOC	53.0
HAPS/TAPS	
Total:	122.0
Fee Due	**$10,000.00**

Comments: