

# **Statement of Basis**

## **Concrete Batch Operations General Permit**

**Permittee**

**Facility Name**

**City, Idaho**

**Facility ID No. XXX-XXXXX**

**Permit to Construct P-20XX.xxxx**

**Project No. XXXXX**

**January 1, 2012**

**Name**

**Permit Writer**

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

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## ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

AAC	acceptable ambient concentrations for non-carcinogens
AACC	acceptable ambient concentrations for carcinogens
acfm	actual cubic feet per minute
AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
ASTM	American Society for Testing and Materials
BMP	best management practices
Btu	British thermal units
Btu/lb	British thermal units per pound
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CBP	concrete batch plant
CFR	Code of Federal Regulations
CI	compression ignition
CO	carbon monoxide
CO <sub>2</sub> e	carbon dioxide equivalent
cy/day	cubic yard per day
cy/hr	cubic yard per hour
cy/yr	cubic yard per year
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EF	Emission Factor
EI	Emission Inventory
EL	screening emission levels
EPA	U.S. Environmental Protection Agency
GHG	greenhouse gases
g/kW-hr	gram per kilowatt hour
gr	grain (1 lb = 7,000 grains)
HAP	hazardous air pollutants
hp	horsepower
hr/yr	hours per year
ICE	internal combustion engines
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
km	kilometers
kW	kilowatts
lb/cy	pound per cubic yard
lb/10 <sup>3</sup> gal	pound per thousand gallons
lb/gal	pound per gallon
lb/hr	pounds per hour
lb/MMBtu	pound per million British thermal unit
lb/qtr	pound per quarter
m	meters
MACT	Maximum Achievable Control Technology
MMBtu	million British thermal units
MMscf/hr	million standard cubic feet per hour
MMscf	million standard cubic feet
NAAQS	National Ambient Air Quality Standard
NAICS	North American Industry Classification System
NSCR	Non-Selective Reduction Catalyst

NESHAP	National Emission Standards for Hazardous Air Pollutants
NO <sub>2</sub>	nitrogen dioxide
NO <sub>x</sub>	nitrogen oxides
NSPS	New Source Performance Standards
PAH	polyaromatic hydrocarbons
PC	permit condition
PERF	Portable Equipment Relocation Form
PM	particulate matter
PM <sub>10</sub>	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
POM	polycyclic organic matter
ppm	parts per million
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
SCL	significant contribution limits
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO <sub>2</sub>	sulfur dioxide
SO <sub>x</sub>	sulfur oxides
T/yr	tons per consecutive 12-calendar month period
T2	Tier II operating permit
TAP	toxic air pollutants
TCEQ	Texas Commission on Environmental Quality
UTM	Universal Transverse Mercator
VOC	volatile organic compounds
µg/m <sup>3</sup>	micrograms per cubic meter

## FACILITY INFORMATION

### Description

*{Modify the paragraph where appropriate}*

Facility Name is a portable truck/central mix concrete batch plant that may consist of the following: aggregate stockpiles, a cement storage silo, a cement supplement (flyash) storage silo, a weigh batcher, conveyors and an electric power supply. The facility combines aggregate, flyash and cement, and transfers the mixture into a truck/central drum along with a measured amount of water for in-transit/stationary mixing of the concrete. Electrical power will be supplied to the facility either by the local power grid /via an electric generator powered by a Manufacturer XXX bhp rated engine(s). Also, water heater(s) may be used to heat the water in cold weather prior to use for the mixing of concrete.

### Permitting History

The following information was derived from a review of the information supplied by the permittee and from permit files available to DEQ. All previous Permits to Construct (PTC) listed below are superseded (S) upon issuance of this general permit.

Date Field P-20XX.XXXX, Project XXXXX, Permitting action description

### Application Scope

This permit is the initial PTC for a portable Concrete Batch Plant.

*{or}*

This permit is being issued to a currently permitted facility. Permit No. XXXX-XXXX, Project XXXXX, issued Month XX, XXXX, is being terminated by this permitting action.

### Application Chronology

Month XX, 20XX	A PTC application and combined application and processing fee (\$1,500) were received.
Month XX, 20XX	A 15-day opportunity for a public comment period was held. A/Several/No requests for a public comment period was/were received.
Month XX, 20XX	P-20XX.0XXX project XXXX application was deemed complete/incomplete.
Month XX, 20XX	Supplemental information was received from the Applicant. <i>{Add only if necessary}</i>
Month XX, 20XX	30-day public comment period commenced. <i>{Remove if not requested}</i>
Month XX, 20XX	30-day public comment period ended. <i>{Remove if not requested}</i>
Month XX, 20XX	Final permit and statement of basis were issued.

# TECHNICAL ANALYSIS

## Emissions Units and Control Devices

Table 1 CONCRETE BATCH PLANT AND CONTROL DEVICE INFORMATION<sup>a</sup>

Emissions Unit Description	Control Device Description	Emissions Discharge Point ID No. and/or Description
<p><u>Concrete Batch Plant – Truck or Central Mix</u>            Manufacturer: <u>Enter name</u>            Model: <u>Enter Model</u>            Maximum capacity: <u>Max cap</u>            Maximum production: <u>Enter cy/day and cy/year</u></p>	<p><u>Cement Storage Silo Baghouse No. 1<sup>c</sup>:</u>            Manufacturer: <u>Enter name</u>            Model: <u>Enter Model</u>            XX bags XX' x XX' baghouse</p> <p><u>Cement Supplement Storage Silo Flyash Baghouse No. 2<sup>b</sup>:</u>            Manufacturer: <u>Enter name</u>            Model: <u>Enter Model</u>            XX bags XX' x XX' baghouse</p> <p><u>Weigh Batcher Baghouse:</u>            Manufacturer: <u>Enter name</u>            Model: <u>Enter Model</u>            XX bags XX' x XX' baghouse  <b>Remove if no baghouse</b></p> <p><u>Load-out Shroud {or} Baghouse {or}</u>  <u>Load-out Shroud w/ water ring:</u>            Boot or shroud {or} Boot plus water ring            {or} Baghouse  <b>Note: If baghouse is used add manufacturer, model and # of bags similar to above.</b></p> <p><u>Material Transfer Point Water Sprays or Equivalent</u>            Best Management Practices            Sprays and other suppressants</p>	<p><u>Baghouse No. 1 stack</u>            Stack height: XX feet            Exit diameter: XX feet            Exit air flow rate: XX acfm            Exit Temperature: Ambient            Control efficiency: 99%</p> <p><u>Baghouse No. 2 stack</u>            Stack height: XX feet            Exit diameter: XX feet            Exit air flow rate: XX acfm            Exit Temperature: Ambient            Control efficiency: 99%  <b>Remove if no 2<sup>nd</sup> baghouse</b></p> <p><u>Weigh Batcher Baghouse:</u>            Stack height: XX feet            Exit diameter: XX feet            Exit air flow rate: XX acfm            Exit Temperature: Ambient            Control efficiency: 99%</p> <p><u>Load-out Boot {or} Baghouse {or}</u>  <u>Load-out Boot w/ water ring:</u>            Control efficiency: 95% {or} 99%  <b>Note: If baghouse is used add description similar to above</b></p> <p><u>Materials Transfer:</u>            Control Efficiency: 75% {or} 95%</p>
<p><u>XX MMBtu/hr natural gas/LPG/diesel-fired water heater</u> (or equivalent<sup>b</sup>)            Maximum Rating: <u>Max rating bhp</u>            Maximum Fuel Usage: <u>MMscf/yr {or} gal/yr</u>  <b>{Add another heater if necessary or remove if not included}</b></p>	<p>None</p>	<p>Stack height: XX feet            Exit Velocity: XX acfm</p>
<p><u>XXX bhp rated engine</u> (or equivalent<sup>b</sup>)            Maximum Rating: <u>Max rating bhp</u>            Construction Date: <u>Enter date</u>            EPA Certification: <u>Enter Tier #</u>  <b>{Add another engine if necessary or remove if not included}</b></p>	<p>none</p>	<p>Stack height: XX feet            Stack diameter XX inches            Exit Velocity: XX acfm</p>

- Note that this table is for informational purposes only and the actual operation at the facility may deviate slightly.
- “or equivalent” is defined as equipment which has an equivalent or less brake horsepower than listed in this table, which does not result in an increase in emissions, and which does not result in the emission of a toxic air pollutant not previously emitted.
- Both the storage silo baghouse and supplement storage silo flyash baghouse are considered process equipment and therefore there is no associated control efficiency. Controlled PM<sub>10</sub> emission factors were used when determining PTE and for modeling purposes.

## **Emissions Inventories**

The emissions inventory for this portable concrete batch plant was developed by DEQ and is based on AP-42 Section 11.12 emission factors for central-mix and truck-mix concrete batch plants and the following assumptions: **XXX** cy per hour concrete production capacity and concrete production limits of **XXX** cy per day and **XXX,XXX** cy per year. Baghouse/cartridge filter capture efficiencies were presumed to be 99.0% in DEQ's generic emissions estimation.

The emissions analysis developed by DEQ, at most, assumes one central-mix or truck-mix concrete batch plant, a 5.0 MMBtu/hr diesel-fired water heater and a 1,340 bhp diesel-fired internal combustion engine are used. The total emissions associated with the facility are equal to or less than the equipment mentioned above. All possible equipment may not be included in the facility specific emissions inventory. Only equipment identified within the application material will be included in the inventory. AP-42 Sections 3.3 and 3.4 (10/96) were used to determine both criteria and TAPs emissions from the diesel-fired engine(s). AP-42 Sections 1.3, 1.4 and 1.5 (9/98) were used to calculate emissions from the water heaters.

Fugitive emissions of particulate matter (PM), PM<sub>2.5</sub> and PM<sub>10</sub> from batch plant material transfer points were assumed to be controlled by manual water sprays, sprinklers, or spray bars, or an equivalent method (e.g., enclosing the entire process inside a building) that reduce the emissions by an estimated 75%. The assumed 75% control efficiency is based on the Western Regional Air Partnership Fugitive Dust Handbook. According to the Handbook, water suppressant of material handling can range from 50-90% control. Assuming the average of 70% and including another 5% due to Best Management Practices required by the permit allow for 75% control to be a conservative estimate. *{If assuming 95% fugitive control; add the following sentence}*. For an additional 20% control, which reduces the setback distance, the following practices must be adhered to: continuous use of a 3-sided bunker for all aggregate piles and handling areas, covering of unused aggregate piles and eliminating all visible emissions beyond the property boundary.

Aggregate is washed before delivery to the batch plant site, and water is used on-site to control the temperature of the aggregate. Particulate matter and PM<sub>10</sub> emissions from the weigh batcher transfer point are controlled by a baghouse/cartridge, and **truck/central** mix load-out emissions are controlled by a boot. Capture efficiency of the truck mix load-out **boot {or} boot with water ring {or} baghouse** or equivalent was estimated at **95% {or} 99%**. *{Boot alone is 95%; other two options are 99%}*

Controlled emissions of particulate toxic air pollutants (TAPs) were estimated based on the presence of a baghouse on the cement/cement supplement silos, a baghouses/cartridge on the weigh batcher, and **95 {or} 99%** control for truck load-out emissions. Hexavalent chromium content was estimated at 20% of total chromium for cement, and 30% of total chromium for the cement supplement/fly ash. The hexavalent chromium percentages were taken from a University of North Dakota study, by the Energy and Environmental Research Center, Center for Air Toxic Metals. Detailed emissions calculations can be found in Appendix A of this document.

*{Delete this section if a water heater is not used by facility. May need to add a second heater to paragraph.}*

### **Emissions Inventory for **XX** MMBtu/hr Water Heater(s)**

**Facility name** has a **XX** MMBtu/hr **natural gas/LPG/diesel-fired** water heater(s). The water heater(s) will be used on a limited basis and thus have a fuel usage limit. The usage is based on calculations associated with the rated capacity of the unit, the heating value and the annual hours of operation. Natural Gas emissions are derived from AP-42, Section 1.4 (07/98) where the heating value was assumed to be 1,020 MMBtu/MMscf. Similarly, LPG and diesel heating values were obtained from AP-42 Section 1.5 (10/96) and Section 1.3 (09/98), respectively. Heating values were assumed to be 91.5 MMBtu/10<sup>3</sup> gal and 140 MMBtu/10<sup>3</sup> gal. Note that the water heater does not have any control devices associated with it. Detailed emissions calculations can be found in Appendix A of this document.

*{Delete this section if an engine is not used by facility}*

### Emissions Inventory for 1,340 bhp, Tier II Certified Engine(s)

Emissions are based on using diesel fuel in a Tier XX/uncertified, XXX bhp and Tier XX/uncertified, XXX bhp engine(s). The maximum fuel use rate was calculated in gal/hr and was based on the total XXX *{if more than one (1), sum capacities of all engines}* bhp capacity of the engine(s). The following equation was used to determine the fuel use rate from the fuel heating value and average brake-specific fuel consumption (BSFC). Note that the fuel heating value applied is based on AP-42 Sections 3.3 and 3.4 values of 19,300 Btu/lb and a density of 7.1 lb/gal. The maximum fuel use rate was converted into MMBtu/hr and multiplied by a given emission factor in lb/MMBtu to obtain an emission rate in lb/hr. *{Remember to add combined capacity to equation below}*.

$$\max \text{ fuel} = \frac{(\text{rating} * \text{BSFC})}{(\text{fuel heating value})} = \frac{(\text{XXXbhp} * 7,000 \text{Btu} / \text{hp} - \text{hr})}{(137,030 \text{Btu} / \text{gal})} = 68.50 \text{gal} / \text{hr}$$

The facility may use any engine of choice, but if the corresponding emissions exceed those of a Tier II, 1,340 bhp the operating hours are reduced. Emission factors are derived from one of three sources: 1) If the engine is uncertified, AP-42 factors from Sections 3.3 and 3.4 (10/96) were applied; 2) If the engine is certified as Tier 1-3 or Blue Sky engine, 40 CFR 89 factors were applied; 3) For the more recent Tier 4 engines, 40 CFR 1039 factors were applied.

### Emissions Inventory for Transfer Points

Determining emissions from a concrete batch plant also includes transfer emissions from the number of drop points throughout the process. The PM<sub>10</sub> emissions from Truck-Mix/Central-Mix loading operations are defined by an equation which includes the wind speed at each drop point and the moisture content of cement and cement supplement and a number of exponents and constants defined by AP-42 Equation 11.12-1/2 *{eq 1 is for truck mix and eq 2 is for central mix}* (6/06). An average value of wind speed and moisture content are 7 mph and 6%, respectively<sup>1</sup>. The following equation of particulate emissions is specific to PM<sub>10</sub>. The resulting emissions were used to determine a factor to help evaluate wind speed variations in AERMOD modeling.

$$E = k(0.0032) * \left[ \frac{U^a}{M^b} \right] + c$$

Where:

k = particle size multiplier

a = exponent

b = exponent

c = constant

U = mean wind speed

M = moisture content

The second transfer emissions calculations were used to determine conveyor emissions. For both coarse and fine aggregate to a conveyor. It was assumed that 82% or 164 cy/hr of the concrete produced was aggregate. This percentage was based on 1,865 lb coarse aggregate, 1,428 lb sand, 564 lb cement/supplement and 167 lb water for a total of 4,024 lb concrete as defined by AP-42 Table 11.12-5 (06/06). The fine and coarse aggregate contributions were separated into 36% and 46% of the total concrete production<sup>2</sup>. Employing emission factors from AP-42 Table 11.12-5 (6/06) for conveyor transfer and assuming 75% control efficiency as stated earlier for

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<sup>1</sup> 7 mph was the average wind speed obtained from an average of 19 Idaho airports throughout the state from 1996-2006. This data is from the Western Regional Climate Center (<http://www.wrcc.dri.edu/htmlfiles/westwind.final.html#IDAHO>). 4.17 % and 1.77% were the average percentages for sand and aggregate respectively. These values are based on EPA tests conducted at Cheney Enterprises. The percentages used in AP-42 are typical for most concrete batching operations.

<sup>2</sup> The percentages of coarse and fine aggregate are based on the AP-42 concrete composition. One cubic yard of concrete as defined by AP-42 is 4024 total pounds. Similarly, coarse aggregate is 1865 pounds or 46% of the total and sand (fine) aggregate is 1428 pounds or 36%.

conveyor transfer PM<sub>10</sub> emissions were calculated for each transfer point. For both fine and coarse aggregate the facility has XX transfer points.

*{Remove any unit or units that are not included at the facility. Manually input the values in the table from the "Final EI" tab in the CBP spreadsheet. Note that for CO<sub>2e</sub>, if you have two the same heater type add the heater#1 and #2 values together. After completing table highlight the Total row and hit F9.}*

**Table 2 FACILITY WIDE CRITERIA POLLUTANT EMISSION ESTIMATES**

Emissions Unit	PM <sub>2.5</sub> T/yr	PM <sub>10</sub> T/yr	SO <sub>2</sub> T/yr	NO <sub>x</sub> T/yr	CO T/yr	VOC T/yr	Lead T/yr	CO <sub>2e</sub> T/yr
Concrete Batch Plant	XX	XX	--	--	--	--	XX	--
Natural Gas Water Heater(s) <i>{remove if no heater or diesel/LPG}</i>	XX	XX	XX	XX	XX	XX	XX	XX
Diesel Water Heater <i>{remove if no heater or natural gas/LPG}</i>	XX	XX	XX	XX	XX	XX	XX	XX
LPG Water Heater <i>{remove if no heater or natural gas/diesel}</i>	XX	XX	XX	XX	XX	XX	XX	XX
Small Diesel Fired Engine(s) <i>{remove if no engine}</i>	XX	XX	XX	XX	XX	XX	--	XX
Large Diesel Fired Engine <i>{remove if no engine}</i>	XX	XX	XX	XX	XX	XX	--	XX
Transfer Points	XX	XX	--	--	--	--	--	--
<b>Total</b>	<b>2.80</b>	<b>2.80</b>	<b>0.07</b>	<b>44.05</b>	<b>23.94</b>	<b>8.70</b>	<b>0.04</b>	<b>0.04</b>

A summary of the estimated controlled emissions of toxic air pollutants (TAP) is provided in the Emissions Inventory within Appendix A. The emission estimates are total summation values of each unit used at the facility which are outlined in the previous table.

### Ambient Air Quality Impact Analyses

A circular grid with 5.0 meter receptor spacing, extending out to 100 meters was used in the non-site-specific modeling performed by DEQ. To establish a setback distance, the following procedure was followed for various production levels and operational configurations:

1. Trigger values for the modeling analyses were determined (see Appendix C for details). These are values, when combined with background concentrations, indicated an exceedance of a standard. They were calculated by subtracting the background value from the standard (because the model does not specifically include background in the results). The following are trigger values:

**Table 3 AMBIENT AIR IMPACT ANALYSIS TRIGGER VALUES**

Pollutants	Averaging Period	Trigger Value (µg/m <sup>3</sup> )
PM <sub>10</sub>	24-hr	77
	Annual	24
SO <sub>2</sub>	3-hr	1266
	24-hr	339
	Annual	72
CO	1-hr	36400
	8-hr	7700
NO <sub>2</sub>	Annual	83

2. For each operational configuration scenario, pollutant, averaging period, and meteorological data set, all receptors with concentrations equal or greater than the trigger value were plotted. This effectively gave a plot of receptors where the standard could be exceeded for that pollutant and averaging period.

3. The controlling receptor for each pollutant, averaging period, and meteorological data set was identified. First, the receptor having a concentration in excess of the trigger value that was the furthest from any emissions source was identified. The controlling receptor was the next furthest downwind receptor from that point.
4. The minimum setback distance was then calculated. This was the furthest distance between an emissions point and the controlling receptor.

The applicant has demonstrated compliance to DEQ's satisfaction that emissions from this facility will not cause or significantly contribute to a violation of any ambient air quality standard so long as the setback distance and other permit conditions are complied with. The applicant has also demonstrated compliance to DEQ's satisfaction that the emissions increase due to this permitting action will not exceed any acceptable ambient concentration (AAC) or acceptable ambient concentration for carcinogens (AACC) for toxic air pollutants (TAP).

## REGULATORY ANALYSIS

### **Attainment Designation (40 CFR 81.313)**

Because a separate modeling analysis was not provided to demonstrate compliance with applicable standards in PM<sub>2.5</sub> and PM<sub>10</sub> nonattainment areas, this portable facility is not permitted for operation in nonattainment areas.

### **Permit to Construct (IDAPA 58.01.01.201)**

The proposed project does not meet the permit to construct exemption criteria in IDAPA 58.01.01.220–223.

A concrete batch plant with associated internal combustion engine and water heater are not categorically exempt and therefore do not meet the criteria of IDAPA 58.01.01.221 or 222. As a result, a permit to construct is required in accordance with IDAPA 58.01.01.201. This permitting action was processed in accordance with the procedures of IDAPA 58.01.01.200-228.

### **Tier II Operating Permit (IDAPA 58.01.01.401)**

The application was submitted for a permit to construct (refer to the Permit to Construct section), and an optional Tier II operating permit has not been requested. Therefore, the procedures of IDAPA 58.01.01.400–410 are not applicable to this permitting action.

### **Registration Procedures & Requirements for Portable Equipment (IDAPA 58.01.01.500)**

Portable equipment needs to be registered within 90 days after permit issuance and DEQ must be notified at least 10 days prior to relocation. This requirement is assured by Permit Condition **XX**. *{Insert the appropriate permit condition numbers as they will vary depending on what conditions are removed.}*

### **Visible Emissions (IDAPA 58.01.01.625)**

The sources of PM<sub>10</sub> emissions at this facility are subject to the State of Idaho visible emissions standard of 20% opacity. This requirement is assured by Permit Conditions **XX** and **XX**. *{Insert the appropriate permit condition numbers as they will vary depending on what conditions are removed.}*

### **Rules For Control of Fugitive Dust (IDAPA 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 Condition **XX**. *{Insert the appropriate permit condition numbers as they will vary depending on what conditions are removed.}*

### **Standards for New Sources (IDAPA 58.01.01.676/7)**

The fuel burning equipment located at this facility, with a maximum rated input of ten (10) million BTU per hour or more, are subject to a 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 Conditions **X** and **X**. *{Insert the appropriate permit condition numbers as they will vary depending on what conditions are removed.}*

**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 **XX** and **XX**. *{Insert the appropriate permit condition numbers as they will vary depending on what conditions are removed.}*

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

The facility is not classified as a major facility as defined in IDAPA 58.01.01.008.10. The facility is a synthetic minor facility, because without limits on the potential to emit, the emissions of regulated air pollutants the facility would exceed major source thresholds. Therefore, the requirements of IDAPA 58.01.01.300–399 are not applicable to this permitting action.

**PSD Classification (40 CFR 52.21 and IDAPA 205)**

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 60)**

*{If no engines are located at facility, add the following paragraph. Delete all other NSPS discussion. If there are engines at facility delete the following paragraph.}*

The facility is not subject to the requirements of 40 CFR 60 Subpart IIII – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, and 40 CFR 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines because there are not engines on site.

The facility **is/is not** subject to the requirements of 40 CFR 60 Subpart IIII – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, and 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

**§ 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.*

*(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.*

*(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.*

(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.*

*If the facility is subject to Subpart III include the following section, otherwise delete.*

The XX bhp IC engine was constructed, modified or reconstructed on [Insert Date](#), which is after July 11, 2005. Therefore the engine is subject to the Subpart.

As the general permit was being developed there were discussions about the differences between 40 CFR 60, Subpart III and Non-road Diesel Engine requirements, 40 CFR 1068.30. According to CFR 1068.30, Non-road engine means that, by itself or in or on a piece of equipment, is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform.

Also, according to 40 CFR 1068.30 (2)(iii), an internal combustion engine is not a non-road engine if it:

- Will remain at a location for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source.
- A location is any single site at a building, structure, facility, or installation.
- Any engine (or engines) that replace an engine at a location and that is intended to perform the same or similar function as the engine replaced will be included in calculating the consecutive time period.

The conclusions were that the requirements for non-road engines and Subpart III were very similar with a few exceptions. Those exceptions being the installation of a non-resettable hour meter, the maintenance schedule and the use of colored fuel. But possibly, the biggest issue was the timeframe that stipulated whether or not a unit was stationary or non-road. If an engine stays in one place longer than 12 months it is considered a stationary source and would be subject to Subpart III. In order to avoid any potential non-compliance issues and to eliminate the possibility of failure by a non-road engine to comply with 40 CFR 1068.30, it was concluded to require Subpart III for all engines regardless of time at a given location. To eliminate permitting complexity, all applicants that choose the general permit have been required to comply with Subpart III.

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

The Permittee is not the manufacturer of the IC engine and therefore this requirement is not applicable.

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

The Permittee is not the manufacturer of the IC engine and the engine is not used for emergency purposes. Therefore, this requirement is not applicable.

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

The Permittee is not the manufacturer of the IC engine and therefore this requirement is not applicable.

*§ 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?*

(a) Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of less than 10 liters per cylinder 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 must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new CI engines in §60.4201 for their 2007 model year and later stationary CI ICE, as applicable.

The Subpart requires that the Permittee comply with Table 1 of IIII if the engine is pre-2007 and has a displacement of less than 10 liters/cylinder. However, this permit requires that the Permittee comply with 40 CFR 89.112 or 40 CFR 139 where applicable. All of those standards are equal to or more stringent than Table 1 of this Subpart. Also, if the engine or engines are non-certified, per the Subpart they have to demonstrate compliance with Table 1 and the hours of operations are reduced. If the engines have a model year of 2007 or greater they too must meet and certify that their IC engine meets all non-road engine standards: 40 CFR 89.112, 40 CFR 89.113, 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable. These emission standard requirements are accounted for in the PTC.

*§ 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?*

The Permittee is not using the IC engine for emergency purposes. Therefore, this requirement is not applicable.

*§ 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.

The Permittee must operate the IC engine for the life of the unit in accordance with manufacturer-approved methods. This is included in the PTC.

*§ 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 non-road diesel fuel.

The Permittee has stated that they will operate the applicable IC engine in accordance with 40 CFR 80.510(b). The fuel sulfur content cannot exceed 15 ppm or 0.0015% by weight. All emissions calculations assume that percentage throughout the PTC.

*§ 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.

(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.

(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.

The Permittee is installing a 20XX model engine that meets the applicable requirements for that model year.

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

The Permittee is not installing an emergency IC engine. Thus, a non-resettable meter is not required and the engine does not have a diesel particulate filter. These requirements are not applicable to the unit, but the unit must comply with 60.4211.

*§ 60.4210 What are my compliance requirements if I am a stationary CI internal combustion engine manufacturer?*

The Permittee is not the manufacturer of the IC engine and therefore this requirement is not applicable.

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

(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.

The Permittee is subject to 60.4204(a)/60.4204(b){select the correct one, may be both, if engine is pre-2007 it is (a), otherwise (b)}, therefore the engine must be installed and configured according to the manufacturer's specifications. This requirement is included in the PTC.

*§ 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?*

A Performance test on the IC engine is not required and therefore this requirement is not applicable to the Permittee and the XX bhp IC engine.

*§ 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?*

A Performance test on the IC engine is not required and the engine is less than 30 liters per cylinder. Therefore this requirement is not applicable to the Permittee and the XX bhp IC engine.

§ 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.

(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 applicable IC engine does not meet the criteria set forth in the Subpart requiring notification unless it is uncertified, greater than 175 bhp and was reconstructed or modified on or after July 11, 2005. All engines are less than 3,000 HP and have a displacement less than 10 liters per cylinder. *{If engine(s) is applicable to section (a) add the reminder of the paragraph, otherwise delete.}* Because the IC engine was **modified/reconstructed** after July 11, 2005 the permittee is required to notify DEQ about the specifications of the engines and maintain records of maintenance and demonstration that the engine is meeting required standards.

All engines that are uncertified and constructed reconstructed or modified prior to July 11, 2005 are subject to 40 CFR 63, Subpart ZZZZ. Therefore section (a) of the requirement is not applicable. However, section (c) does apply only if the engine is equipped with a diesel particulate filter.

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

The applicable IC engine is not being operated in Guam, American Samoa or the Northern Mariana Islands. Therefore this requirement is not applicable.

§ 60.4216 *What requirements must I meet for engines used in Alaska?*

The applicable IC engine is not being operated in Alaska. Therefore this requirement is not applicable.

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

The applicable IC engine is not using any special fuels. Therefore this requirement is not applicable.

*If the engine(s) is not subject to Subpart IIII include the following, otherwise delete:*

The XX bhp IC engine is not subject to 40 CFR 60, Subpart IIII because it was constructed, modified or reconstructed on **Insert Date**, which is on or prior to July 11, 2005. Therefore is it subject to 40 CFR 63, Subpart ZZZZ. For further detail refer to the MACT Applicability section.

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

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

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

This Concrete Batch plant does not emit or have the potential to emit more than 10 tons or more per year of any HAP, or 25 tons or more per year of any combination of HAPs. Major source Maximum Achievable Control Technology (MACT) requirements therefore do not apply to this facility.

Area source MACT requirements that would apply to the IC engines include Subpart ZZZZ:

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

*{If no engine onsite add the following sentence and delete all discussion of ZZZZ. If there is an engine delete the following sentence.}*

Facility Name is not subject to this subpart as there are no engines onsite.

§ 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.

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

All engines used with this general CBP plant are subject to 40 CFR 63, Subpart ZZZZ as they are all stationary engines operating at a HAP emissions area source. HAP emissions are defined under section 112(b) of the Clean Air Act. Diesel IC engines emit several of the pollutants listed in the section and are therefore consider HAP emissions sources.

*If the engine(s) is subject to 40 CFR 60, Subpart IIII include the following, otherwise delete.*

However, a source may be exempt from Subpart ZZZZ if the engine(s) requires compliance with 40 CFR 60, Subpart IIII. Section 40 CFR 63.6590(c) states that an engine that is subject to Subpart IIII, is therefore in compliance with Subpart ZZZZ.

*(c) Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that is a new or reconstructed stationary RICE located at an area source, or is a new or reconstructed stationary RICE located at a major source of HAP emissions and is a spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of less than 500 brake HP, a spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of less than 250 brake HP, or a 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP, a stationary RICE with a site rating of less than or equal to 500 brake HP which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP, or a compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP, 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.*

*If the engine(s) is not subject to 40 CFR, Subpart IIII, it is by default Subject to 40 CFR 63, Subpart ZZZZ, include the following, otherwise delete all up to the CAM section.*

§ 63.6595 *When do I have to comply with this Subpart?*

*(a)(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.*

The applicable IC engine must be in compliance with the Subpart no later than May 3, 2013.

§ 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?*

The applicable IC engine is not operating at a major source for HAP emissions. Therefore there are no applicable emission and operating limitations under this section.

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

The applicable IC engine is not operating at a major source for HAP emissions and the engine is not a 4-stroke lean burn spark ignition. Therefore there are no applicable emission and operating limitations under this section.

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

The applicable IC engine is not operating at a major source for HAP emissions. Therefore there are no applicable emission and operating limitations under this section.

*§ 63.6603 What emission limitations and operating limitations must I meet if I own or operate an existing stationary CI 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 CI 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 does not apply as it refers only to engines located at major source facilities. Table 2d, however, identifies those limitations required by area sources to comply with the Subpart. The specifics of Table 2d requires that the permittee either perform regular maintenance on the applicable engine such as changing oil and filters every 1,000 operating hours or requiring performance tests to meet certain CO or formaldehyde concentrations or reduction of emissions by a minimum of 70%. The brake horsepower of the engine dictates what limitations are required. Table 4 identifies the tests methods the permittee must conduct to demonstrate compliance.

*§ 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 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 non-road diesel fuel.*

This requirement states that only engines with a rating greater than 300 bhp must meet 40 CFR 80.510(b). However, one of the requirements of this general permit is that all diesel burning emission units on site must meet 40 CFR 80.510(b) requirements regardless of rating.

*§ 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.*

When operating the applicable IC engine(s), they be operated in a manner that is consistent with reducing emissions and compliance with appropriate limitations applies at all times.

*§ 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?*

The applicable IC engine is not operating at a major source for HAP emissions. Therefore there is no applicable initial performance test date requirement under this section.

*§ 63.6611 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a 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?*

The applicable IC engine is not operating at a major source for HAP emissions nor is the engine(s) a 4-stroke slow burn spark ignition unit. Therefore there is no applicable initial performance test date requirement under this section.

*§ 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 CI 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 CI 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).*

*(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.*

The applicable engine(s) must conduct an initial performance test or compliance demonstration 180 days following May 3, 2013, the compliance date. An initial test is not required if a previous test was conducted and meets all the criteria set forth in section (b) of 63.6612.

*§ 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.*

According to Table 3, all subsequent tests are only necessary for engines of greater than 500 bhp. The frequencies at which the tests must be performed are dependent on the usage of the engine. If the engine is operated as a limited use engine it must be tested every 5 years or 8,760 hours, whichever is comes first. Limited use is defined as less than 100 hr/yr. Therefore all subsequent tests of limited use engines will be every 5 years. If the engine is not limited use testing every 3 years or 8,760 hours, whichever is comes first.

*§ 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.*

*(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.*

*(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:*

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

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<sub>2</sub>). If pollutant concentrations are to be corrected to 15 percent oxygen and CO<sub>2</sub> concentration is measured in lieu of oxygen concentration measurement, a CO<sub>2</sub> correction factor is needed. Calculate the CO<sub>2</sub> correction 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:

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

Where:

$F_o$  = Fuel factor based on the ratio of oxygen volume to the ultimate CO<sub>2</sub> volume 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,  $\text{dsm}^3 / \text{J}$  ( $\text{dscf} / 10^6 \text{ Btu}$ ).

$F_c$  = Ratio of the volume of CO<sub>2</sub> produced to the gross calorific value of the fuel from Method 19,  $\text{dsm}^3 / \text{J}$  ( $\text{dscf} / 10^6 \text{ Btu}$ ).

(ii) Calculate the CO<sub>2</sub> correction factor for correcting measurement data to 15 percent oxygen, as follows:

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

Where:

$X_{co_2}$  = CO<sub>2</sub> correction factor, percent.

5.9 = 20.9 percent O<sub>2</sub> - 15 percent O<sub>2</sub>, the defined O<sub>2</sub> correction value, percent.

(iii) Calculate the NO<sub>x</sub> and SO<sub>2</sub> gas concentrations adjusted to 15 percent O<sub>2</sub> using CO<sub>2</sub> as follows:

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

Where:

$\%CO_2$  = Measured CO<sub>2</sub> concentration 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.*

This section lays out the criteria under which each performance test must be conducted. Note that depending on the method selected by the permittee some of the requirements of this section may or may not apply. For example, if the percent reduction option is chosen section (e) applies, otherwise it can be ignored by the permittee. Similarly with section (f), only if compliance is demonstrated without use of a NSCR or oxidation catalyst does it apply.

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

*(e) If you own or operate an existing stationary RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions, an existing stationary emergency RICE, or an existing stationary RICE located at an area source of HAP emissions not subject to any numerical emission standards shown in Table 2d to this Subpart, 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.*

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

*(i) If you own or operate a stationary engine that is subject to the work, operation or management practices in items 1, 2, or 4 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 before continuing to use the engine. 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.*

If the applicable engine is less than 100 bhp only maintenance and manufacturer's guidelines are required to minimize emissions. If the engine is greater than or equal to 300 bhp and does not have a closed crankcase ventilation system, it is required to install either a closed ventilation system or an open filtration crankcase system. Additionally, startup time is limited to a maximum of 30 minutes. Lastly, if the engine is less than 100 bhp, the permittee has the option to perform an oil analysis program in lieu of regular oil changes.

*§ 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.*

This requires the permittee to conduct an initial performance test or compliance demonstration and submit notification of compliance.

*§ 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.*

*(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.*

Table 6 of the Subpart lays out the testing schedules and maintenance requirements discussed in previous sections of the Subpart. All of these requirements are accounted for earlier permit conditions. Reporting is also including into the permit under 40 CFR 63.6650.

*§ 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 CI RICE located at an area source of HAP emissions.*

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

*(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).*

The permittee responsible for the applicable engine(s) are required to submit a Notification of Compliance Status 30 days following the initial compliance demonstration or the notification along with test results 60 days following the initial performance test. Additionally, if a test is required, the permittee must also submit a Notification of Intent to conduct a performance test at least 60 days prior to the scheduled testing date.

*§ 63.6650 What reports must I submit and when?*

*(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 startup, shutdown, or malfunction during the reporting period, the compliance report must include the information in §63.10(d)(5)(i).

(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.

The reports that must be maintained in accordance with the Subpart are stated in this section. The permittee is required to submit both semi-annual and annual Compliance reports if the engine is greater than 300 bhp (see Table 7 of the subpart for further details). Specific due dates are stated and the contents of each reports is included.

§ 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.

(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.

(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 CI RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this Subpart.

The permittee is required to maintain records of all required notifications, each malfunction, all performance tests and results, any required maintenance and any corrective action that was taken.

§ 63.6660 In what form and how long must I keep my records?

(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).

All records must be kept by the permittee for a minimum of five (5) years for each record.

### **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**

This section describes the permit conditions for this initial permit.

#### **Scope**

##### ***Purpose***

##### **Permit Condition 1.**

States that the purpose is to permit a concrete batch plant

##### **Permit Condition 2.**

The table in this condition outlines those regulated sources within the permit.

#### **Facility-wide Conditions**

##### ***Fuel Specifications***

##### **Permit Condition 3.**

This condition identifies the allowable fuels that may be combusted in the water heater(s). The restriction of sulfur content is to maintain consistency between the water heater(s) and engine as there is a restriction of sulfur content in accordance with 40 CFR 60.4207 and 40 CFR 80.510(b). To minimize setback distances the sulfur content may not exceed 15 ppm standard for use of this general CBP permit. Fuels that are allowed include: natural gas, diesel or LPG.

##### **Permit Condition 4.**

This condition identifies the allowable fuels that may be combusted in the engine(s). The restriction of sulfur content is to maintain consistency between the water heater(s) and engine as there is a restriction of sulfur content in accordance with 40 CFR 60.4207 and 40 CFR 80.510(b). Also, the inclusion of the minimum cetane index and maximum aromatic content is in accordance with 40 CFR 80.510(b).

## ***Fuel Monitoring and Recordkeeping***

### Permit Condition 5.

The permittee needs to maintain documentation each time fuel is received to demonstrate compliance with the sulfur content limitation.

## ***Fugitive Dust Control***

### Permit Condition 6.

This condition requires that the permittee perform visible emissions checks on see/no see basis to verify that fugitive emissions are not extending beyond the property boundary. If visible emissions are seen, corrective action must be taken. Reasonable control requirements for fugitive dust are needed at any potential site. Permit conditions requires that the plant must take corrective action where practical to control fugitive dust when operating. This requires compliance with IDAPA 58.01.01.650-651.

### Permit Condition 7.

More fugitive dust control is required by implementing Best Management Practices. Visible emissions are determined by a see/no see basis at the facility boundary. If visible emissions are present, the permittee must take appropriate action to correct the problem or perform a Method 9 test. The methods provided in this condition are options that the permittee may use to control any dust problems.

### Permit Condition 8.

*{Include this condition when assuming 95% fugitive control, recall that the no setback option assumes 95%}*

When 95 % control is assumed two other requirements are required to further suppress any potential dust emissions. These include three-side barriers and covering/application of suppressants on aggregate/sand piles. These practices are mandatory when the piles are not in use.

## ***Fugitive Dust Control Monitoring & Recordkeeping***

### Permit Condition 9.

Requires the permittee to conduct inspections each day that the plant is operating to assess the control of fugitive emissions and specifies corrective actions to take if fugitive dust is not reasonably controlled.

## ***Opacity***

### Permit Condition 10.

The condition is in accordance with the opacity limit of 20% as stated by IDAPA 58.01.01.625.

## ***Visible Emissions Monitoring & Recordkeeping***

### Permit Condition 11.

Visible emissions and/or opacity monitoring is required on a monthly basis. This includes a see/no see evaluation of baghouse stacks. If there are any visible emissions, corrective actions must be taken within 24 hours. If the problem persists, a Method 9 opacity test must be performed in accordance to IDAPA 58.01.01.130-136. Records of all inspections need to be maintained as well.

## ***Odors***

### Permit Condition 12.

The permittee must operate in accordance with IDAPA 58.01.01.776.01 to minimize odors associated with the facility.

### Permit Condition 13.

Maintaining records of odor complaints, and corrective action taken demonstrates compliance with this condition.

## ***Nonattainment Areas***

### Permit Condition 14.

The concrete batch plant cannot relocate and operate in any nonattainment area. Operations within a nonattainment area were not included in the modeling compliance analysis. Therefore, it is not permitted with this general CBP permit. See the associated modeling memo.

### ***Co-location***

#### Permit Condition 15.

The concrete batch plant may only co-locate with one (1) rock crushing facility. Co-location is defined as being within 1,000 ft of the nearest emission unit. This includes the concrete batch plant, silos and the center of any stockpile.

### ***Reporting Requirements***

#### Permit Condition 16.

*{Remove this condition if the site-specific modeling was performed}.*

When relocating to another site, the permittee must submit a Portable Equipment Relocation Form (PERF) within 10 days of desired moving date in accordance with IDAPA 58.01.01.500. A scaled plot must also be included with the PERF form.

### ***Subpart A General Provisions***

#### Permit Condition 17.

*Include only if engine(s) is subject to 40 CFR 60, Subpart IIII*

This set of general provisions applies because the engine(s) associated with the CBP is an affected source in accordance with 40 CFR 60, Subpart IIII Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.

#### Permit Condition 18.

*Include only if engine(s) is subject to 40 CFR 63, Subpart ZZZZ*

This set of general provisions applies because the engine(s) associated with the CBP is an affected source in accordance with 40 CFR 63, Subpart ZZZZ National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

### ***Incorporation by Reference***

#### Permit Condition 19.

If there is any discrepancy between this permit and the NSPS or NESHAP *{include only the applicable standard, may be both}* standard this condition states that the federal standards shall govern.

## **Concrete Batch Plant**

### ***Description***

#### Permit Condition 20.

The process description is provided to outline the activity at the facility.

#### Permit Condition 21.

The table in this condition outlines the associated emission control devices for each regulated unit.

### ***Emissions Limits***

#### Permit Condition 22.

*If there is no water heater, omit the condition.*

The emissions limits for a **natural gas/LPG/diesel-fired** water heater are listed in IDAPA 58.01.01.676 *{or}* 677. Specifically, the permittee shall not discharge PM to the atmosphere from any fuel-burning equipment source in excess of 0.050 gr/dscf of effluent gas corrected to 3% oxygen by volume for liquid or 0.015 gr/dscf of effluent gas corrected to 3% oxygen by volume for gaseous fuels.

### ***Operating Requirements***

#### **Permit Condition 23.**

Limits the finished concrete production and required setback for any future site. A setback distance from the property boundary was used in the ambient air quality impact analysis to demonstrate compliance with NAAQS and TAP increments. Because the equipment is portable and the location may be changed from its initial location, compliance with a minimum setback distance limit is required. The setback distances are based on a number of criteria which include the use of an engine, control devices such as baghouses, boot enclosures, water ring and other suppressants.

One of the biggest drivers when establishing the setback distances was truck loadout. It is accepted by the DEQ that a boot enclosure alone provides 95% control. This acceptance is based on several previously issued permits that demonstrated through manufacturer information. To increase the flexibility of the general permit and allow for small setback distances the permittee has the option to increase the loadout control to 99%. The permittee can increase the control efficiency to 99% in one of two ways; either 1) route all loadout emissions to a baghouse or 2) equip the boot enclosure with a water-fog-ring spray system. A BACT analysis done by the Texas Commission of Environmental Quality (TCEQ) in 2006 suggested that the appropriate control efficiency for the water ring was 85%. Multiply (1-95%) and (1-85%) returns a value of .0075.  $1 - .0075 = .9925$  or 99.25%. Therefore adding the water fog ring to the boot enclosure obtains 99% control efficiency for truck loadout.

The fugitive dust control ranges from 75% to 95%. The additional 20% is obtained by mandating the enclosing of aggregate/sand piles with three-sided barriers and covering piles or adding additional suppressants.

Setback distances of both line power and engine use are included in the condition. This allows for the facility to move from one site that requires an engine for power to another site in which line power is available without requiring a permit revision.

#### **Permit Condition 24.**

This condition limits the total amount of hours the facility may operate in any given day. There also may be restrictions to daylight hours. This restriction may be included to help limit the setback distance related to 1-hr NO<sub>2</sub> NAAQS. During daylight hours dispersion may be better and fewer emissions may remain in close proximity to the facility.

#### **Permit Condition 25.**

*Include this condition only if a water heater is included, otherwise delete. Also necessary info to fill out description below can be found in the spreadsheet. If the heater(s) are assumed to operate 8,760 hours and there are no TAPs that exceed the ELs this condition can be deleted. See the spreadsheet to confirm TAP emissions.*

General restrictions were applied to the water heater(s) when in use. The associated water heater(s) requires an annual fuel usage limit to demonstrate compliance with the NAAQS standards. The limit in this condition is based on a **XX** MMBtu/hr maximum water heater and running **XX** hr/yr. **{Add one or more of the following sentences depending on what type of heater the facility has.}** AP-42 Section 1.3 (9/98) assumes 140 MMBtu/10<sup>3</sup> gal which equates to **XXe**<sup>-0X</sup>/10<sup>3</sup> gal/hr for a **XX** MMBtu/hr diesel-fired water heater. That hourly rate is multiplied by **XX** hr/yr to obtain **XX** gal fuel per year. AP-42 Section 1.4 (7/98) assumes 1,020 MMBtu/MMscf which equates to **XXe**<sup>-0X</sup> MMscf/hr for a **XX** MMBtu/hr natural gas water heater. That hourly rate is multiplied by **XX** hr/yr to obtain **XX** MMscf fuel per year. AP-42 Section 1.5 (9/98) assumes 91.5 MMBtu/10<sup>3</sup> gal which equates to **XXe**<sup>-0X</sup>/10<sup>3</sup> gal/hr for a **XX** MMBtu/hr LPG water heater. That hourly rate is multiplied by **XX** hr/yr to obtain **XX** gal fuel per year.

#### **Permit Condition 26.**

A baghouse filter/cartridge system must be installed on any storage silo and all control equipment must be operated with a developed procedures document. This is required to control particulate emissions and demonstrate compliance with NAAQS standards.

Permit Condition 27.

A water spray bar or equivalent must be installed and all control equipment must be operated with a developed procedures document. This is required to control particulate emissions and demonstrate compliance with NAAQS standards.

Permit Condition 28.

Within 60 days of start up, the permittee needs to develop a procedures document outlining operations and maintenance schedules. This procedure must be submitted to the appropriate regional DEQ office for review. This is to demonstrate that all required control equipment is being operated and maintained properly. Also any change whether it is done by the facility or requested by DEQ must be submitted to DEQ within 15 days of the change.

Permit Condition 29.

*If assuming 99% truck loadout control, add the following condition; otherwise add second paragraph. If assuming central mix loading delete the condition.*

To achieve 99% control efficiency for truck loadout emissions the permittee must route the emissions to a baghouse or install a water ring with at a minimum 85% control efficiency in conjunction with the boot enclosure. This option was added to reduce the setback distances available within the general permit.

{or}

Truck loadout emissions must be controlled to a minimum of 95% efficiency. This is achieved by requiring a shroud or boot enclosure.

***Monitoring & Recordkeeping Requirements***

Permit Condition 30.

Concrete production monitoring is required daily, monthly and annually. This is necessary to demonstrate compliance with the production limits.

Permit Condition 31.

Setback monitoring is required to demonstrate compliance with the setback distance requirements. This must be done each time the CBP relocates or anytime the layout has changed.

Permit Condition 32.

*Include this condition only if a water heater is not included, otherwise delete.*

Each month the water heater's fuel usage needs to be recorded and summed for the previous consecutive 12 months to demonstrate compliance with the annual fuel limit.

Permit Condition 33.

Daily records of the hours of operation of the facility must be kept to demonstrate compliance with the hours of operation permit condition.

**Compression Ignition Internal Combustion Engines**

*Include this section only if there is one or more engines, otherwise delete.*

***Process Description***

Permit Condition 34.

This condition provides a brief synopsis of the engine(s) used by the facility.

***Operating Requirements***

Permit Condition 35.

*Include this condition only if the engine(s) is > 600 bhp and tier certified, otherwise delete.*

This condition states that the facility must install and operate an IC engine that is tier certified and that documentation stating such is maintained onsite.

Permit Condition 36.

*Include this condition only if the engine(s) is ≤ 600 bhp and tier certified, otherwise delete.*

This condition states that the facility must install and operate an IC engine that is tier certified and that documentation stating such is maintained onsite.

Permit Condition 37.

This condition is included to limit the engine(s) use to those hours requested by the permittee. The engine limitation was added to help reduce the setback distance. Note that the modeling associated with this condition assumes that if there are multiple engines onsite that they are operating simultaneously. But this is a permittee-defined condition so the stringency associated with the condition is dependent on what operating requirements are needed by the facility.

***Monitoring & Recordkeeping***

Permit Condition 38.

Each month the permittee must record the operational time of the engine. The annual usage needs to be summed over a consecutive 12 month period to demonstrate compliance with the annual hourly limit.

**NSPS 40 CFR 60, Subpart III Requirements**

Permit Condition 39.

*Include this condition only if the engine(s) is subject to Subpart III, otherwise delete.*

The permittee needs to operate and maintain the diesel engine according to manufacturer procedures. This is required in accordance with 40 CFR 60, Subpart III specifically sections 60.4206 and 60.4211(a).

Permit Condition 40.

*Include this condition only if the engine(s) is subject to Subpart III and there is a filter associated with the engine.*

If the engine is equipped with a particulate filter, it must be installed with a backpressure monitor in accordance with 40 CFR 60, Subpart III, specifically section 60.4209.

Permit Condition 41.

*If the engine is uncertified, greater than 175 bhp and modified or reconstructed after July 11, 2005 include paragraph, otherwise delete.*

40 CFR 60, Subpart III has a number of recordkeeping requirements for older engines that are subject to 40 CFR 60, Subpart III due to a modification or reconstruction. These include notifications, maintenance of engines and documentation demonstrating compliance with the emission standards of the Subpart.

*If the engine is equipped with a diesel particulate filter include paragraph, otherwise delete.*

Records of any corrective action must be maintained when the backpressure monitor notifies the operator that a high backpressure limit has been approached. This condition is in accordance with 40 CFR 60.4214(c).

Permit Condition 42.

*If the engine is a pre-2007 non-Tier certified engine, include the following condition, otherwise delete.*

40 CFR, Subpart IIII requires that an older non-certified engine must be replaced with a certified engine or records must be maintained to demonstrate that applicable standards are being met.

Permit Condition 43.

*If the engine is uncertified, greater than 175 bhp and modified or reconstructed after July 11, 2005 include paragraph, otherwise delete.*

40 CFR, Subpart IIII has a notification requirement if the engine meets a set of criteria. Those criteria include a model year earlier than 2007; an input rating greater than 175 bhp and the engine is not certified. DEQ must be notified of the owner's name and address, physical address, specific engine specifications and any control equipment used. This is required in accordance with 40 CFR 60.4214(a)(1).

Permit Condition 44.

*Include this condition only if the engine(s) is subject to Subpart IIII and notification and reporting are required, otherwise delete.*

All reports and notifications need to be sent to the appropriate DEQ Regional Office. This condition provides the mailing address.

**NESHAP 40 CFR 63, Subpart ZZZZ Requirements**

Permit Condition 45.

*Include this condition only if the engine(s) is subject to Subpart ZZZZ.*

The compliance for all engines subject to 40 CFR 63, Subpart ZZZZ at area sources is May 3, 2013. This condition makes the permittee aware of what date they need to be in compliance.

Permit Condition 46.

*Include this condition only if the engine(s) is subject to Subpart ZZZZ, otherwise delete.*

Start-up time of the applicable engine(s) may not exceed 30 minutes. Following start-up all applicable limitations must be complied with. This condition is in accordance with 40 CFR 63.6625(h).

Permit Condition 47.

*{If the engine or engines are subject to 40 CFR 63, Subpart ZZZZ and rated at  $\leq 300$  bhp, include the following condition, otherwise delete.}*

The smaller CI engines are only subject to regular maintenance. This includes changing of oil and filters every 1,000 hours of operation or annually, whichever comes first. Air cleaners must also be inspected on that same schedule. Hoses and belts need to be inspected every 500 hours of operation or annually, whichever comes first. This condition is in accordance with 40 CFR 63.6603(a).

Permit Condition 48.

*Include this condition only if the engine(s) is subject to Subpart ZZZZ, and the engine is less than or equal to 300 bhp, otherwise delete.*

Rather than regularly changing oil every 1,000 hours as required by the Subpart, the facility has the option of implementing an oil analysis program. The analysis must be performed at the same frequency of the oil changes. If the oil meets certain criteria, such as a total base number of less than 30% of new oil, viscosity change of less than 20% from new and the percent water content by volume is greater than 0.5%, it does not need to be changed. This is in accordance with 40 CFR 63.6625(i).

*{Include this condition if the engines or engines are subject to Subpart ZZZ and are subject to emission limitations, otherwise delete.}*

Permit Condition 49.

Engines greater than 300 bhp up to 500 bhp are required to demonstrate they have either reduced emissions by 70% or have a CO concentration less than or equal to 49 ppmvd at 15% O<sub>2</sub>. Finally, engines larger than 500 bhp must reduce emissions by 70% or emit a CO concentration less than or equal to 23 ppmvd at 15% O<sub>2</sub>. This condition includes these requirements in accordance with 40 CFR 63.6603(a).

*{If the engine(s) is rated at > 300 bhp, include the following five conditions}*

Permit Condition 50.

If the permittee elects to demonstrate compliance with the 70% CO Emission Reduction, this condition identifies the appropriate test methods that must be performed. This condition includes the requirements in accordance with 40 CFR 63.6612.

Permit Condition 51.

If the permittee elects to demonstrate compliance with the Formaldehyde or CO Emission Concentration limitations, this condition identifies the appropriate test methods that must be performed. This condition includes the requirements in accordance with 40 CFR 63.6612.

Permit Condition 52.

Within 180 days following the compliance date of May 3, 2013, the permittee is required to demonstrate compliance with the applicable limitation identified in Table 2d of the Subpart. The permittee may do one of two procedures: either reduce emissions by measuring CO or conduct a performance test to determine the concentration of CO (formaldehyde may be used as a surrogate according to the Federal Register, 75 FR 9674). A variety of different approved test methods are noted in the condition in accordance with 40 CFR 63.6612(a) and Table 4 of the Subpart. The initial performance test can be waived if a prior test was conducted in accordance with 40 CFR 63.6612(b). *If the engine is Subpart to Subpart ZZZZ and greater than 500 bhp include, otherwise delete.* Subsequent testing is required only for the larger engines (greater than 500 bhp). The frequency of the tests is either every 3 years or 8,760 hours of operation, whichever comes first for all unlimited use engines. It is very likely that all large engines used for this permit are unlimited because limited use is defined by the Subpart as operating less than 100 hours per year. In the off chance that a limited use engine is use they are required to test every 5 years.

Permit Condition 53.

This condition outlines the equations that shall be used to calculate the percentage emission reduction.

Permit Condition 54.

This condition outlines the procedures all performance tests must adhere to. The permit condition is conditional in that other portions of it apply only if the facility chooses to reduce emissions by a percentage or didn't use an oxidation catalyst or NSCR when complying with the standard. The permittee may also petition the EPA for approval of different operational limitations from those specified in the Subpart. All testing procedures must all comply with IDAPA 58.01.01.157.

Permit Condition 55.

*If the engine or engines are subject to 40 CFR 63, Subpart ZZZZ, include the condition, otherwise delete condition. This condition only applies if the engine(s) is > 500 HP and the permittee elects to use CEMS.*

This condition establishes the requirements if the permittee chooses to use a CEMS to help demonstrate initial compliance with the emission limitations and operating limitations.

Permit Condition 56.

*If the engine or engines are subject to 40 CFR 63, Subpart ZZZZ, include the condition, otherwise delete condition. This condition only applies if the engine(s) is > 500 HP and the permittee elects to use CPMS.*

This condition establishes the requirements if the permittee chooses to use a CPMS to help demonstrate initial compliance with the emission limitations and operating limitations.

Permit Condition 57.

*{If the engine or engines are subject to 40 CFR 63, Subpart ZZZZ, include the condition, otherwise delete condition. This condition only applies if the engine or engines is rated at  $\leq 300$  bhp, include the following condition, otherwise delete.}*

This condition requires that an engine needs to be operated and maintained according to manufacturer specifications. As an alternative a specific maintenance plan can be developed to minimize emissions. This is in accordance with 40 CFR 63.6625.

Permit Condition 58.

*If the engine is Subpart to Subpart ZZZZ and greater than or equal to 300 bhp include, otherwise delete.*

This condition requires that if an applicable engine(s) is not equipped with a closed crankcase ventilation system on or following the compliance date, the permittee must either install one or install an open crankcase filtration system. General maintenance on either system shall be done in accordance with manufacturer's specifications or the permittee can require approval from EPA for other requirements.

Permit Condition 59.

*If the engine or engines are subject to 40 CFR 63, Subpart ZZZZ, include the condition, otherwise delete condition. This condition only applies if the engine(s) uses an oxidation catalyst.*

This condition describes the criteria that the temperature measurement device must meet when installed and operated. This condition is in accordance with 40 CFR 63.6625.

Permit Condition 60.

*{If the engine or engines are subject to 40 CFR 63, Subpart ZZZZ, include the condition, otherwise delete. This condition only applies if engine(s) has an oxidation catalyst and has a CPMS.}*

This condition establishes parameters for determining the reduction in CO emissions when using an oxidation catalyst and a CPMS, in accordance with 40 CFR 63.6630.

Permit Condition 61.

*{If the engine or engines does not have an oxidation catalyst and has a CPMS, include the following condition, otherwise delete.}*

This condition establishes parameters for determining the reduction in CO emissions when not using an oxidation catalyst but a CPMS, in accordance with 40 CFR 63.6630.

Permit Condition 62.

*{If the engine or engines are subject to 40 CFR 63, Subpart ZZZZ, include the condition, otherwise delete. This condition only applies if engine(s) has an oxidation catalyst and has a CEMS.}*

This condition establishes parameters for determining the reduction in CO emissions when using an oxidation catalyst and a CEMS, in accordance with 40 CFR 63.6630.

Permit Condition 63.

*{If the Primary IC engine is rated at  $> 500$  bhp and equipped with an oxidation catalyst, include the following condition, otherwise delete.}*

This condition describes the maintenance requirements for an oxidation catalyst. This is accordance with 40 CFR 63.6640.

Permit Condition 64.

*Include this condition only if the engine(s) is subject to Subpart ZZZZ, otherwise delete.*

All reports and notifications need to be sent to the EPA and the appropriate DEQ Regional Office. This condition provides the mailing address.

Permit Condition 65.

*{If the engine is equipped with a CEMS or a CPMS, include the following condition.}*

The permittee is required to submit both semi-annual and annual compliance reports to the EPA. This condition lies out the specified dates that all correspondence must include and postmarked by. It also include the necessary content of each report in accordance with 40 CFR 63.6650(b-c).

Permit Condition 66.

*Include this condition only if the engine(s) is subject to Subpart ZZZZ, otherwise delete.*

The permittee is required to maintain records of all required notifications, each malfunction, all performance tests and results, any required maintenance and any corrective action that was taken.

All records must be kept by the permittee for a minimum of five (5) years for each record.

**General Provisions**

***General Compliance***

Permit Condition 67.

The duty to comply general compliance provision requires that the permittee comply with all of the permit terms and conditions pursuant to Idaho Code §39-101.

Permit Condition 68.

The maintenance and operation general compliance provision requires that the permittee maintain and operate all treatment and control facilities at the facility in accordance with IDAPA 58.01.01.211.

Permit Condition 69.

The obligation to comply general compliance provision specifies that no permit condition is intended to relieve or exempt the permittee from compliance with applicable state and federal requirements, in accordance with IDAPA 58.01.01.212.01.

***Inspection & Entry***

Permit Condition 70.

The inspection and entry provision requires that the permittee allow DEQ inspection and entry pursuant to Idaho Code §39-108.

***Construction & Operation Notification***

Permit Condition 71.

The construction and operation notification provision requires that the permittee notify DEQ of the dates of construction and operation, in accordance with IDAPA 58.01.01.211.02.

Permit Condition 72.

The construction and operation notification provision requires that the permittee notify DEQ of the dates of construction and operation, in accordance with IDAPA 58.01.01.211.03.

***Performance Testing***

Permit Condition 73.

The performance testing notification of intent provision requires that the permittee notify DEQ at least 15 days prior to any performance test to provide DEQ the option to have an observer present, in accordance with IDAPA 58.01.01.157.03.

Permit Condition 74.

The performance test protocol provision requires that any performance testing be conducted in accordance with the procedures of IDAPA 58.01.01.157, and encourages the permittee to submit a protocol to DEQ for approval prior to testing.

Permit Condition 75.

The performance test report provision requires that the permittee report any performance test results to DEQ within 30 days of completion, in accordance with IDAPA 58.01.01.157.04-05.

***Monitoring & Recordkeeping***

Permit Condition 76.

The monitoring and recordkeeping provision requires that the permittee maintain sufficient records to assess compliance with permit conditions, in accordance with IDAPA 58.01.01.211.

***Excess Emissions***

Permit Condition 77.

The excess emissions provision requires that the permittee follow the procedures required for excess emissions events, in accordance with IDAPA 58.01.01.130.

***Certification***

Permit Condition 78.

The certification provision requires that a responsible official certify all documents submitted to DEQ, in accordance with IDAPA 58.01.01.123.

***False Statements***

Permit Condition 79.

The false statement provision requires that no person make false statements, representations, or certifications, in accordance with IDAPA 58.01.01.125.

***Tampering***

Permit Condition 80.

The tampering provision requires that no person render inaccurate any required monitoring device or method, in accordance with IDAPA 58.01.01.126.

***Transferability***

Permit Condition 81.

The transferability provision specifies that this permit to construct is transferable, in accordance with the procedures of IDAPA 58.01.01.209.06.

***Severability***

Permit Condition 82.

The severability provision specifies that permit conditions are severable, in accordance with IDAPA 58.01.01.211.

## **PUBLIC REVIEW**

### ***Public Comment Opportunity***

An opportunity for public comment period on the application was provided in accordance with IDAPA 58.01.01.209.01.c. During this time, there [were/were no](#) comments on the application and there [was/was not](#) a request for a public comment period on DEQ's proposed action. Refer to the chronology for public comment opportunity dates.

[{Remove the following two headings if a comment period and hearing are not requested.}](#)

### ***Public Comment Period***

A public comment period was made available to the public in accordance with IDAPA 58.01.01.209.01.c. During this time, comments [were/were not](#) submitted in response to DEQ's proposed action. Refer to the chronology for public comment period dates.

[\(comments received\)](#) A response to public comments document has been crafted by DEQ based on comments submitted during the public comment period. That document is part of the final permit package for this permitting action.

### ***Public Hearing***

In addition to the public comment period, DEQ also provided a public hearing in [CITY](#) for persons interested to appear and submit written or oral comments. DEQ's responses to the comments submitted during the public hearing are included in the response to public comments document. Refer to the chronology for public hearing dates.

## **APPENDIX A – EMISSIONS INVENTORIES**

**{Add data from the EI spreadsheet. At a minimum add the “Final EI” tab. However, it is recommended that all tabs be included with the exemption of the Instructions, Entry tab and the Emission factor tables.}**

## **APPENDIX B – PERMIT FEES**

All associated permitting fees were paid when the application was submitted. The total cost of the Concrete Batch General Permit is \$1,500. That includes a \$1,000 application fee and \$500 processing fee.

Per Section 224 of the Rules, all PTC applications are subject to an application fee of \$1000.

Per Section 225 of the Rules, General PTC permits are subject to a processing fee of \$500. The definition of General permit per the Rules: “no facility-specific requirements (defined as a source category specific permit for which the Department has developed standard emission limitations, operating requirements, monitoring and recordkeeping requirements, and that require minimal engineering analysis. General permit facilities may include portable concrete batch plants, portable hot-mix asphalt plants and portable rock crushing plants.)”

## APPENDIX C – AMBIENT AIR QUALITY ANALYSIS

{Modify Modeling memo and include}.