INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

NOTICE OF 30-DAY PERIOD FOR PUBLIC COMMENT

Preliminary Findings Regarding the Renewal of a Part 70 Operating Permit

for Indianapolis Airport Authority in Marion County

Part 70 Operating Permit Renewal No.: T097-35016-00156

The Indiana Department of Environmental Management (IDEM) has received an application from the Indianapolis Airport Authority located at 2825 West Perimeter Road and 7800 Col. H. Weir Cook Memorial Drive, Indianapolis, Indiana 46241 for a renewal of its Part 70 Operating Permit issued on July 7, 2010. If approved by IDEM's Office of Air Quality (OAQ), this proposed renewal would allow the Indianapolis Airport Authority to continue to operate its existing source.

This draft Part 70 Operating Permit does not contain any new equipment that would emit air pollutants; however, some conditions from previously issued permits/approvals have been corrected, changed, or removed. These corrections, changes, and removals may include Title I changes. This notice fulfills the public notice procedures to which those conditions are subject. IDEM has reviewed this application and has developed preliminary findings, consisting of a draft permit and several supporting documents, which would allow for these changes.

A copy of the permit application and IDEM's preliminary findings are available at:

Indianapolis Marion County Public Library - Wayne Branch
198 S Girls School Rd.
Indianapolis, Indiana 46231

A copy of the preliminary findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/.

How can you participate in this process?

The date that this notice is published in a newspaper marks the beginning of a 30-day public comment period. If the 30th day of the comment period falls on a day when IDEM offices are closed for business, all comments must be postmarked or delivered in person on the next business day that IDEM is open.

You may request that IDEM hold a public hearing about this draft permit. If adverse comments concerning the **air pollution impact** of this draft permit are received, with a request for a public hearing, IDEM will decide whether or not to hold a public hearing. IDEM could also decide to hold a public meeting instead of, or in addition to, a public hearing. If a public hearing or meeting is held, IDEM will make a separate announcement of the date, time, and location of that hearing or meeting. At a hearing, you would have an opportunity to submit written comments and make verbal comments. At a meeting, you would have an opportunity to submit written comments, ask questions, and discuss any air pollution concerns with IDEM staff.

Comments and supporting documentation, or a request for a public hearing should be sent in writing to IDEM at the address below. If you comment via e-mail, please include your full U.S. mailing address so that you can be added to IDEM's mailing list to receive notice of future action related to this permit. If you do not want to comment at this time, but would like to receive notice of future action related to this permit application, please contact IDEM at the address below. Please refer to permit number T097-35016-00156 in all correspondence.

Comments should be sent to:

David Matousek
IDEM, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
(800) 451-6027, ask for extension 2-8253
Or dial directly: (317) 232-8253
Fax: (317) 232-6749 attn: David Matousek
E-mail: dmatouse@idem.IN.gov

All comments will be considered by IDEM when we make a decision to issue or deny the permit. Comments that are most likely to affect final permit decisions are those based on the rules and laws governing this permitting process (326 IAC 2), air quality issues, and technical issues. IDEM does not have legal authority to regulate zoning, odor, or noise. For such issues, please contact your local officials.

For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: http://www.in.gov/idem/5881.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

What will happen after IDEM makes a decision?

Following the end of the public comment period, IDEM will issue a Notice of Decision stating whether the permit has been issued or denied. If the permit is issued, it may be different than the draft permit because of comments that were received during the public comment period. If comments are received during the public notice period, the final decision will include a document that summarizes the comments and IDEM's response to those comments. If you have submitted comments or have asked to be added to the mailing list, you will receive a Notice of the Decision. The notice will provide details on how you may appeal IDEM's decision, if you disagree with that decision. The final decision will also be available on the Internet at the address indicated above, at the local library indicated above, and the IDEM public file room on the 12th floor of the Indiana Government Center North, 100 N. Senate Avenue, Indianapolis, Indiana 46204-2251.

If you have any questions, please contact David Matousek of my staff at the above address.

Nathan C. Bell, Section Chief
Permits Branch
Office of Air Quality

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Part 70 Operating Permit Renewal
OFFICE OF AIR QUALITY

DRAFT

Indianapolis Airport Authority
2825 West Perimeter Road and 7800 Col. Weir Cook Drive
Indianapolis, Indiana 46241

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T097-35016-00156	
Issued by: Nathan C. Bell, Section Chief Permits Branch Office of Air Quality	Issuance Date: Expiration Date:

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(14)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary airfield, aerospace maintenance center, and a central energy plant.

Source Address:	2825 West Perimeter Road and 7800 Col. Weir Cook Drive, Indianapolis, Indiana 46241
General Source Phone Number:	(317) 487-5070
SIC Code:	4581 (Airports, Flying Fields, and Airport Terminal Services) 4961 (Steam and Air Conditioning Supply)
County Location:	Marion County, Decatur and Wayne Township
Source Location Status:	Nonattainment for SO_2 standard Attainment for all other criteria pollutants
Source Status:	Part 70 Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Nested Source with fossil fuel fired boilers (or combinations thereof) totaling more than two hundred fifty million (250,000,000) British thermal units per hour heat input, as 1 of 28 Source Categories

A.2 Source Definition [326 IAC 2-7-1(22)]

This collocated airfield, aerospace vehicle maintenance center and central energy plant source consists of five (5) plants:

(a) Plant 1, Indianapolis Airport Authority (097-00156), is located at 2825 West Perimeter Road, Indianapolis, Indiana 46241 and 7800 Col. H. Weir Cook Memorial Drive (and various collocated addresses), Indianapolis, Indiana 46241;

(b) Plant 2, Johnson Melloh Solutions - IMC Central Energy Plant (097-00586), is located at 2745 South Hoffman Road, Suite 504, Indianapolis, Indiana 46241;

(c) Plant 3, AAR Aircraft Services, Indianapolis (097-00559), is located at 2825 West Perimeter Road, Indianapolis, Indiana 46241;

(d) Plant 5, Shuttle America Corporation (097-00668), is located at 2745 South Hoffman Road, Dock 67, Hangar 7A-7B, Indianapolis, IN 46241; and

(e) Plant 6, ASIG Aircraft Services International Group (097-00667), is located at 2050 Hoffman Road, Indianapolis, IN 46241.

IDEM, OAQ has determined that since the five (5) plants are located on contiguous or adjacent properties and are under common control of the same entity, the Indianapolis Airport Authority (IAA), they will be considered one (1) source.

A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(14)]

This stationary source, Plant 1, located at 2825 West Perimeter Road, Indianapolis, Indiana 46241 and 7800 Col. H. Weir Cook Memorial Drive, Indianapolis, Indiana 46241, consists of the following emission units and pollution control devices:

(a) Two (2) reciprocating internal combustion engine emergency generators in the New Indianapolis Airport Terminal located at 7800 Col. H. Weir Cook Memorial Drive, identified as emission unit 013 and emission unit 014. Each engine is diesel fuel-fired, compression ignition and rated at 2200 horsepower. Emission unit 013 exhausts to stack/vent V1 and emission unit 014 exhausts to stack/vent V2. Each engine was approved in 2008 for construction. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

A.4 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(14)]

This stationary source, Plant 1, located at 2825 West Perimeter Road, Indianapolis, Indiana 46241 and 7800 Col. H. Weir Cook Memorial Drive, Indianapolis, Indiana 46241, consists of the following specifically regulated insignificant activities, as defined in 326 IAC 2-7-1(21):

(a) One (1) reciprocating internal combustion engine emergency generator in Fire Station #1, located at 8300 North Service Road, identified as emission unit 015. Emission unit 015 is diesel fuel-fired, compression ignition and rated at 840 horsepower. Emission unit 015 exhausts to stack/vent V3. Emission unit 015 was approved in 2008 for construction and has a manufacturing date of 2007. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(b) One (1) reciprocating internal combustion engine emergency generator in the New Indianapolis Airport Parking Garage, located at 7801 Airport Terminal Drive identified as emission unit 016. Emission unit 016 is diesel fuel-fired, compression ignition and rated at 1495 horsepower. Emission unit 016 exhausts to stack/vent V4A and V4B. Emission unit 016 was approved in 2008 for construction and has a manufacturing date of 2006. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(c) One (1) reciprocating internal combustion engine emergency generator in the Airport Operations Center - Emergency Operations Center (AOC-EOC), located at 8101 South Service Road identified as emission unit 018. Emission unit 018 is diesel fuel-fired, compression ignition and rated at 1528 horsepower. Emission unit 018 exhausts to stack/vent V6. Emission unit 018 was approved in 2008 for construction. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(d) One (1) reciprocating internal combustion engine emergency generator in Parking Access Revenue Control (PARC), located at 8081 Col. H. Weir Cook Memorial Drive identified as emission unit 021. Emission unit 021 is diesel fuel-fired, compression ignition and rated at 133 horsepower. Emission unit 021 exhausts to stack/vent V7. Emission unit 021 was approved in 2008 for construction. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(e) One (1) Caterpillar Standby 500 diesel-fired emergency generator identified as Caterpillar Standby 500, rated at 831 horsepower, located in the Midfield Electrical Vault. This emergency generator is a replacement of an existing 750 horsepower generator. Approved in 2007 for construction. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(f) The following degreasing operation that does not individually exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6: One (1) System One cold cleaner degreaser located in the Airfield Maintenance Building at 2500 South High School Road. [326 IAC 8-3-2] [326 IAC 8-3-8] [326 IAC 6.5]

(g) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, including but not limited to the following:

(1) One (1) Kewanee boiler, identified as hot water heater, identified as emission unit #4, approved in 2007 for construction, with maximum heat input capacity of 8.998 million Btu per hour, located in the Airfield Maintenance building at 2500 South High School Road. [326 IAC 6.5]

(2) One (1) Weil McClain boiler, identified as hot water heater, identified as emission unit #5, approved in 2007 for construction, with maximum heat input capacity of 2.247 million Btu per hour, located in the International Arrivals building at 2500 South High School Road. [326 IAC 6.5]

(3) Two (2) natural gas fired boilers in the Airport Operations Center-Emergency Operations Center (AOC-EOC), located at 8101 South Service Road identified as emission unit 019 and 020. Each boiler is rated at 1.0 million Btu per hour. Emission unit 019 and emission unit 020 were approved in 2008 for construction. [326 IAC 6.5]

(4) One (1) boiler, identified as emission unit 23, permitted in 2010, with a maximum heat input capacity of 3 MMBtu/hr, burning natural gas, and located in the Airfield Maintenance Building at 7800 Col. H. Weir Cook Memorial Drive [326 IAC 6.5]

(h) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]

(i) One (1) reciprocating internal combustion engine emergency generator at Terminal Fire Pumps located at 7800 Col. H. Cook Memorial Drive, identified as emission unit 024. Emission unit 024 is diesel fuel-fired, rated at 755 horsepower, approved in 2008 for construction, with a manufacture date of 2008. [40 CFR 60, Subpart IIII] [326 IAC 6.5]

(j) One (1) reciprocating internal combustion engine diesel-fired emergency generator, approved in 2012 for construction with a manufacture date of 1994, identified as emission unit 025, located at Building 60 at 7800 Col. H. Weir Cook Memorial Drive, with a maximum capacity of 380 hp. [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(k) One (1) reciprocating internal combustion engine diesel-fired emergency generator, approved in 2012 for construction, identified as emission unit 026, located at Fire House #2 at 7800 Col. H. Weir Cook Memorial Drive, with a maximum capacity of 476 hp. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(l) One (1) reciprocating internal combustion engine diesel-fired emergency generator, located at Eagle Hub, 7800 Col. H. Weir Cook Memorial Drive. The Eagle Hub Generator is diesel fuel-fired, rated at 2025 horsepower, approved in 1992 for construction. [40 CFR 60, Subpart ZZZZ] [326 IAC 6.5]

(m) The following diesel emergency generators not exceeding one thousand six hundred (1600) horsepower located at 7800 Col. H. Weir Cook Memorial Drive, construction commenced prior to July 11, 2005:

(1) One (1) Caterpillar-Perkins emergency generator, identified as EG2, rated at 70 horsepower, located in the Old South Tug Guard Shack.
[40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(2) One (1) Caterpillar-Perkins emergency generator, identified as EG3, rated at 70 horsepower, located at international arrivals. [40 CFR 63, Subpart ZZZZ]
[326 IAC 6.5]

(3) One (1) Caterpillar-Perkins emergency generator, identified as EG4, rated at 70 horsepower, located in the Midfield Road Access Gate.
[40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(4) One (1) Cummins Model 1010 Straight 6 emergency generator, identified as EG6, rated at 750 horsepower, located in the Airfield Maintenance Electrical Vault. [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(5) One (1) Generac Model 2000 emergency generator, identified as EG7, rated at 340 horsepower, located in the Airfield Maintenance building.
[40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(n) One (1) paint booth, identified as emission unit Paint Booth, equipped with two (2) HVLP paint systems used to paint maintenance equipment, equipped with dry filters, installed in 1974, located in the Airfield Maintenance building at 7800 Col. H Weir Cook Memorial Drive. [326 IAC 6.5]

A.5 Insignificant Activities [326 IAC 2-7-1(21)]

This stationary source, Plant 1, located at 2825 West Perimeter Road, Indianapolis, Indiana 46241 and 7800 Col. H. Weir Cook Memorial Drive, Indianapolis, Indiana 46241, consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21), that are not specifically regulated:

(a) One (1) No. 6 Recycled Oil Storage Tank, identified as Stand A, with a maximum capacity of 840,000 gallons, with a floating roof, and constructed in 1978, prior to May 19, 1978.

A.6 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5] [326 IAC 2-7-4(a)(1)(D)] [IC 13-15-3-6(a)]

(a) This permit, T097-35016-00156, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

B.3 Term of Conditions [326 IAC 2-1.1-9.5]

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

(a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or

(b) the emission unit to which the condition pertains permanently ceases operation.

B.4 Enforceability [326 IAC 2-7-7] [IC 13-17-12]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Severability [326 IAC 2-7-5(5)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

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

B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]

(a) A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:

(1) it contains a certification by a "responsible official" as defined by 326 IAC 2-7-1(35), and

(2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

(c) A "responsible official" is defined at 326 IAC 2-7-1(35).

B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and

(5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(12)] [326 IAC 1-6-3]

(a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

The Permittee shall implement the PMPs.

(b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

The Permittee shall implement the PMPs.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.11 Emergency Provisions [326 IAC 2-7-16]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(8) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.

(g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

B.12 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]

(a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

(b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.

(c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.

(d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:

(1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;

(2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;

(3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and

(4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.

(e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).

(f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]

(g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5] [326 IAC 2-7-10.5]

(a) All terms and conditions of permits established prior to T097-35016-00156 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised under 326 IAC 2-7-10.5, or

(3) deleted under 326 IAC 2-7-10.5.

(b) Provided that all terms and conditions are accurately reflected in this permit, all previous registrations and permits are superseded by this Part 70 operating permit.

B.14 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]

(c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.16 Permit Renewal [326 IAC 2-7-3] [326 IAC 2-7-4] [326 IAC 2-7-8(e)]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(42). The renewal application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(b) A timely renewal application is one that is:

(1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12(b)(2)]

(a) No Part 70 permit revision or notice shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.

(b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.19 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b) or (c) without a prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;

(3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b)(1) and (c)(1). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-7-20(b)(1) and (c)(1).

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(37)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

(1) A brief description of the change within the source;

(2) The date on which the change will occur;

(3) Any change in emissions; and

(4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).

(d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ or U.S. EPA is required.

(e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.20 Source Modification Requirement [326 IAC 2-7-10.5]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.21 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2] [IC 13-30-3-1] [IC 13-17-3-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)] [326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

(b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.24 Credible Evidence [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [62 FR 8314] [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-7-5(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-1(3), 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4, and 326 IAC 1-7-5(a), (b), and (d) are not federally enforceable.

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Demolition and Renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

(g) Indiana Licensed Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-7-6(1)]

C.8 Performance Testing [326 IAC 3-6]

(a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.9 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.10 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

(a) For new units:
Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units shall be implemented on and after the date of initial start-up.

(b) For existing units:
Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance to begin such monitoring. If, due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

C.11 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale. The analog instrument shall be capable of measuring values outside of the normal range.

(b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.12 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee shall maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.13 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

C.14 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

(a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to normal or usual manner of operation.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records; and/or

(3) inspection of the control device, associated capture system, and the process.

(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

(e) The Permittee shall record the reasonable response steps taken.

C.15 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ no later than seventy-five (75) days after the date of the test.

(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.16 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]

Pursuant to 326 IAC 2-6-3(b)(2), starting in 2005 and every three (3) years thereafter, the Permittee shall submit by July 1 an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

(1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);

(2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(33) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule") from the source, for purpose of fee assessment.

The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue
MC 61-50 IGCN 1003
Indianapolis, Indiana 46204-2251

The emission statement does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

C.17 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. Support information includes the following, where applicable:

(AA) All calibration and maintenance records.

(BB) All original strip chart recordings for continuous monitoring instrumentation.

(CC) Copies of all reports required by the Part 70 permit.

Records of required monitoring information include the following, where applicable:

(AA) The date, place, as defined in this permit, and time of sampling or measurements.

(BB) The dates analyses were performed.
(CC) The company or entity that performed the analyses.

(DD) The analytical techniques or methods used.

(EE) The results of such analyses.

(FF) The operating conditions as existing at the time of sampling or measurement.

These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

C.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B -Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

(b) The address for report submittal is:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit “calendar year” means the twelve (12) month period from January 1 to December 31 inclusive.

Stratospheric Ozone Protection

C.19 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with applicable standards for recycling and emissions reduction.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Descriptions:

(a) Two (2) reciprocating internal combustion engine emergency generators in the New Indianapolis Airport Terminal located at 7800 Col. H. Weir Cook Memorial Drive, identified as emission unit 013 and emission unit 014. Each engine is diesel fuel-fired, compression ignition and rated at 2200 horsepower. Emission unit 013 exhausts to stack/vent V1 and emission unit 014 exhausts to stack/vent V2. Each engine was approved in 2008 for construction. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

Insignificant Activities:

(a) One (1) reciprocating internal combustion engine emergency generator in Fire Station #1, located at 8300 North Service Road, identified as emission unit 015. Emission unit 015 is diesel fuel-fired, compression ignition and rated at 840 horsepower. Emission unit 015 exhausts to stack/vent V3. Emission unit 015 was approved in 2008 for construction and has a manufacturing date of 2007. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(b) One (1) reciprocating internal combustion engine emergency generator in the New Indianapolis Airport Parking Garage, located at 7801 Airport Terminal Drive identified as emission unit 016. Emission unit 016 is diesel fuel-fired, compression ignition and rated at 1495 horsepower. Emission unit 016 exhausts to stack/vent V4A and V4B. Emission unit 016 was approved in 2008 for construction and has a manufacturing date of 2006. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(c) One (1) reciprocating internal combustion engine emergency generator in the Airport Operations Center - Emergency Operations Center (AOC-EOC), located at 8101 South Service Road identified as emission unit 018. Emission unit 018 is diesel fuel-fired, compression ignition and rated at 1528 horsepower. Emission unit 018 exhausts to stack/vent V6. Emission unit 018 was approved in 2008 for construction. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(d) One (1) reciprocating internal combustion engine emergency generator in Parking Access Revenue Control (PARC), located at 8081 Col. H. Weir Cook Memorial Drive identified as emission unit 021. Emission unit 021 is diesel fuel-fired, compression ignition and rated at 133 horsepower. Emission unit 021 exhausts to stack/vent V7. Emission unit 021 was approved in 2008 for construction. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(e) One (1) Caterpillar Standby 500 diesel-fired emergency generator identified as Caterpillar Standby 500, rated at 831 horsepower, located in the Midfield Electrical Vault. This emergency generator is a replacement of an existing 750 horsepower generator. Approved in 2007 for construction. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(f) The following degreasing operation that does not individually exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6: One (1) System One cold cleaner degreaser located in the Airfield Maintenance Building at 2500 South High School Road. [326 IAC 8-3-2] [326 IAC 8-3-8] [326 IAC 6.5]

(g) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, including but not limited to the following:

(1) One (1) Kewanee boiler, identified as hot water heater, identified as emission unit #4, approved in 2007 for construction, with maximum heat input capacity of 8.998 million Btu per hour, located in the Airfield Maintenance building at 2500 South High School Road. [326 IAC 6.5]

(2) One (1) Weil McClain boiler, identified as hot water heater, identified as emission unit #5, approved in 2007 for construction, with maximum heat input capacity of 2.247 million Btu per hour, located in the International Arrivals building at 2500 South High School Road. [326 IAC 6.5]

(3) Two (2) natural gas fired boilers in the Airport Operations Center-Emergency Operations Center (AOC-EOC), located at 8101 South Service Road identified as emission unit 019 and 020. Each boiler is rated at 1.0 million Btu per hour. Emission unit 019 and emission unit 020 were approved in 2008 for construction. [326 IAC 6.5]

(4) One (1) boiler, identified as emission unit 23, permitted in 2010, with a maximum heat input capacity of 3 MMBtu/hr, burning natural gas, and located in the Airfield Maintenance Building at 7800 Col. H. Weir Cook Memorial Drive [326 IAC 6.5]

(i) One (1) reciprocating internal combustion engine emergency generator at Terminal Fire Pumps located at 7800 Col. H. Cook Memorial Drive, identified as emission unit 024. Emission unit 024 is diesel fuel-fired, rated at 755 horsepower, approved in 2008 for construction, with a manufacture date of 2008. [40 CFR 60, Subpart IIII] [326 IAC 6.5]

(j) One (1) reciprocating internal combustion engine diesel-fired emergency generator, approved in 2012 for construction with a manufacture date of 1994, identified as emission unit 025, located at Building 60 at 7800 Col. H. Weir Cook Memorial Drive, with a maximum capacity of 380 hp. [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(k) One (1) reciprocating internal combustion engine diesel-fired emergency generator, approved in 2012 for construction, identified as emission unit 026, located at Fire House #2 at 7800 Col. H. Weir Cook Memorial Drive, with a maximum capacity of 476 hp. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(l) One (1) reciprocating internal combustion engine diesel-fired emergency generator, located at Eagle Hub, 7800 Col. H. Weir Cook Memorial Drive. The Eagle Hub Generator is diesel fuel-fired, rated at 2025 horsepower, approved in 1992 for construction. [40 CFR 60, Subpart ZZZZ] [326 IAC 6.5]

(m) The following diesel emergency generators not exceeding one thousand six hundred (1600) horsepower located at 7800 Col. H. Weir Cook Memorial Drive, construction commenced prior to July 11, 2005:

(1) One (1) Caterpillar-Perkins emergency generator, identified as EG2, rated at 70 horsepower, located in the Old South Tug Guard Shack. [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(2) One (1) Caterpillar-Perkins emergency generator, identified as EG3, rated at 70 horsepower, located at international arrivals. [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(3) One (1) Caterpillar-Perkins emergency generator, identified as EG4, rated at 70 horsepower, located in the Midfield Road Access Gate. [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(4) One (1) Cummins Model 1010 Straight 6 emergency generator, identified as EG6, rated at 750 horsepower, located in the Airfield Maintenance Electrical Vault. [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(5) One (1) Generac Model 2000 emergency generator, identified as EG7, rated at 340 horsepower, located in the Airfield Maintenance building. [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(n) One (1) paint booth, identified as emission unit Paint Booth, equipped with two (2) HVLP paint systems used to paint maintenance equipment, equipped with dry filters, installed in 1974, located in the Airfield Maintenance building at 7800 Col. H Weir Cook Memorial Drive. [326 IAC 6.5]

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Volatile Organic Compound (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold cleaner degreaser control equipment and operating requirements), for cold cleaning operations constructed after January 1, 1980, the Permittee shall comply with the following:

(a) The owner or operator of a cold cleaner degreaser shall ensure the following control equipment and operating requirements are met:

(1) Equip the degreaser with a cover;

(2) Equip the degreaser with a device for draining cleaned parts;

(3) Close the degreaser cover whenever parts are not being handled in the degreaser;

(4) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

(5) Provide a permanent, conspicuous label that lists the operation requirements in subdivisions (3), (4), (6), and (7);

(6) Store waste solvent only in closed containers.

(7) Prohibit the disposal or transfer of waste solvent in such a manner that could allow greater than twenty percent (20%) of the waste solvent (by weight) to evaporate into the atmosphere.

(b) The owner or operator of a cold cleaner degreaser subject to this subsection shall ensure the following additional control equipment and operating requirements are met:

(1) Equip the degreaser with one (1) of the following control devices if the solvent is heated to a temperature of greater than forty-eight and nine-tenths (48.9) degrees Celsius (one hundred twenty (120) degrees Fahrenheit):

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

(B) A water cover when solvent used is insoluble in, and heavier than, water.

(C) A refrigerated chiller.

(D) Carbon adsorption.

(E) An alternative system of demonstrated equivalent or better control as those outlined in clauses (A) through (D) that is approved by the department. An alternative system shall be submitted to the U.S. EPA as a SIP revision.

(2) Ensure the degreaser cover is designed so that it can be easily operated with one (1) hand if the solvent is agitated or heated.

(3) If used, solvent spray:

(A) must be a solid, fluid stream; and

(B) shall be applied at a pressure that does not cause excessive splashing.

D.1.2 Material Requirements for Cold Cleaner Degreasers [326 IAC 8-3-8]

Pursuant to 326 IAC 8-3-8, on and after January 1, 2015, the Permittee shall not operate a cold cleaner degreaser with a solvent that has a VOC composite partial vapor pressure that exceeds one (1) millimeter of mercury (nineteen-thousandths (0.019) pound per square inch) measured at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

D.1.3 Particulate Matter (PM) [326 IAC 6.5]

(a) Pursuant to 326 IAC 6.5-1-2(b)(3), particulate matter (PM) emissions from the following emission units shall not exceed 0.01 grain per dry standard cubic foot:

(1) Kewanee boiler, emission unit #4;

(2) Weil McClain boiler, emission unit #5;

(3) Two (2) natural gas boilers in the Airport Operations Center - Emergency Operations Center (AOC-EOC), emission units 019 and 020; and

(4) One (1) boiler, identified as emission unit 23, located at the Airfield Maintenance Center.

(b) Pursuant to 326 IAC 6.5-1-2(h), the surface coating operation, identified as Paint Booth shall be controlled by a dry particulate filter, waterwash, or an equivalent control device operated in accordance with the manufacturer's specifications.

(c) Pursuant to 326 IAC 6.5-1-2(a), particulate matter (PM) emissions from the following diesel fuel-fired emergency RICE generator sets shall not exceed 0.03 grain per dry standard cubic foot:

(1) Emission units 013 and 014 located in the new terminal;

(2) Emission unit 015 located in Fire Station #1;

(3) Emission unit 016 located in the new parking garage;

(4) Emission unit 018 located in the AOC-EOC;

(5) Emission unit 021 located in Parking Access Revenue Control;

(6) Emission unit Caterpillar Standby 500 located in the Midfield Electrical Vault;

(7) Emission unit 024 located at the Terminal fire Pumps;

(8) Emission unit 025 located in Building 60;

(9) Emission unit 026 located at Fire House #2;

(10) Emission unit Eagle Hub Generator located at the Eagle Hub;

(11) Emission unit EG2 located in the Old South Tug Guard Shack;

(12) Emission unit EG3 located at international arrivals;

(13) Emission unit EG4 located at the Midfield Road Access Gate;

(14) Emission unit EG6 located at the Airfield Maintenance Electrical Vault; and

(15) Emission unit EG7 located at the Airfield Maintenance Building.

D.1.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the facilities listed in this section and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.1.5 Monitoring

(a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the surface coating operation, identified as Paint Booth while the booth is in operation. If a condition exists which should result in a response, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response required by this condition. Failure to take a reasonable response shall be considered a deviation from this permit.

(b) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. When there is a noticeable change in overspray emissions, or when evidence of overspray emissions is observed, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response required by this condition. Failure to take a reasonable response shall be considered a deviation from this permit.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.6 Record Keeping Requirements [326 IAC 8-3-8]

(a) To document the compliance status with Condition D.1.2, the Permittee shall maintain the following records for each solvent purchase:

(1) The name and address of the solvent supplier

(2) The date of purchase (or invoice/bill date of contract servicer indicating service date;

(3) The type of solvent purchased;

(4) The total volume of solvent purchased; and

(5) The true vapor pressure of the solvent measured in millimeters of mercury at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

(b) To document the compliance status with Condition D.1.5(a) and D.1.5(b), the Permittee shall maintain a log of weekly overspray observations, daily and monthly inspections. The Permittee shall include in its log of weekly overspray observations, daily and monthly inspections when an overspray observation or inspection is not taken and the reason for the lack of an overspray observation or inspection (e.g., the process did not operate that day).

(c) Section C – General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

SECTION E.1 FACILITY OPERATION CONDITIONS - 40 CFR 60, Subpart IIII

Emissions Unit Description:

(a) Two (2) reciprocating internal combustion engine emergency generators in the New Indianapolis Airport Terminal located at 7800 Col. H. Weir Cook Memorial Drive, identified as emission unit 013 and emission unit 014. Each engine is diesel fuel-fired, compression ignition and rated at 2200 horsepower. Emission unit 013 exhausts to stack/vent V1 and emission unit 014 exhausts to stack/vent V2. Each engine was approved in 2008 for construction. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

Insignificant Activities:

(a) One (1) reciprocating internal combustion engine emergency generator in Fire Station #1, located at 8300 North Service Road, identified as emission unit 015. Emission unit 015 is diesel fuel-fired, compression ignition and rated at 840 horsepower. Emission unit 015 exhausts to stack/vent V3. Emission unit 015 was approved in 2008 for construction and has a manufacturing date of 2007. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(b) One (1) reciprocating internal combustion engine emergency generator in the New Indianapolis Airport Parking Garage, located at 7801 Airport Terminal Drive identified as emission unit 016. Emission unit 016 is diesel fuel-fired, compression ignition and rated at 1495 horsepower. Emission unit 016 exhausts to stack/vent V4A and V4B. Emission unit 016 was approved in 2008 for construction and has a manufacturing date of 2006. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(c) One (1) reciprocating internal combustion engine emergency generator in the Airport Operations Center - Emergency Operations Center (AOC-EOC), located at 8101 South Service Road identified as emission unit 018. Emission unit 018 is diesel fuel-fired, compression ignition and rated at 1528 horsepower. Emission unit 018 exhausts to stack/vent V6. Emission unit 018 was approved in 2008 for construction. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(d) One (1) reciprocating internal combustion engine emergency generator in Parking Access Revenue Control (PARC), located at 8081 Col. H. Weir Cook Memorial Drive identified as emission unit 021. Emission unit 021 is diesel fuel-fired, compression ignition and rated at 133 horsepower. Emission unit 021 exhausts to stack/vent V7. Emission unit 021 was approved in 2008 for construction. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(e) One (1) Caterpillar Standby 500 diesel-fired emergency generator identified as Caterpillar Standby 500, rated at 831 horsepower, located in the Midfield Electrical Vault. This emergency generator is a replacement of an existing 750 horsepower generator. Approved in 2007 for construction. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(i) One (1) reciprocating internal combustion engine emergency generator at Terminal Fire Pumps located at 7800 Col. H. Cook Memorial Drive, identified as emission unit 024. Emission unit 024 is diesel fuel-fired, rated at 755 horsepower, approved in 2008 for construction, with a manufacture date of 2008. [40 CFR 60, Subpart IIII] [326 IAC 6.5]

(k) One (1) reciprocating internal combustion engine diesel-fired emergency generator, approved in 2012 for construction, identified as emission unit 026, located at Fire House #2 at 7800 Col. H. Weir Cook Memorial Drive, with a maximum capacity of 476 hp. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

New Source Performance Standards [40 CFR 60] [326 IAC 12]

E.1.1 General Provisions Relating to New Source Performance Standards [40 CFR 60, Subpart A] [326 IAC 12-1]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1 for the facilities listed in this section except as otherwise specified in 40 CFR Part 60, Subpart IIII.

(b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue,
Indianapolis, Indiana 46204

E.1.2 Standards of Performance for Stationary Compression Ignition Internal Combustion Engines [40 CFR 60, Subpart IIII] [326 IAC 12]

Pursuant to 40 CFR 60, Subpart IIII, the Permittee shall comply with the following provisions of 40 CFR 60, Subpart IIII (included as Attachment A to this permit), which are incorporated by reference as 326 IAC 12, for the facilities described in this section:

(a) Emission unit EU016, with a pre-model year 2007 engine with a displacement of less than 10 liters per cylinder and not a fire pump engine is subject to the following portions of 40 CFR 60, Subpart IIII:

(1) 40 CFR 60.4200(a)(2), and (a)(4);
(2) 40 CFR 60.4203;
(3) 40 CFR 60.4205(a);
(4) 40 CFR 60.4206;
(5) 40 CFR 60.4207(b), and (d);
(6) 40 CFR 60.4209(a);
(7) 40 CFR 60.4211(a), (b)(3), (f)(1), (f)(2)(i), and (f)(3);
(8) 40 CFR 60.4214(b);
(9) 40 CFR 60.4218;
(10) 40 CFR 60.4219;
(11) Table 1; and
(12) Table 8.

(b) Emission units EU013, EU014, EU015, EU018, EU021, Standby 500, and EU024, with model year 2007 through 2010 engines, with a displacement of less than 10 liters per cylinder and not fire pump engines are subject to the following portions of 40 CFR 60, Subpart IIII:

(1) 40 CFR 60.4200(a)(2), and (a)(4);
(2) 40 CFR 60.4203;
(3) 40 CFR 60.4205(b);
(4) 40 CFR 60.4206;
(5) 40 CFR 60.4207(b), and (d);
(6) 40 CFR 60.4209(a);
(7) 40 CFR 60.4211(a), (c), (f)(1), (f)(2)(i), and (f)(3);
(8) 40 CFR 60.4214(b);
(9) 40 CFR 60.4218;
(10) 40 CFR 60.4219;
(11) Table 2;
(12) Table 5; and
(13) Table 8.

(c) Emission unit EU026, with a model year 2011 and later engine, with a displacement of less than 10 liters per cylinder and not a fire pump engine is subject to the following portions of 40 CFR 60, Subpart IIII:

(1) 40 CFR 60.4200(a)(2), and (a)(4);
(2) 40 CFR 60.4203;
(3) 40 CFR 60.4205(b);
(4) 40 CFR 60.4206;
(5) 40 CFR 60.4207(b), and (d);
(6) 40 CFR 60.4209(a);
(7) 40 CFR 60.4211(a), (c), (f)(1), (f)(2)(i), and (f)(3);
(8) 40 CFR 60.4214(b);
(9) 40 CFR 60.4218;
(10) 40 CFR 60.4219;
(11) Table 2;
(12) Table 5; and
(13) Table 8.

SECTION E.2 FACILITY OPERATION CONDITIONS - 40 CFR 63, Subpart ZZZZ

Emissions Unit Description: Insignificant Activities:

(a) One (1) reciprocating internal combustion engine emergency generator in Fire Station #1, located at 8300 North Service Road, identified as emission unit 015. Emission unit 015 is diesel fuel-fired, compression ignition and rated at 840 horsepower. Emission unit 015 exhausts to stack/vent V3. Emission unit 015 was approved in 2008 for construction and has a manufacturing date of 2007. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(b) One (1) reciprocating internal combustion engine emergency generator in the New Indianapolis Airport Parking Garage, located at 7801 Airport Terminal Drive identified as emission unit 016. Emission unit 016 is diesel fuel-fired, compression ignition and rated at 1495 horsepower. Emission unit 016 exhausts to stack/vent V4A and V4B. Emission unit 016 was approved in 2008 for construction and has a manufacturing date of 2006. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(c) One (1) reciprocating internal combustion engine emergency generator in the Airport Operations Center - Emergency Operations Center (AOC-EOC), located at 8101 South Service Road identified as emission unit 018. Emission unit 018 is diesel fuel-fired, compression ignition and rated at 1528 horsepower. Emission unit 018 exhausts to stack/vent V6. Emission unit 018 was approved in 2008 for construction. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(d) One (1) reciprocating internal combustion engine emergency generator in Parking Access Revenue Control (PARC), located at 8081 Col. H. Weir Cook Memorial Drive identified as emission unit 021. Emission unit 021 is diesel fuel-fired, compression ignition and rated at 133 horsepower. Emission unit 021 exhausts to stack/vent V7. Emission unit 021 was approved in 2008 for construction. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(e) One (1) Caterpillar Standby 500 diesel-fired emergency generator identified as Caterpillar Standby 500, rated at 831 horsepower, located in the Midfield Electrical Vault. This emergency generator is a replacement of an existing 750 horsepower generator. Approved in 2007 for construction. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(j) One (1) reciprocating internal combustion engine diesel-fired emergency generator, approved in 2012 for construction with a manufacture date of 1994, identified as emission unit 025, located at Building 60 at 7800 Col. H. Weir Cook Memorial Drive, with a maximum capacity of 380 hp. [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(k) One (1) reciprocating internal combustion engine diesel-fired emergency generator, approved in 2012 for construction, identified as emission unit 026, located at Fire House #2 at 7800 Col. H. Weir Cook Memorial Drive, with a maximum capacity of 476 hp. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(l) One (1) reciprocating internal combustion engine diesel-fired emergency generator, located at Eagle Hub, 7800 Col. H. Weir Cook Memorial Drive. The Eagle Hub Generator is diesel fuel-fired, rated at 2025 horsepower, approved in 1992 for construction. [40 CFR 60, Subpart ZZZZ] [326 IAC 6.5]

(m) The following diesel emergency generators not exceeding one thousand six hundred (1600) horsepower located at 7800 Col. H. Weir Cook Memorial Drive, construction commenced prior to July 11, 2005:

(1) One (1) Caterpillar-Perkins emergency generator, identified as EG2, rated at 70 horsepower, located in the Old South Tug Guard Shack. [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(2) One (1) Caterpillar-Perkins emergency generator, identified as EG3, rated at 70 horsepower, located at international arrivals. [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(3) One (1) Caterpillar-Perkins emergency generator, identified as EG4, rated at 70 horsepower, located in the Midfield Road Access Gate. [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(4) One (1) Cummins Model 1010 Straight 6 emergency generator, identified as EG6, rated at 750 horsepower, located in the Airfield Maintenance Electrical Vault. [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(5) One (1) Generac Model 2000 emergency generator, identified as EG7, rated at 340 horsepower, located in the Airfield Maintenance building. [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

National Emission Standards for Hazardous Air Pollutants [40 CFR 63] [326 IAC 20-82]

E.2.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants [40 CFR 63, Subpart A] [326 IAC 20-1]

(a) Pursuant to 40 CFR 63.6580, the Permittee shall comply with the provisions of 40 CFR 63, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 20-1, for the facilities described in this section as specified in 40 CFR 63, Subpart ZZZZ in accordance with the schedule in 40 CFR 63, Subpart ZZZZ.

(b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue,
Indianapolis, Indiana 46204

E.2.2 National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [40 CFR 63, Subpart ZZZZ] [326 IAC 20-82]

Pursuant to 40 CFR 63, Subpart ZZZZ, the Permittee shall comply with the provisions of 40 CFR 63, Subpart ZZZZ (included as Attachment B to this permit), which are incorporated by reference as 326 IAC 20-82 for the facilities described in this section, as follows:

(a) New stationary RICE, identified as emission units EU013, EU014, EU015, EU016, EU018, EU021, Standby 500, EU024, and EU0026 are subject to the following portions of 40 CFR, Subpart ZZZZ:

(1) 40 CFR 63.6580;
(2) 40 CFR 63.6585(a), and (c);
(3) 40 CFR 63.6590(a)(2)(iii), and (c)(1);
(4) 40 CFR 63.6665;
(5) 40 CFR 63.6670; and
(6) 40 CFR 63.6675.

(b) Existing stationary RICE, identified as Eagle Hub, Cummins Model 1010, EU025, EG2, EG3, EG4, and EG7 are subject to the following portions of 40 CFR, Subpart ZZZZ:

(1) 40 CFR 63.6580;
(2) 40 CFR 63.6585(a), and (c);
(3) 40 CFR 63.6590(a)(1)(iii);
(4) 40 CFR 63.6595(a)(1) and (c);
(5) 40 CFR 63.6603(a);
(6) 40 CFR 63.6605;
(7) 40 CFR 63.6625(e)(3), (f), (h), and (i);
(8) 40 CFR 63.6635
(9) 40 CFR 63.6640(a), (b), (e), (f)(1), (f)(2)(i), and (f)(4);
(10) 40 CFR 63.6645(a)(5);
(11) 40 CFR 63.6650(f)
(12) 40 CFR 63.6655(d), (e)(2), and (f);
(13) 40 CFR 63.6660
(14) 40 CFR 63.6665;
(15) 40 CFR 63.6670;
(16) 40 CFR 63.6675;
(17) Table 2d (item: 4);
(18) Table 6 (item: 9); and
(19) Table 8.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
CERTIFICATION

Source Name: Indianapolis Airport Authority
Source Address: 2825 West Perimeter Road and 7800 Col. Weir Cook Drive
Indianapolis, Indiana 46241
Part 70 Permit No.: T097-35016-00156

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

☐ Annual Compliance Certification Letter

☐ Test Result (specify)

☐ Report (specify)

☐ Notification (specify)

☐ Affidavit (specify)

☐ Other (specify)

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

Signature:

Printed Name:

Title/Position:

Phone:

Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: (317) 233-0178
Fax: (317) 233-6865

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: Indianapolis Airport Authority
Source Address: 2825 West Perimeter Road and 7800 Col. Weir Cook Drive
Indianapolis, Indiana 46241
Part 70 Permit No.: T097-35016-00156

This form consists of 2 pages **Page 1 of 2**

□ This is an emergency as defined in 326 IAC 2-7-1(12)

- The Permittee must notify the Office of Air Quality (OAQ), within four (**4**) daytime business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
- The Permittee must submit notice in writing or by facsimile within two (**2**) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by:_____

Title / Position: _____

Date:_____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Indianapolis Airport Authority
Source Address: 2825 West Perimeter Road and 7800 Col. Weir Cook Drive
Indianapolis, Indiana 46241
Part 70 Permit No.: T097-35016-00156

Months: _____ **to** _____ **Year:** _____

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B -Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C-General Reporting. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Page 2 of 2

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed by:_____

Title / Position: _____

Date:_____

Phone: _____

Attachment A

Part 70 Operating Permit Renewal No: T097-35016-00156

[Downloaded from the eCFR on September 30, 2014]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

SOURCE: 71 FR 39172, July 11, 2006, unless otherwise noted.

What This Subpart Covers

§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) and other persons as specified in paragraphs (a)(1) through (4) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

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

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

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

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

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

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

(3) Owners and operators of any stationary CI ICE that are modified or reconstructed after July 11, 2005 and any person that modifies or reconstructs any stationary CI ICE after July 11, 2005.

(4) The provisions of §60.4208 of this subpart are applicable to all owners and operators of stationary CI ICE that commence construction 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.

(e) Owners and operators of facilities with CI ICE that are acting as temporary replacement units and that are located at a stationary source for less than 1 year and that have been properly certified as meeting the standards that would be applicable to such engine under the appropriate nonroad engine provisions, are not required to meet any other provisions under this subpart with regard to such engines.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37967, June 28, 2011]

Emission Standards for Manufacturers

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

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 kilowatt (KW) (3,000 horsepower (HP)) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 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, for all pollutants, for the same model year and maximum engine power.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 through 2010 model year non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(c) Stationary CI internal combustion engine manufacturers must certify their 2011 model year and later non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 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, for all pollutants, for the same maximum engine power.

(d) Stationary CI internal combustion engine manufacturers must certify the following non-emergency stationary CI ICE to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2007 model year through 2012 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;

(2) Their 2013 model year non-emergency stationary CI ICE with a maximum engine power greater than or equal to 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(3) Their 2013 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(e) Stationary CI internal combustion engine manufacturers must certify the following non-emergency stationary CI ICE to the certification emission standards and other requirements for new marine CI engines in 40 CFR 1042.101, 40 CFR 1042.107, 40 CFR 1042.110, 40 CFR 1042.115, 40 CFR 1042.120, and 40 CFR 1042.145, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2013 model year non-emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(2) Their 2014 model year and later 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.

(f) Notwithstanding the requirements in paragraphs (a) through (c) of this section, stationary non-emergency CI ICE identified in paragraphs (a) and (c) may be certified to the provisions of 40 CFR part 94 or, if Table 1 to 40 CFR 1042.1 identifies 40 CFR part 1042 as being applicable, 40 CFR part 1042, if the engines will be used solely in either or both of the following locations:

(1) Areas of Alaska not accessible by the Federal Aid Highway System (FAHS); and

(2) Marine offshore installations.

(g) Notwithstanding the requirements in paragraphs (a) through (f) of this section, stationary CI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (e) of this section that are applicable to the model year, maximum engine power, and displacement of the reconstructed stationary CI ICE.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37967, June 28, 2011]

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

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

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

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

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

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

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

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

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

(c) [Reserved]

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

(e) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE that are not fire pump engines to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2007 model year through 2012 emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder;

(2) Their 2013 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder;

(3) Their 2013 model year emergency stationary CI ICE with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder; and

(4) Their 2014 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(f) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE to the certification emission standards and other requirements applicable to Tier 3 new marine CI engines in 40 CFR 1042.101, 40 CFR 1042.107, 40 CFR 1042.115, 40 CFR 1042.120, and 40 CFR 1042.145, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2013 model year and later emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(2) Their 2014 model year and later emergency stationary CI ICE with a maximum engine power less than 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(g) Notwithstanding the requirements in paragraphs (a) through (d) of this section, stationary emergency CI internal combustion engines identified in paragraphs (a) and (c) may be certified to the provisions of 40 CFR part 94 or, if Table 2 to 40 CFR 1042.101 identifies Tier 3 standards as being applicable, the requirements applicable to Tier 3 engines in 40 CFR part 1042, if the engines will be used solely in either or both of the following locations:

(1) Areas of Alaska not accessible by the FAHS; and

(2) Marine offshore installations.

(h) Notwithstanding the requirements in paragraphs (a) through (f) of this section, stationary CI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (f) of this section that are applicable to the model year, maximum engine power and displacement of the reconstructed emergency stationary CI ICE.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37968, June 28, 2011]

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

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

[76 FR 37968, June 28, 2011]

Emission Standards for Owners and Operators

§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.

(c) Owners and operators of non-emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the following requirements:

(1) For engines installed prior to January 1, 2012, limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 grams per kilowatt-hour (g/KW-hr) (12.7 grams per horsepower-hr (g/HP-hr)) when maximum engine speed is less than 130 revolutions per minute (rpm);

(ii) $45 \cdot n^{-0.2}$ g/KW-hr ($34 \cdot n^{-0.2}$ g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/KW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012 and before January 1, 2016, limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $44 \cdot n^{-0.23}$ g/KW-hr ($33 \cdot n^{-0.23}$ g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) For engines installed on or after January 1, 2016, limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to the following:

(i) 3.4 g/KW-hr (2.5 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $9.0 \cdot n^{-0.20}$ g/KW-hr ($6.7 \cdot n^{-0.20}$ g/HP-hr) where n (maximum engine speed) is 130 or more but less than 2,000 rpm; and

(iii) 2.0 g/KW-hr (1.5 g/HP-hr) where maximum engine speed is greater than or equal to 2,000 rpm.

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

(d) Owners and operators of non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the not-to-exceed (NTE) standards as indicated in §60.4212.

(e) Owners and operators of any modified or reconstructed non-emergency stationary CI ICE subject to this subpart must meet the emission standards applicable to the model year, maximum engine power, and displacement of the modified or reconstructed non-emergency stationary CI ICE that are specified in paragraphs (a) through (d) of this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37968, June 28, 2011]

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

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

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

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

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

(1) For engines installed prior to January 1, 2012, limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 g/KW-hr (12.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $45 \cdot n^{-0.2}$ g/KW-hr ($34 \cdot n^{-0.2}$ g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/kW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012, limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $44 \cdot n^{-0.23}$ g/KW-hr ($33 \cdot n^{-0.23}$ g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) Limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.40 g/KW-hr (0.30 g/HP-hr).

(e) Owners and operators of emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the NTE standards as indicated in §60.4212.

(f) Owners and operators of any modified or reconstructed emergency stationary CI ICE subject to this subpart must meet the emission standards applicable to the model year, maximum engine power, and displacement of the modified or reconstructed CI ICE that are specified in paragraphs (a) through (e) of this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

§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 over the entire life of the engine.

[76 FR 37969, June 28, 2011]

Fuel Requirements for Owners and Operators

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

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

(b) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted.

(c) [Reserved]

(d) Beginning June 1, 2012, owners and operators of stationary CI ICE subject to this subpart with a displacement of greater than or equal to 30 liters per cylinder are no longer subject to the requirements of paragraph (a) of this section, and must use fuel that meets a maximum per-gallon sulfur content of 1,000 parts per million (ppm).

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

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011; 78 FR 6695, Jan. 30, 2013]

Other Requirements for Owners and Operators

§60.4208 What is the deadline for importing or installing stationary CI ICE produced in previous model years?

(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) After December 31, 2018, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power greater than or equal to 600 KW (804 HP) and less than 2,000 KW (2,680 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that do not meet the applicable requirements for 2017 model year non-emergency engines.

(h) 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 (g) of this section after the dates specified in paragraphs (a) through (g) of this section.

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

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

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

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

(a) If you are an owner or operator of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter prior to startup of the engine.

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

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

Compliance Requirements

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

(a) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of less than 10 liters per cylinder to the emission standards specified in §60.4201(a) through (c) and §60.4202(a), (b) and (d) using the certification procedures required in 40 CFR part 89, subpart B, or 40 CFR part 1039, subpart C, as applicable, and must test their engines as specified in those parts. For the purposes of this subpart, engines certified to the standards in table 1 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89. For the purposes of this subpart, engines certified to the standards in table 4 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89, except that engines with NFPA nameplate power of less than 37 KW (50 HP) certified to model year 2011 or later standards shall be subject to the same requirements as engines certified to the standards in 40 CFR part 1039.

(b) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder to the emission standards specified in §60.4201(d) and (e) and §60.4202(e) and (f) using the certification procedures required in 40 CFR part 94, subpart C, or 40 CFR part 1042, subpart C, as applicable, and must test their engines as specified in 40 CFR part 94 or 1042, as applicable.

(c) Stationary CI internal combustion engine manufacturers must meet the requirements of 40 CFR 1039.120, 1039.125, 1039.130, and 1039.135, and 40 CFR part 1068 for engines that are certified to the emission standards in 40 CFR part 1039. Stationary CI internal combustion engine manufacturers must meet the corresponding provisions of 40 CFR part 89, 40 CFR part 94 or 40 CFR part 1042 for engines that would be covered by that part if they were nonroad (including marine) engines. Labels on such engines must refer to stationary engines, rather than or in addition to nonroad or marine engines, as appropriate. Stationary CI internal combustion engine manufacturers must label their engines according to paragraphs (c)(1) through (3) of this section.

(1) Stationary CI internal combustion engines manufactured from January 1, 2006 to March 31, 2006 (January 1, 2006 to June 30, 2006 for fire pump engines), other than those that are part of certified engine families under the nonroad CI engine regulations, must be labeled according to 40 CFR 1039.20.

(2) Stationary CI internal combustion engines manufactured from April 1, 2006 to December 31, 2006 (or, for fire pump engines, July 1, 2006 to December 31 of the year preceding the year listed in table 3 to this subpart) must be labeled according to paragraphs (c)(2)(i) through (iii) of this section:

(i) Stationary CI internal combustion engines that are part of certified engine families under the nonroad regulations must meet the labeling requirements for nonroad CI engines, but do not have to meet the labeling requirements in 40 CFR 1039.20.

(ii) Stationary CI internal combustion engines that meet Tier 1 requirements (or requirements for fire pumps) under this subpart, but do not meet the requirements applicable to nonroad CI engines must be labeled according to 40 CFR 1039.20. The engine manufacturer may add language to the label clarifying that the engine meets Tier 1 requirements (or requirements for fire pumps) of this subpart.

(iii) Stationary CI internal combustion engines manufactured after April 1, 2006 that do not meet Tier 1 requirements of this subpart, or fire pumps engines manufactured after July 1, 2006 that do not meet the requirements for fire pumps under this subpart, may not be used in the U.S. If any such engines are manufactured in the U.S. after April 1, 2006 (July 1, 2006 for fire pump engines), they must be exported or must be brought into compliance with the appropriate standards prior to initial operation. The export provisions of 40 CFR 1068.230 would apply to engines for export and the manufacturers must label such engines according to 40 CFR 1068.230.

(3) Stationary CI internal combustion engines manufactured after January 1, 2007 (for fire pump engines, after January 1 of the year listed in table 3 to this subpart, as applicable) must be labeled according to paragraphs (c)(3)(i) through (iii) of this section.

(i) Stationary CI internal combustion engines that meet the requirements of this subpart and the corresponding requirements for nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in 40 CFR parts 89, 94, 1039 or 1042, as appropriate.

(ii) Stationary CI internal combustion engines that meet the requirements of this subpart, but are not certified to the standards applicable to nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in 40 CFR parts 89, 94, 1039 or 1042, as appropriate, but the words “stationary” must be included instead of “nonroad” or “marine” on the label. In addition, such engines must be labeled according to 40 CFR 1039.20.

(iii) Stationary CI internal combustion engines that do not meet the requirements of this subpart must be labeled according to 40 CFR 1068.230 and must be exported under the provisions of 40 CFR 1068.230.

(d) An engine manufacturer certifying an engine family or families to standards under this subpart that are identical to standards applicable under 40 CFR parts 89, 94, 1039 or 1042 for that model year may certify any such family that contains both nonroad (including marine) and stationary engines as a single engine family and/or may include any

such family containing stationary engines in the averaging, banking and trading provisions applicable for such engines under those parts.

(e) Manufacturers of engine families discussed in paragraph (d) of this section may meet the labeling requirements referred to in paragraph (c) of this section for stationary CI ICE by either adding a separate label containing the information required in paragraph (c) of this section or by adding the words “and stationary” after the word “nonroad” or “marine,” as appropriate, to the label.

(f) Starting with the model years shown in table 5 to this subpart, stationary CI internal combustion engine manufacturers must add a permanent label stating that the engine is for stationary emergency use only to each new emergency stationary CI internal combustion engine greater than or equal to 19 KW (25 HP) that meets all the emission standards for emergency engines in §60.4202 but does not meet all the emission standards for non-emergency engines in §60.4201. The label must be added according to the labeling requirements specified in 40 CFR 1039.135(b). Engine manufacturers must specify in the owner's manual that operation of emergency engines is limited to emergency operations and required maintenance and testing.

(g) Manufacturers of fire pump engines may use the test cycle in table 6 to this subpart for testing fire pump engines and may test at the NFPA certified nameplate HP, provided that the engine is labeled as “Fire Pump Applications Only”.

(h) Engine manufacturers, including importers, may introduce into commerce uncertified engines or engines certified to earlier standards that were manufactured before the new or changed standards took effect until inventories are depleted, as long as such engines are part of normal inventory. For example, if the engine manufacturers' normal industry practice is to keep on hand a one-month supply of engines based on its projected sales, and a new tier of standards starts to apply for the 2009 model year, the engine manufacturer may manufacture engines based on the normal inventory requirements late in the 2008 model year, and sell those engines for installation. The engine manufacturer may not circumvent the provisions of §§60.4201 or 60.4202 by stockpiling engines that are built before new or changed standards take effect. Stockpiling of such engines beyond normal industry practice is a violation of this subpart.

(i) The replacement engine provisions of 40 CFR 89.1003(b)(7), 40 CFR 94.1103(b)(3), 40 CFR 94.1103(b)(4) and 40 CFR 1068.240 are applicable to stationary CI engines replacing existing equipment that is less than 15 years old.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

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

(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must do all of the following, except as permitted under paragraph (g) of this section:

(1) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;

(2) Change only those emission-related settings that are permitted by the manufacturer; and

(3) Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

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

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

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

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

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

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

(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 emission-related specifications, except as permitted in paragraph (g) of this section.

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

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

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

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

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

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

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

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

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

(e) If you are an owner or operator of a modified or reconstructed stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(e) or §60.4205(f), you must demonstrate compliance according to one of the methods specified in paragraphs (e)(1) or (2) of this section.

(1) Purchasing, or otherwise owning or operating, an engine certified to the emission standards in §60.4204(e) or §60.4205(f), as applicable.

(2) Conducting a performance test to demonstrate initial compliance with the emission standards according to the requirements specified in §60.4212 or §60.4213, as appropriate. The test must be conducted within 60 days after the engine commences operation after the modification or reconstruction.

(f) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (f)(1) through (3) of this section. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (3) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (3) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

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

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

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

(ii) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

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

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

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

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

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

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

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

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the

engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

(ii) [Reserved]

(g) If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as follows:

(1) If you are an owner or operator of a stationary CI internal combustion engine with maximum engine power less than 100 HP, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, if you do not install and configure the engine and control device according to the manufacturer's emission-related written instructions, or you change the emission-related settings in a way that is not permitted by the manufacturer, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of such action.

(2) If you are an owner or operator of a stationary CI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer.

(3) If you are an owner or operator of a stationary CI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. You must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37970, June 28, 2011; 78 FR 6695, Jan. 30, 2013]

Testing Requirements for Owners and Operators

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

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

(a) The performance test must be conducted according to the in-use testing procedures in 40 CFR part 1039, subpart F, for stationary CI ICE with a displacement of less than 10 liters per cylinder, and according to 40 CFR part 1042, subpart F, for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder.

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

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

$$\text{NTE requirement for each pollutant} = (1.25) \times (\text{STD}) \qquad \text{(Eq. 1)}$$

Where:

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

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

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

Where:

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

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

(e) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1042 must not exceed the NTE standards for the same model year and maximum engine power as required in 40 CFR 1042.101(c).

[71 FR 39172, July 11, 2006, as amended at 76 FR 37971, June 28, 2011]

§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?

Owners and operators of stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must conduct performance tests according to paragraphs (a) through (f) of this section.

(a) Each performance test must be conducted according to the requirements in §60.8 and under the specific conditions that this subpart specifies in table 7. The test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load.

(b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c).

(c) You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must last at least 1 hour.

(d) To determine compliance with the percent reduction requirement, you must follow the requirements as specified in paragraphs (d)(1) through (3) of this section.

(1) You must use Equation 2 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \qquad \text{(Eq. 2)}$$

Where:

C_i = concentration of NO_X or PM at the control device inlet,

C_o = concentration of NO_X or PM at the control device outlet, and

R = percent reduction of NO_X or PM emissions.

(2) You must normalize the NO_X or PM concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen (O_2) using Equation 3 of this section, or an equivalent percent carbon dioxide (CO_2) using the procedures described in paragraph (d)(3) of this section.

$$C_{adj} = C_d \frac{5.9}{20.9 - \%\, O_2} \qquad \text{(Eq. 3)}$$

Where:

C_{adj} = Calculated NO_X or PM concentration adjusted to 15 percent O_2.

C_d = Measured concentration of NO_X or PM, uncorrected.

5.9 = 20.9 percent O_2−15 percent O_2, the defined O_2 correction value, percent.

$\%O_2$ = Measured O_2 concentration, dry basis, percent.

(3) If pollutant concentrations are to be corrected to 15 percent O_2 and CO_2 concentration is measured in lieu of O_2 concentration measurement, a CO_2 correction factor is needed. Calculate the CO_2 correction factor as described in paragraphs (d)(3)(i) through (iii) of this section.

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

$$F_o = \frac{0.209 F_d}{F_c} \qquad \text{(Eq. 4)}$$

Where:

F_o = Fuel factor based on the ratio of O_2 volume to the ultimate CO_2 volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is O_2, percent/100.

F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm3/J (dscf/106 Btu).

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm3/J (dscf/106 Btu).

(ii) Calculate the CO_2 correction factor for correcting measurement data to 15 percent O_2, as follows:

$$X_{co_2} = \frac{5.9}{F_o} \qquad \text{(Eq. 5)}$$

Where:

X_{CO2} = CO_2 correction factor, percent.

5.9 = 20.9 percent O_2−15 percent O_2, the defined O_2 correction value, percent.

(iii) Calculate the NO_X and PM gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{adj} = C_d \frac{X_{co_2}}{\%CO_2} \qquad \text{(Eq. 6)}$$

Where:

C_{adj} = Calculated NO_X or PM concentration adjusted to 15 percent O_2.

C_d = Measured concentration of NO_X or PM, uncorrected.

$\%CO_2$ = Measured CO_2 concentration, dry basis, percent.

(e) To determine compliance with the NO_X mass per unit output emission limitation, convert the concentration of NO_X in the engine exhaust using Equation 7 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{\text{KW-hour}} \qquad \text{(Eq. 7)}$$

Where:

ER = Emission rate in grams per KW-hour.

C_d = Measured NO_X concentration in ppm.

$1.912x10^{-3}$ = Conversion constant for ppm NO_X to grams per standard cubic meter at 25 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour.

T = Time of test run, in hours.

KW-hour = Brake work of the engine, in KW-hour.

(f) To determine compliance with the PM mass per unit output emission limitation, convert the concentration of PM in the engine exhaust using Equation 8 of this section:

$$ER = \frac{C_{adj} \times Q \times T}{\text{KW-hour}} \qquad \text{(Eq. 8)}$$

Where:

ER = Emission rate in grams per KW-hour.

C_{adj} = Calculated PM concentration in grams per standard cubic meter.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour.

T = Time of test run, in hours.

KW-hour = Energy output of the engine, in KW.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37971, June 28, 2011]

Notification, Reports, and Records for Owners and Operators

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

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

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

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

(ii) The address of the affected source;

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

(iv) Emission control equipment; and

(v) Fuel used.

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

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

(ii) Maintenance conducted on the engine.

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

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

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

(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.

(d) If you own or operate an emergency stationary CI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §60.4211(f)(2)(ii) and (iii) or that operates for the purposes specified in §60.4211(f)(3)(i), you must submit an annual report according to the requirements in paragraphs (d)(1) through (3) of this section.

(1) The report must contain the following information:

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

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

(iii) Engine site rating and model year.

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

(v) Hours operated for the purposes specified in §60.4211(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §60.4211(f)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §60.4211(f)(2)(ii) and (iii).

(vii) Hours spent for operation for the purposes specified in §60.4211(f)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in §60.4211(f)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

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

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in §60.4.

[71 FR 39172, July 11, 2006, as amended at 78 FR 6696, Jan. 30, 2013]

Special Requirements

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

(a) Stationary CI ICE with a displacement of less than 30 liters per cylinder that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the applicable emission standards in §§60.4202 and 60.4205.

(b) Stationary CI ICE that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are not required to meet the fuel requirements in §60.4207.

(c) Stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the following emission standards:

(1) For engines installed prior to January 1, 2012, limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 g/KW-hr (12.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $45 \cdot n^{-0.2}$ g/KW-hr ($34 \cdot n^{-0.2}$ g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/KW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012, limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $44 \cdot n^{-0.23}$ g/KW-hr ($33 \cdot n^{-0.23}$ g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) Limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.40 g/KW-hr (0.30 g/HP-hr).

[71 FR 39172, July 11, 2006, as amended at 76 FR 37971, June 28, 2011]

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

(a) Prior to December 1, 2010, owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder located in areas of Alaska not accessible by the FAHS should refer to 40 CFR part 69 to determine the diesel fuel requirements applicable to such engines.

(b) Except as indicated in paragraph (c) of this section, manufacturers, owners and operators of stationary CI ICE with a displacement of less than 10 liters per cylinder located in areas of Alaska not accessible by the FAHS may meet the requirements of this subpart by manufacturing and installing engines meeting the requirements of 40 CFR parts 94 or 1042, as appropriate, rather than the otherwise applicable requirements of 40 CFR parts 89 and 1039, as indicated in sections §§60.4201(f) and 60.4202(g) of this subpart.

(c) Manufacturers, owners and operators of stationary CI ICE that are located in areas of Alaska not accessible by the FAHS may choose to meet the applicable emission standards for emergency engines in §60.4202 and §60.4205, and not those for non-emergency engines in §60.4201 and §60.4204, except that for 2014 model year and later non-emergency CI ICE, the owner or operator of any such engine that was not certified as meeting Tier 4 PM standards, must meet the applicable requirements for PM in §60.4201 and §60.4204 or install a PM emission control device that achieves PM emission reductions of 85 percent, or 60 percent for engines with a displacement of greater than or equal to 30 liters per cylinder, compared to engine-out emissions.

(d) The provisions of §60.4207 do not apply to owners and operators of pre-2014 model year stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the FAHS.

(e) The provisions of §60.4208(a) do not apply to owners and operators of stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the FAHS until after December 31, 2009.

(f) The provisions of this section and §60.4207 do not prevent owners and operators of stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the FAHS from using fuels mixed with used lubricating oil, in volumes of up to 1.75 percent of the total fuel. The sulfur content of the used lubricating oil must be less than 200 parts per million. The used lubricating oil must meet the on-specification levels and properties for used oil in 40 CFR 279.11.

[76 FR 37971, June 28, 2011]

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

Owners and operators of stationary CI ICE that do not use diesel fuel may petition the Administrator for approval of alternative emission standards, if they can demonstrate that they use a fuel that is not the fuel on which the manufacturer of the engine certified the engine and that the engine cannot meet the applicable standards required in §60.4204 or §60.4205 using such fuels and that use of such fuel is appropriate and reasonably necessary, considering cost, energy, technical feasibility, human health and environmental, and other factors, for the operation of the engine.

[76 FR 37972, June 28, 2011]

General Provisions

§60.4218 What parts of the General Provisions apply to me?

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

Definitions

§60.4219 What definitions apply to this subpart?

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

Certified emissions life means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for certified emissions life for stationary CI ICE with a displacement of less than 10 liters per cylinder are given in 40 CFR 1039.101(g). The values for certified emissions life for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder are given in 40 CFR 94.9(a).

Combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), and any ancillary components and sub-components comprising any simple cycle combustion turbine, any regenerative/recuperative cycle combustion turbine, the combustion turbine portion of any cogeneration cycle combustion system, or the combustion turbine portion of any combined cycle steam/electric generating system.

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Date of manufacture means one of the following things:

(1) For freshly manufactured engines and modified engines, date of manufacture means the date the engine is originally produced.

(2) For reconstructed engines, date of manufacture means the date the engine was originally produced, except as specified in paragraph (3) of this definition.

(3) Reconstructed engines are assigned a new date of manufacture if the fixed capital cost of the new and refurbished components exceeds 75 percent of the fixed capital cost of a comparable entirely new facility. An engine that is produced from a previously used engine block does not retain the date of manufacture of the engine in which the engine block was previously used if the engine is produced using all new components except for the engine block. In these cases, the date of manufacture is the date of reconstruction or the date the new engine is produced.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is number 2 distillate oil.

Diesel particulate filter means an emission control technology that reduces PM emissions by trapping the particles in a flow filter substrate and periodically removes the collected particles by either physical action or by oxidizing (burning off) the particles in a process called regeneration.

Emergency stationary internal combustion engine means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary ICE must comply with the requirements specified in §60.4211(f) in order to be considered emergency stationary ICE. If the engine does not comply with the requirements specified in §60.4211(f), then it is not considered to be an emergency stationary ICE under this subpart.

(1) The stationary ICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, etc.

(2) The stationary ICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in §60.4211(f).

(3) The stationary ICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in §60.4211(f)(2)(ii) or (iii) and §60.4211(f)(3)(i).

Engine manufacturer means the manufacturer of the engine. See the definition of “manufacturer” in this section.

Fire pump engine means an emergency stationary internal combustion engine certified to NFPA requirements that is used to provide power to pump water for fire suppression or protection.

Freshly manufactured engine means an engine that has not been placed into service. An engine becomes freshly manufactured when it is originally produced.

Installed means the engine is placed and secured at the location where it is intended to be operated.

Manufacturer has the meaning given in section 216(1) of the Act. In general, this term includes any person who manufactures a stationary engine for sale in the United States or otherwise introduces a new stationary engine into commerce in the United States. This includes importers who import stationary engines for sale or resale.

Maximum engine power means maximum engine power as defined in 40 CFR 1039.801.

Model year means the calendar year in which an engine is manufactured (see “date of manufacture”), except as follows:

(1) Model year means the annual new model production period of the engine manufacturer in which an engine is manufactured (see “date of manufacture”), if the annual new model production period is different than the calendar year and includes January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year and it must end by December 31 of the named calendar year.

(2) For an engine that is converted to a stationary engine after being placed into service as a nonroad or other non-stationary engine, model year means the calendar year or new model production period in which the engine was manufactured (see “date of manufacture”).

Other internal combustion engine means any internal combustion engine, except combustion turbines, which is not a reciprocating internal combustion engine or rotary internal combustion engine.

Reciprocating internal combustion engine means any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work.

Rotary internal combustion engine means any internal combustion engine which uses rotary motion to convert heat energy into mechanical work.

Spark ignition means relating to a gasoline, natural gas, or liquefied petroleum gas fueled engine or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

Stationary internal combustion engine means any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE differ from mobile ICE in that a stationary internal combustion engine is not a nonroad engine as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is not used to propel a motor vehicle, aircraft, or a vehicle used solely for competition. Stationary ICE include reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

Subpart means 40 CFR part 60, subpart IIII.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37972, June 28, 2011; 78 FR 6696, Jan. 30, 2013]

Table 1 to Subpart IIII of Part 60—Emission Standards for Stationary Pre-2007 Model Year Engines With a Displacement of <10 Liters per Cylinder and 2007-2010 Model Year Engines >2,237 KW (3,000 HP) and With a Displacement of <10 Liters per Cylinder

[As stated in §§60.4201(b), 60.4202(b), 60.4204(a), and 60.4205(a), you must comply with the following emission standards]

Maximum engine power	Emission standards for stationary pre-2007 model year engines with a displacement of <10 liters per cylinder and 2007-2010 model year engines >2,237 KW (3,000 HP) and with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)				
	NMHC + NO_X	HC	NO_X	CO	PM
KW<8 (HP<11)	10.5 (7.8)			8.0 (6.0)	1.0 (0.75)
8≤KW<19 (11≤HP<25)	9.5 (7.1)			6.6 (4.9)	0.80 (0.60)
19≤KW<37 (25≤HP<50)	9.5 (7.1)			5.5 (4.1)	0.80 (0.60)
37≤KW<56 (50≤HP<75)			9.2 (6.9)		
56≤KW<75 (75≤HP<100)			9.2 (6.9)		
75≤KW<130 (100≤HP<175)			9.2 (6.9)		
130≤KW<225 (175≤HP<300)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
225≤KW<450 (300≤HP<600)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
450≤KW≤560 (600≤HP≤750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
KW>560 (HP>750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)

Table 2 to Subpart IIII of Part 60—Emission Standards for 2008 Model Year and Later Emergency Stationary CI ICE <37 KW (50 HP) With a Displacement of <10 Liters per Cylinder

[As stated in §60.4202(a)(1), you must comply with the following emission standards]

Engine power	Emission standards for 2008 model year and later emergency stationary CI ICE <37 KW (50 HP) with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)			
	Model year(s)	NO_X + NMHC	CO	PM
KW<8 (HP<11)	2008+	7.5 (5.6)	8.0 (6.0)	0.40 (0.30)
8≤KW<19 (11≤HP<25)	2008+	7.5 (5.6)	6.6 (4.9)	0.40 (0.30)
19≤KW<37 (25≤HP<50)	2008+	7.5 (5.6)	5.5 (4.1)	0.30 (0.22)

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

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

Engine power	Starting model year engine manufacturers must certify new stationary fire pump engines according to §60.4202(d)[1]
KW<75 (HP<100)	2011
75≤KW<130 (100≤HP<175)	2010
130≤KW≤560 (175≤HP≤750)	2009
KW>560 (HP>750)	2008

[1]Manufacturers of fire pump stationary CI ICE with a maximum engine power greater than or equal to 37 kW (50 HP) and less than 450 KW (600 HP) and a rated speed of greater than 2,650 revolutions per minute (rpm) are not required to certify such engines until three model years following the model year indicated in this Table 3 for engines in the applicable engine power category.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37972, June 28, 2011]

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

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

Maximum engine power	Model year(s)	NMHC + NO_X	CO	PM
KW<8 (HP<11)	2010 and earlier	10.5 (7.8)	8.0 (6.0)	1.0 (0.75)
	2011+	7.5 (5.6)		0.40 (0.30)
8≤KW<19 (11≤HP<25)	2010 and earlier	9.5 (7.1)	6.6 (4.9)	0.80 (0.60)
	2011+	7.5 (5.6)		0.40 (0.30)
19≤KW<37 (25≤HP<50)	2010 and earlier	9.5 (7.1)	5.5 (4.1)	0.80 (0.60)

Maximum engine power	Model year(s)	NMHC + NO_X	CO	PM
	2011+	7.5 (5.6)		0.30 (0.22)
37≤KW<56 (50≤HP<75)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011+[1]	4.7 (3.5)		0.40 (0.30)
56≤KW<75 (75≤HP<100)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011+[1]	4.7 (3.5)		0.40 (0.30)
75≤KW<130 (100≤HP<175)	2009 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2010+[2]	4.0 (3.0)		0.30 (0.22)
130≤KW<225 (175≤HP<300)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+[3]	4.0 (3.0)		0.20 (0.15)
225≤KW<450 (300≤HP<600)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+[3]	4.0 (3.0)		0.20 (0.15)
450≤KW≤560 (600≤HP≤750)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+	4.0 (3.0)		0.20 (0.15)
KW>560 (HP>750)	2007 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2008+	6.4 (4.8)		0.20 (0.15)

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

[2]For model years 2010-2012, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2009 model year engines.

[3]In model years 2009-2011, manufacturers of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2008 model year engines.

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

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

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

Table 6 to Subpart IIII of Part 60—Optional 3-Mode Test Cycle for Stationary Fire Pump Engines

[As stated in §60.4210(g), manufacturers of fire pump engines may use the following test cycle for testing fire pump engines:]

Mode No.	Engine speed[1]	Torque (percent)[2]	Weighting factors
1	Rated	100	0.30
2	Rated	75	0.50
3	Rated	50	0.20

[1]Engine speed: ±2 percent of point.

[2]Torque: NFPA certified nameplate HP for 100 percent point. All points should be ±2 percent of engine percent load value.

Table 7 to Subpart IIII of Part 60—Requirements for Performance Tests for Stationary CI ICE With a Displacement of ≥30 Liters per Cylinder

As stated in §60.4213, you must comply with the following requirements for performance tests for stationary CI ICE with a displacement of ≥30 liters per cylinder:

Each	Complying with the requirement to	You must	Using	According to the following requirements
1. Stationary CI internal combustion engine with a displacement of ≥ 30 liters per cylinder	a. Reduce NO_X emissions by 90 percent or more;	i. Select the sampling port location and number/location of traverse points at the inlet and outlet of the control device;		(a) For NO_X, O_2, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A-1, the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4.
		ii. Measure O_2 at the inlet and outlet of the control device;	(1) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for NO_X concentration.
		iii. If necessary, measure moisture content at the inlet and outlet of the control device; and	(2) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)	(c) Measurements to determine moisture content must be made at the same time as the measurements for NO_X concentration.

Each	Complying with the requirement to	You must	Using	According to the following requirements
		iv. Measure NO_X at the inlet and outlet of the control device.	(3) Method 7E of 40 CFR part 60, appendix A-4, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)	(d) NO_X concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	b. Limit the concentration of NO_X in the stationary CI internal combustion engine exhaust.	i. Select the sampling port location and number/location of traverse points at the exhaust of the stationary internal combustion engine;		(a) For NO_X, O_2, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A-1, the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4.
		ii. Determine the O_2 concentration of the stationary internal combustion engine exhaust at the sampling port location;	(1) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O_2 concentration must be made at the same time as the measurement for NO_X concentration.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(2) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)	(c) Measurements to determine moisture content must be made at the same time as the measurement for NO_X concentration.
		iv. Measure NO_X at the exhaust of the stationary internal combustion engine; if using a control device, the sampling site must be located at the outlet of the control device.	(3) Method 7E of 40 CFR part 60, Appendix A-4, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)	(d) NO_X concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

Each	Complying with the requirement to	You must	Using	According to the following requirements
	c. Reduce PM emissions by 60 percent or more	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O_2 at the inlet and outlet of the control device;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for PM concentration.
		iii. If necessary, measure moisture content at the inlet and outlet of the control device; and	(3) Method 4 of 40 CFR part 60, appendix A-3	(c) Measurements to determine and moisture content must be made at the same time as the measurements for PM concentration.
		iv. Measure PM at the inlet and outlet of the control device.	(4) Method 5 of 40 CFR part 60, appendix A-3	(d) PM concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	d. Limit the concentration of PM in the stationary CI internal combustion engine exhaust	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2 concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for PM concentration.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(3) Method 4 of 40 CFR part 60, appendix A-3	(c) Measurements to determine moisture content must be made at the same time as the measurements for PM concentration.
		iv. Measure PM at the exhaust of the stationary internal combustion engine.	(4) Method 5 of 40 CFR part 60, appendix A-3.	(d) PM concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

[79 FR 11251, Feb. 27, 2014]

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

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

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

Attachment B

Part 70 Operating Permit Renewal No: T097-35016-00156

[Downloaded from the eCFR on July 23, 2014]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

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

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

What This Subpart Covers

§63.6580 What is the purpose of subpart ZZZZ?

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

[73 FR 3603, Jan. 18, 2008]

§63.6585 Am I subject to this subpart?

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

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

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

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

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

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

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

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

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

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

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008; 78 FR 6700, Jan. 30, 2013]

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

This subpart applies to each affected source.

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

(1) *Existing stationary RICE.*

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9674, Mar. 3, 2010; 75 FR 37733, June 30, 2010; 75 FR 51588, Aug. 20, 2010; 78 FR 6700, Jan. 30, 2013]

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

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

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

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

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

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

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

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

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

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

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

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

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 78 FR 6701, Jan. 30, 2013]

Emission and Operating Limitations

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

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

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

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

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

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

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

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

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart. If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at major source of HAP emissions manufactured on or after January 1, 2008, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010]

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

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

[78 FR 6701, Jan. 30, 2013]

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

[75 FR 9675, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6701, Jan. 30, 2013]

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

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

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

(c) Beginning January 1, 2015, if you own or operate a new emergency CI stationary RICE with a site rating of more than 500 brake HP and a displacement of less than 30 liters per cylinder located at a major source of HAP that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(d) Existing CI stationary RICE located in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, at area sources in areas of Alaska that meet either §63.6603(b)(1) or §63.6603(b)(2), or are on offshore vessels that meet §63.6603(c) are exempt from the requirements of this section.

[78 FR 6702, Jan. 30, 2013]

General Compliance Requirements

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

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

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

[75 FR 9675, Mar. 3, 2010, as amended at 78 FR 6702, Jan. 30, 2013]

Testing and Initial Compliance Requirements

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

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

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

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

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

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

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

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

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

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

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

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

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

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

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 51589, Aug. 20, 2010]

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

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

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

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

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

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

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

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

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

§63.6615 When must I conduct subsequent performance tests?

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

§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. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load for the stationary RICE listed in paragraphs (b)(1) through (4) of this section.

(1) Non-emergency 4SRB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(2) New non-emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP located at a major source of HAP emissions.

(3) New non-emergency 2SLB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(4) New non-emergency CI stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(c) [Reserved]

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

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

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

Where:

C_i = concentration of carbon monoxide (CO), total hydrocarbons (THC), or formaldehyde at the control device inlet,

C_o = concentration of CO, THC, or formaldehyde at the control device outlet, and

R = percent reduction of CO, THC, or formaldehyde emissions.

(2) You must normalize the CO, THC, or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO_2). If pollutant concentrations are to be corrected to 15 percent oxygen and CO_2 concentration is measured in lieu of oxygen concentration measurement, a CO_2 correction factor is needed. Calculate the CO_2 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:

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

Where:

F_o = Fuel factor based on the ratio of oxygen volume to the ultimate CO_2 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, dsm3/J (dscf/106 Btu).

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm3/J (dscf/106 Btu)

(ii) Calculate the CO_2 correction factor for correcting measurement data to 15 percent O_2, as follows:

$$X_{CO2} = \frac{5.9}{F_O} \quad (Eq. 3)$$

Where:

X_{CO2} = CO_2 correction factor, percent.

5.9 = 20.9 percent O_2—15 percent O_2, the defined O_2 correction value, percent.

(iii) Calculate the CO, THC, and formaldehyde gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{adj} = C_d \frac{X_{CO2}}{\%CO_2} \quad (Eq. 4)$$

Where:

C_{adj} = Calculated concentration of CO, THC, or formaldehyde adjusted to 15 percent O_2.

C_d = Measured concentration of CO, THC, or formaldehyde, uncorrected.

X_{CO2} = CO_2 correction factor, percent.

$\%CO_2$ = Measured CO_2 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.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9676, Mar. 3, 2010; 78 FR 6702, Jan. 30, 2013]

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

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either O_2 or CO_2 according to the requirements in paragraphs (a)(1) through (4) of this section. If you are meeting a requirement to reduce CO emissions, the CEMS must be installed at both the inlet and outlet of the control device. If you are meeting a requirement to limit the concentration of CO, the CEMS must be installed at the outlet of the control device.

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

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in §63.8 and according to the applicable performance specifications of 40 CFR

part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

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

(4) The CEMS data must be reduced as specified in §63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO_2 concentration.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6703, Jan. 30, 2013]

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

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

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

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

(d) Non-emergency 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more can demonstrate initial compliance with the formaldehyde emission limit by testing for THC instead of formaldehyde. The testing must be conducted according to the requirements in Table 4 of this subpart. The average reduction of emissions of THC determined from the performance test must be equal to or greater than 30 percent.

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

(1) The compliance demonstration must consist of at least three test runs.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O_2 using one of the O_2 measurement methods specified in Table 4 of this subpart. Measurements to determine O_2 concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O_2 emissions simultaneously at the inlet and outlet of the control device.

[69 FR 33506, June 15, 2004, as amended at 78 FR 6704, Jan. 30, 2013]

Continuous Compliance Requirements

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

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

(b) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, you must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

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

[69 FR 33506, June 15, 2004, as amended at 76 FR 12867, Mar. 9, 2011]

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

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

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

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

(1) The compliance demonstration must consist of at least one test run.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O_2 using one of the O_2 measurement methods specified in Table 4 of this subpart. Measurements to determine O_2 concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O_2 emissions simultaneously at the inlet and outlet of the control device.

(7) If the results of the annual compliance demonstration show that the emissions exceed the levels specified in Table 6 of this subpart, the stationary RICE must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The stationary RICE must be retested within 7 days of being restarted and the emissions must meet the levels specified in Table 6 of this subpart. If the retest shows that the emissions continue to exceed the specified levels, the stationary RICE must again be shut down as soon as safely possible, and the stationary RICE may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the emissions do not exceed the levels specified in Table 6 of this subpart.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the

engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6704, Jan. 30, 2013]

Notifications, Reports, and Records

§63.6645 What notifications must I submit and when?

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

[73 FR 3606, Jan. 18, 2008, as amended at 75 FR 9677, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6705, Jan. 30, 2013]

§63.6650 What reports must I submit and when?

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

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

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

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

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

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

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

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

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

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

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

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

(1) Company name and address.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

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

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

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

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

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

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

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

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

(1) The report must contain the following information:

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

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

(iii) Engine site rating and model year.

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

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

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

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

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

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

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

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

[69 FR 33506, June 15, 2004, as amended at 75 FR 9677, Mar. 3, 2010; 78 FR 6705, Jan. 30, 2013]

§63.6655 What records must I keep?

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

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

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

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

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

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

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

(1) Records described in §63.10(b)(2)(vi) through (xi).

(2) Previous (*i.e.,* superseded) versions of the performance evaluation plan as required in §63.8(d)(3).

(3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in §63.8(f)(6)(i), if applicable.

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

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

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

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

(2) An existing stationary emergency RICE.

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

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

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

(2) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 78 FR 6706, Jan. 30, 2013]

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

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

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

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

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010]

Other Requirements and Information

§63.6665 What parts of the General Provisions apply to me?

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

site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions specified in Table 8 except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

[75 FR 9678, Mar. 3, 2010]

§63.6670 Who implements and enforces this subpart?

(a) This subpart is implemented and enforced by the U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out whether this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are:

(1) Approval of alternatives to the non-opacity emission limitations and operating limitations in §63.6600 under §63.6(g).

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(3) Approval of major alternatives to monitoring under §63.8(f) and as defined in §63.90.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

(5) Approval of a performance test which was conducted prior to the effective date of the rule, as specified in §63.6610(b).

§63.6675 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act (CAA); in 40 CFR 63.2, the General Provisions of this part; and in this section as follows:

Alaska Railbelt Grid means the service areas of the six regulated public utilities that extend from Fairbanks to Anchorage and the Kenai Peninsula. These utilities are Golden Valley Electric Association; Chugach Electric Association; Matanuska Electric Association; Homer Electric Association; Anchorage Municipal Light & Power; and the City of Seward Electric System.

Area source means any stationary source of HAP that is not a major source as defined in part 63.

Associated equipment as used in this subpart and as referred to in section 112(n)(4) of the CAA, means equipment associated with an oil or natural gas exploration or production well, and includes all equipment from the well bore to the point of custody transfer, except glycol dehydration units, storage vessels with potential for flash emissions, combustion turbines, and stationary RICE.

Backup power for renewable energy means an engine that provides backup power to a facility that generates electricity from renewable energy resources, as that term is defined in Alaska Statute 42.45.045(l)(5) (incorporated by reference, see §63.14).

Black start engine means an engine whose only purpose is to start up a combustion turbine.

CAA means the Clean Air Act (42 U.S.C. 7401 *et seq.,* as amended by Public Law 101-549, 104 Stat. 2399).

Commercial emergency stationary RICE means an emergency stationary RICE used in commercial establishments such as office buildings, hotels, stores, telecommunications facilities, restaurants, financial institutions such as banks, doctor's offices, and sports and performing arts facilities.

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Custody transfer means the transfer of hydrocarbon liquids or natural gas: After processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation. For the purposes of this subpart, the point at which such liquids or natural gas enters a natural gas processing plant is a point of custody transfer.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless or whether or not such failure is permitted by this subpart.

(4) Fails to satisfy the general duty to minimize emissions established by §63.6(e)(1)(i).

Diesel engine means any stationary RICE in which a high boiling point liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition. This process is also known as compression ignition.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2. Diesel fuel also includes any non-distillate fuel with comparable physical and chemical properties (*e.g.* biodiesel) that is suitable for use in compression ignition engines.

Digester gas means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and CO_2.

Dual-fuel engine means any stationary RICE in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel.

Emergency stationary RICE means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary RICE must comply with the requirements specified in §63.6640(f) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in §63.6640(f), then it is not considered to be an emergency stationary RICE under this subpart.

(1) The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc.

(2) The stationary RICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in §63.6640(f).

(3) The stationary RICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in §63.6640(f)(2)(ii) or (iii) and §63.6640(f)(4)(i) or (ii).

Engine startup means the time from initial start until applied load and engine and associated equipment reaches steady state or normal operation. For stationary engine with catalytic controls, engine startup means the time from initial start until applied load and engine and associated equipment, including the catalyst, reaches steady state or normal operation.

Four-stroke engine means any type of engine which completes the power cycle in two crankshaft revolutions, with intake and compression strokes in the first revolution and power and exhaust strokes in the second revolution.

Gaseous fuel means a material used for combustion which is in the gaseous state at standard atmospheric temperature and pressure conditions.

Gasoline means any fuel sold in any State for use in motor vehicles and motor vehicle engines, or nonroad or stationary engines, and commonly or commercially known or sold as gasoline.

Glycol dehydration unit means a device in which a liquid glycol (including, but not limited to, ethylene glycol, diethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and absorbs water in a contact tower or absorption column (absorber). The glycol contacts and absorbs water vapor and other gas stream constituents from the natural gas and becomes “rich” glycol. This glycol is then regenerated in the glycol dehydration unit reboiler. The “lean” glycol is then recycled.

Hazardous air pollutants (HAP) means any air pollutants listed in or pursuant to section 112(b) of the CAA.

Institutional emergency stationary RICE means an emergency stationary RICE used in institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, correctional facilities, elementary and secondary schools, libraries, religious establishments, police stations, and fire stations.

ISO standard day conditions means 288 degrees Kelvin (15 degrees Celsius), 60 percent relative humidity and 101.3 kilopascals pressure.

Landfill gas means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and CO_2.

Lean burn engine means any two-stroke or four-stroke spark ignited engine that does not meet the definition of a rich burn engine.

Limited use stationary RICE means any stationary RICE that operates less than 100 hours per year.

Liquefied petroleum gas means any liquefied hydrocarbon gas obtained as a by-product in petroleum refining of natural gas production.

Liquid fuel means any fuel in liquid form at standard temperature and pressure, including but not limited to diesel, residual/crude oil, kerosene/naphtha (jet fuel), and gasoline.

Major Source, as used in this subpart, shall have the same meaning as in §63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment (as defined in this section)) and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units, to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) For oil and gas production facilities, emissions from processes, operations, or equipment that are not part of the same oil and gas production facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated;

(3) For production field facilities, only HAP emissions from glycol dehydration units, storage vessel with the potential for flash emissions, combustion turbines and reciprocating internal combustion engines shall be aggregated for a major source determination; and

(4) Emissions from processes, operations, and equipment that are not part of the same natural gas transmission and storage facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Natural gas means a naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in geologic formations beneath the Earth's surface, of which the principal constituent is methane. Natural gas may be field or pipeline quality.

Non-selective catalytic reduction (NSCR) means an add-on catalytic nitrogen oxides (NO_X) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, NO_X, CO, and volatile organic compounds (VOC) into CO_2, nitrogen, and water.

Oil and gas production facility as used in this subpart means any grouping of equipment where hydrocarbon liquids are processed, upgraded (*i.e.,* remove impurities or other constituents to meet contract specifications), or stored prior to the point of custody transfer; or where natural gas is processed, upgraded, or stored prior to entering the natural gas transmission and storage source category. For purposes of a major source determination, facility (including a building, structure, or installation) means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in this section. Equipment that is part of a facility will typically be located within close proximity to other equipment located at the same facility. Pieces of production equipment or groupings of equipment located on different oil and gas leases, mineral fee tracts, lease tracts, subsurface or surface unit areas, surface fee tracts, surface lease tracts, or separate surface sites, whether or not connected by a road, waterway, power line or pipeline, shall not be considered part of the same facility. Examples of facilities in the oil and natural gas production source category include, but are not limited to, well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

Oxidation catalyst means an add-on catalytic control device that controls CO and VOC by oxidation.

Peaking unit or engine means any standby engine intended for use during periods of high demand that are not emergencies.

Percent load means the fractional power of an engine compared to its maximum manufacturer's design capacity at engine site conditions. Percent load may range between 0 percent to above 100 percent.

Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. For oil and natural gas production facilities subject to subpart HH of this part, the potential to emit provisions in §63.760(a) may be used. For natural gas transmission and storage facilities subject to subpart HHH of this part, the maximum annual facility gas throughput for storage facilities may be determined according to §63.1270(a)(1) and the maximum annual throughput for transmission facilities may be determined according to §63.1270(a)(2).

Production field facility means those oil and gas production facilities located prior to the point of custody transfer.

Production well means any hole drilled in the earth from which crude oil, condensate, or field natural gas is extracted.

Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure C_3H_8.

Remote stationary RICE means stationary RICE meeting any of the following criteria:

(1) Stationary RICE located in an offshore area that is beyond the line of ordinary low water along that portion of the coast of the United States that is in direct contact with the open seas and beyond the line marking the seaward limit of inland waters.

(2) Stationary RICE located on a pipeline segment that meets both of the criteria in paragraphs (2)(i) and (ii) of this definition.

(i) A pipeline segment with 10 or fewer buildings intended for human occupancy and no buildings with four or more stories within 220 yards (200 meters) on either side of the centerline of any continuous 1-mile (1.6 kilometers) length of pipeline. Each separate dwelling unit in a multiple dwelling unit building is counted as a separate building intended for human occupancy.

(ii) The pipeline segment does not lie within 100 yards (91 meters) of either a building or a small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period. The days and weeks need not be consecutive. The building or area is considered occupied for a full day if it is occupied for any portion of the day.

(iii) For purposes of this paragraph (2), the term pipeline segment means all parts of those physical facilities through which gas moves in transportation, including but not limited to pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies. Stationary RICE located within 50 yards (46 meters) of the pipeline segment providing power for equipment on a pipeline segment are part of the pipeline segment. Transportation of gas means the gathering, transmission, or distribution of gas by pipeline, or the storage of gas. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

(3) Stationary RICE that are not located on gas pipelines and that have 5 or fewer buildings intended for human occupancy and no buildings with four or more stories within a 0.25 mile radius around the engine. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

Residential emergency stationary RICE means an emergency stationary RICE used in residential establishments such as homes or apartment buildings.

Responsible official means responsible official as defined in 40 CFR 70.2.

Rich burn engine means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to December 19, 2002 with passive emission control technology for NO_X (such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

Site-rated HP means the maximum manufacturer's design capacity at engine site conditions.

Spark ignition means relating to either: A gasoline-fueled engine; or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

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

Stationary RICE test cell/stand means an engine test cell/stand, as defined in subpart PPPPP of this part, that tests stationary RICE.

Stoichiometric means the theoretical air-to-fuel ratio required for complete combustion.

Storage vessel with the potential for flash emissions means any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio equal to or greater than 0.31 cubic meters per liter and an American Petroleum Institute gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per day. Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced.

Subpart means 40 CFR part 63, subpart ZZZZ.

Surface site means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

Two-stroke engine means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3607, Jan. 18, 2008; 75 FR 9679, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 76 FR 12867, Mar. 9, 2011; 78 FR 6706, Jan. 30, 2013]

Table 1a to Subpart ZZZZ of Part 63—Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations at 100 percent load plus or minus 10 percent for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 4SRB stationary RICE	a. Reduce formaldehyde emissions by 76 percent or more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007 or	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]
	b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2	

[1] Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9679, Mar. 3, 2010, as amended at 75 FR 51592, Aug. 20, 2010]

Table 1b to Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed SI 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600, 63.6603, 63.6630 and 63.6640, you must comply with the following operating limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
1. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR; or existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2 and using NSCR;	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F.[1]
2. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR; or	Comply with any operating limitations approved by the Administrator.
existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2 and not using NSCR.	

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[78 FR 6706, Jan. 30, 2013]

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

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 2SLB stationary RICE	a. Reduce CO emissions by 58 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent O_2. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent O_2 until June 15, 2007	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]
2. 4SLB stationary RICE	a. Reduce CO emissions by 93 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O_2	

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
3. CI stationary RICE	a. Reduce CO emissions by 70 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O_2	

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9680, Mar. 3, 2010]

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

As stated in §§63.6600, 63.6601, 63.6603, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions; new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions; and existing CI stationary RICE >500 HP:

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
1. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and using an oxidation catalyst; and New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an oxidation catalyst.	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.[1]
2. Existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and using an oxidation catalyst	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test; and
	b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.[1]
3. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and not using an oxidation catalyst; and	Comply with any operating limitations approved by the Administrator.
New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst; and	

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst.	

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[78 FR 6707, Jan. 30, 2013]

Table 2c to Subpart ZZZZ of Part 63—Requirements for Existing Compression Ignition Stationary RICE Located at a Major Source of HAP Emissions and Existing Spark Ignition Stationary RICE ≤500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600, 63.6602, and 63.6640, you must comply with the following requirements for existing compression ignition stationary RICE located at a major source of HAP emissions and existing spark ignition stationary RICE ≤500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Emergency stationary CI RICE and black start stationary CI RICE[1]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first.[2] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[3]
2. Non-Emergency, non-black start stationary CI RICE <100 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first.[2] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
3. Non-Emergency, non-black start CI stationary RICE 100≤HP≤300 HP	Limit concentration of CO in the stationary RICE exhaust to 230 ppmvd or less at 15 percent O_2.	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
4. Non-Emergency, non-black start CI stationary RICE 300<HP≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O_2; or b. Reduce CO emissions by 70 percent or more.	
5. Non-Emergency, non-black start stationary CI RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent O_2; or b. Reduce CO emissions by 70 percent or more.	
6. Emergency stationary SI RICE and black start stationary SI RICE.[1]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[2] b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
7. Non-Emergency, non-black start stationary SI RICE <100 HP that are not 2SLB stationary RICE	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[2] b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary;	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
8. Non-Emergency, non-black start 2SLB stationary SI RICE <100 HP	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;[2] b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary;	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.[3]	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
9. Non-emergency, non-black start 2SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 225 ppmvd or less at 15 percent O_2.	
10. Non-emergency, non-black start 4SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd or less at 15 percent O_2.	
11. Non-emergency, non-black start 4SRB stationary RICE 100≤HP≤500	Limit concentration of formaldehyde in the stationary RICE exhaust to 10.3 ppmvd or less at 15 percent O_2.	
12. Non-emergency, non-black start stationary RICE 100≤HP≤500 which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	Limit concentration of CO in the stationary RICE exhaust to 177 ppmvd or less at 15 percent O_2.	

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

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

[3]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[78 FR 6708, Jan. 30, 2013, as amended at 78 FR 14457, Mar. 6, 2013]

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

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

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

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE >500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE >500 HP that operate 24 hours or less per calendar year.[2]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[1]; b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
6. Non-emergency, non-black start 2SLB stationary RICE	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.	
7. Non-emergency, non-black start 4SLB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
8. Non-emergency, non-black start 4SLB remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	
9. Non-emergency, non-black start 4SLB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install an oxidation catalyst to reduce HAP emissions from the stationary RICE.	
10. Non-emergency, non-black start 4SRB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
11. Non-emergency, non-black start 4SRB remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	
12. Non-emergency, non-black start 4SRB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install NSCR to reduce HAP emissions from the stationary RICE.	
13. Non-emergency, non-black start stationary RICE which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1] b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	

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

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

[78 FR 6709, Jan. 30, 2013]

Table 3 to Subpart ZZZZ of Part 63—Subsequent Performance Tests

As stated in §§63.6615 and 63.6620, you must comply with the following subsequent performance test requirements:

For each . . .	Complying with the requirement to . . .	You must . . .
1. New or reconstructed 2SLB stationary RICE >500 HP located at major sources; new or reconstructed 4SLB stationary RICE ≥250 HP located at major sources; and new or reconstructed CI stationary RICE >500 HP located at major sources	Reduce CO emissions and not using a CEMS	Conduct subsequent performance tests semiannually.[1]
2. 4SRB stationary RICE ≥5,000 HP located at major sources	Reduce formaldehyde emissions	Conduct subsequent performance tests semiannually.[1]
3. Stationary RICE >500 HP located at major sources and new or reconstructed 4SLB stationary RICE 250≤HP≤500 located at major sources	Limit the concentration of formaldehyde in the stationary RICE exhaust	Conduct subsequent performance tests semiannually.[1]
4. Existing non-emergency, non-black start CI stationary RICE >500 HP that are not limited use stationary RICE	Limit or reduce CO emissions and not using a CEMS	Conduct subsequent performance tests every 8,760 hours or 3 years, whichever comes first.
5. Existing non-emergency, non-black start CI stationary RICE >500 HP that are limited use stationary RICE	Limit or reduce CO emissions and not using a CEMS	Conduct subsequent performance tests every 8,760 hours or 5 years, whichever comes first.

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

[78 FR 6711, Jan. 30, 2013]

Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests

As stated in §§63.6610, 63.6611, 63.6620, and 63.6640, you must comply with the following requirements for performance tests for stationary RICE:

Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
1. 2SLB, 4SLB, and CI stationary RICE	a. reduce CO emissions	i. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and		(a) For CO and O_2 measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (`3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A-1, the duct may be sampled at `3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4.
		ii. Measure the O_2 at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)[ac] (heated probe not necessary)	(b) Measurements to determine O_2 must be made at the same time as the measurements for CO concentration.
		iii. Measure the CO at the inlet and the outlet of the control device	(1) ASTM D6522-00 (Reapproved 2005)[abc] (heated probe not necessary) or Method 10 of 40 CFR part 60, appendix A-4	(c) The CO concentration must be at 15 percent O_2, dry basis.

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
2. 4SRB stationary RICE	a. reduce formaldehyde emissions	i. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and		(a) For formaldehyde, O_2, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (`3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A, the duct may be sampled at `3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A.
		ii. Measure O_2 at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)[a] (heated probe not necessary)	(a) Measurements to determine O_2 concentration must be made at the same time as the measurements for formaldehyde or THC concentration.
		iii. Measure moisture content at the inlet and outlet of the control device; and	(1) Method 4 of 40 CFR part 60, appendix A-3, or Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03[a]	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or THC concentration.
		iv. If demonstrating compliance with the formaldehyde percent reduction requirement, measure formalde-hyde at the inlet and the outlet of the control device	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03[a], provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. If demonstrating compliance with the THC percent reduction requirement, measure THC at the inlet and the outlet of the control device	(1) Method 25A, reported as propane, of 40 CFR part 60, appendix A-7	(a) THC concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
3. Stationary RICE	a. limit the concentra-tion of formalde-hyde or CO in the stationary RICE exhaust	i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary RICE; and		(a) For formaldehyde, CO, O_2, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (`3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A, the duct may be sampled at `3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A. If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2 concentration of the stationary RICE exhaust at the sampling port location; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)[a] (heated probe not necessary)	(a) Measurements to determine O_2 concentration must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iii. Measure moisture content of the station-ary RICE exhaust at the sampling port location; and	(1) Method 4 of 40 CFR part 60, appendix A-3, or Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03[a]	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iv. Measure formalde-hyde at the exhaust of the station-ary RICE; or	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03[a], provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. measure CO at the exhaust of the station-ary RICE	(1) Method 10 of 40 CFR part 60, appendix A-4, ASTM Method D6522-00 (2005)[ac], Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03[a]	(a) CO concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

[a]You may also use Methods 3A and 10 as options to ASTM-D6522-00 (2005). You may obtain a copy of ASTM-D6522-00 (2005) from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

[b]You may obtain a copy of ASTM-D6348-03 from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

[79 FR 11290, Feb. 27, 2014]

Table 5 to Subpart ZZZZ of Part 63—Initial Compliance With Emission Limitations, Operating Limitations, and Other Requirements

As stated in §§63.6612, 63.6625 and 63.6630, you must initially comply with the emission and operating limitations as required by the following:

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions and using oxidation catalyst, and using a CPMS	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
2. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, using oxidation catalyst, and using a CPMS	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions and not using oxidation catalyst	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
4. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and not using oxidation catalyst	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
5. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O_2 or CO_2 at both the inlet and outlet of the oxidation catalyst according to the requirements in §63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and
		iii. The average reduction of CO calculated using §63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period.
6. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O_2 or CO_2 at the outlet of the oxidation catalyst according to the requirements in §63.6625(a); and
		ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and
		iii. The average concentration of CO calculated using §63.6620 is less than or equal to the CO emission limitation. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average concentration measured during the 4-hour period.
7. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction, or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
8. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and
		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
9. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
10. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
11. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Reduce CO emissions	i. The average reduction of emissions of CO or formaldehyde, as applicable determined from the initial performance test is equal to or greater than the required CO or formaldehyde, as applicable, percent reduction.

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
12. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. The average formaldehyde or CO concentration, as applicable, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde or CO emission limitation, as applicable.
13. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install an oxidation catalyst	i. You have conducted an initial compliance demonstration as specified in §63.6630(e) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O_2;
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1350 °F.
14. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install NSCR	i. You have conducted an initial compliance demonstration as specified in §63.6630(e) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O_2, or the average reduction of emissions of THC is 30 percent or more;
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1250 °F.

[78 FR 6712, Jan. 30, 2013]

Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, and Other Requirements

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

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved[a]; and ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
2. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved[a]; and ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, new or reconstructed non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using a CEMS	i. Collecting the monitoring data according to §63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction or concentration of CO emissions according to §63.6620; and ii. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period, or that the emission remain at or below the CO concentration limit; and
		iii. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.
4. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and using NSCR	i. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
5. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
6. Non-emergency 4SRB stationary RICE with a brake HP ≥5,000 located at a major source of HAP	a. Reduce formaldehyde emissions	Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved, or to demonstrate that the average reduction of emissions of THC determined from the performance test is equal to or greater than 30 percent.[a]
7. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit[a]; and ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
8. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit[a]; and ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.

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

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
12. Existing limited use CI stationary RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using an oxidation catalyst	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
13. Existing limited use CI stationary RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and not using an oxidation catalyst	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
14. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install an oxidation catalyst	i. Conducting annual compliance demonstrations as specified in §63.6640(c) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O_2; and either ii. Collecting the catalyst inlet temperature data according to §63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than 450 °F and less than or equal to 1350 °F for the catalyst inlet temperature; or iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1350 °F.
15. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install NSCR	i. Conducting annual compliance demonstrations as specified in §63.6640(c) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O_2, or the average reduction of emissions of THC is 30 percent or more; and either ii. Collecting the catalyst inlet temperature data according to §63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than or equal to 750 °F and less than or equal to 1250 °F for the catalyst inlet temperature; or iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1250 °F.

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

[78 FR 6715, Jan. 30, 2013]

Table 7 to Subpart ZZZZ of Part 63—Requirements for Reports

As stated in §63.6650, you must comply with the following requirements for reports:

For each . . .	You must submit a . . .	The report must contain . . .	You must submit the report . . .
1. Existing non-emergency, non-black start stationary RICE 100≤HP≤500 located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >500 HP located at a major source of HAP; existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >300 HP located at an area source of HAP; new or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP; and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	Compliance report	a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or	i. Semiannually according to the requirements in §63.6650(b)(1)-(5) for engines that are not limited use stationary RICE subject to numerical emission limitations; and ii. Annually according to the requirements in §63.6650(b)(6)-(9) for engines that are limited use stationary RICE subject to numerical emission limitations.
		b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in §63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), the information in §63.6650(e); or	i. Semiannually according to the requirements in §63.6650(b).
		c. If you had a malfunction during the reporting period, the information in §63.6650(c)(4).	i. Semiannually according to the requirements in §63.6650(b).
2. New or reconstructed non-emergency stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	Report	a. The fuel flow rate of each fuel and the heating values that were used in your calculations, and you must demonstrate that the percentage of heat input provided by landfill gas or digester gas, is equivalent to 10 percent or more of the gross heat input on an annual basis; and	i. Annually, according to the requirements in §63.6650.
		b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and	i. See item 2.a.i.
		c. Any problems or errors suspected with the meters.	i. See item 2.a.i.
3. Existing non-emergency, non-black start 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Compliance report	a. The results of the annual compliance demonstration, if conducted during the reporting period.	i. Semiannually according to the requirements in §63.6650(b)(1)-(5).

For each . . .	You must submit a . . .	The report must contain . . .	You must submit the report . . .
4. Emergency stationary RICE that operate or are contractually obligated to be available for more than 15 hours per year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operate for the purposes specified in §63.6640(f)(4)(ii)	Report	a. The information in §63.6650(h)(1)	i. annually according to the requirements in §63.6650(h)(2)-(3).

[78 FR 6719, Jan. 30, 2013]

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

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

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.1	General applicability of the General Provisions	Yes.	
§63.2	Definitions	Yes	Additional terms defined in §63.6675.
§63.3	Units and abbreviations	Yes.	
§63.4	Prohibited activities and circumvention	Yes.	
§63.5	Construction and reconstruction	Yes.	
§63.6(a)	Applicability	Yes.	
§63.6(b)(1)-(4)	Compliance dates for new and reconstructed sources	Yes.	
§63.6(b)(5)	Notification	Yes.	
§63.6(b)(6)	[Reserved]		
§63.6(b)(7)	Compliance dates for new and reconstructed area sources that become major sources	Yes.	
§63.6(c)(1)-(2)	Compliance dates for existing sources	Yes.	
§63.6(c)(3)-(4)	[Reserved]		
§63.6(c)(5)	Compliance dates for existing area sources that become major sources	Yes.	
§63.6(d)	[Reserved]		
§63.6(e)	Operation and maintenance	No.	
§63.6(f)(1)	Applicability of standards	No.	
§63.6(f)(2)	Methods for determining compliance	Yes.	
§63.6(f)(3)	Finding of compliance	Yes.	
§63.6(g)(1)-(3)	Use of alternate standard	Yes.	
§63.6(h)	Opacity and visible emission standards	No	Subpart ZZZZ does not contain opacity or visible emission standards.
§63.6(i)	Compliance extension procedures and criteria	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.6(j)	Presidential compliance exemption	Yes.	
§63.7(a)(1)-(2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at §§63.6610, 63.6611, and 63.6612.
§63.7(a)(3)	CAA section 114 authority	Yes.	
§63.7(b)(1)	Notification of performance test	Yes	Except that §63.7(b)(1) only applies as specified in §63.6645.
§63.7(b)(2)	Notification of rescheduling	Yes	Except that §63.7(b)(2) only applies as specified in §63.6645.
§63.7(c)	Quality assurance/test plan	Yes	Except that §63.7(c) only applies as specified in §63.6645.
§63.7(d)	Testing facilities	Yes.	
§63.7(e)(1)	Conditions for conducting performance tests	No.	Subpart ZZZZ specifies conditions for conducting performance tests at §63.6620.
§63.7(e)(2)	Conduct of performance tests and reduction of data	Yes	Subpart ZZZZ specifies test methods at §63.6620.
§63.7(e)(3)	Test run duration	Yes.	
§63.7(e)(4)	Administrator may require other testing under section 114 of the CAA	Yes.	
§63.7(f)	Alternative test method provisions	Yes.	
§63.7(g)	Performance test data analysis, recordkeeping, and reporting	Yes.	
§63.7(h)	Waiver of tests	Yes.	
§63.8(a)(1)	Applicability of monitoring requirements	Yes	Subpart ZZZZ contains specific requirements for monitoring at §63.6625.
§63.8(a)(2)	Performance specifications	Yes.	
§63.8(a)(3)	[Reserved]		
§63.8(a)(4)	Monitoring for control devices	No.	
§63.8(b)(1)	Monitoring	Yes.	
§63.8(b)(2)-(3)	Multiple effluents and multiple monitoring systems	Yes.	
§63.8(c)(1)	Monitoring system operation and maintenance	Yes.	
§63.8(c)(1)(i)	Routine and predictable SSM	No	
§63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan	Yes.	
§63.8(c)(1)(iii)	Compliance with operation and maintenance requirements	No	
§63.8(c)(2)-(3)	Monitoring system installation	Yes.	
§63.8(c)(4)	Continuous monitoring system (CMS) requirements	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§63.8(c)(6)-(8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.

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

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

[75 FR 9688, Mar. 3, 2010, as amended at 78 FR 6720, Jan. 30, 2013]

Appendix A—Protocol for Using an Electrochemical Analyzer to Determine Oxygen and Carbon Monoxide Concentrations From Certain Engines

1.0 Scope and Application. What is this Protocol?

This protocol is a procedure for using portable electrochemical (EC) cells for measuring carbon monoxide (CO) and oxygen (O_2) concentrations in controlled and uncontrolled emissions from existing stationary 4-stroke lean burn and 4-stroke rich burn reciprocating internal combustion engines as specified in the applicable rule.

1.1 Analytes. What does this protocol determine?

This protocol measures the engine exhaust gas concentrations of carbon monoxide (CO) and oxygen (O_2).

Analyte	CAS No.	Sensitivity
Carbon monoxide (CO)	630-08-0	Minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.
Oxygen (O_2)	*7782-44-7*	

1.2 Applicability. When is this protocol acceptable?

This protocol is applicable to 40 CFR part 63, subpart ZZZZ. Because of inherent cross sensitivities of EC cells, you must not apply this protocol to other emissions sources without specific instruction to that effect.

1.3 Data Quality Objectives. How good must my collected data be?

Refer to Section 13 to verify and document acceptable analyzer performance.

1.4 Range. What is the targeted analytical range for this protocol?

The measurement system and EC cell design(s) conforming to this protocol will determine the analytical range for each gas component. The nominal ranges are defined by choosing up-scale calibration gas concentrations near the maximum anticipated flue gas concentrations for CO and O_2, or no more than twice the permitted CO level.

1.5 Sensitivity. What minimum detectable limit will this protocol yield for a particular gas component?

The minimum detectable limit depends on the nominal range and resolution of the specific EC cell used, and the signal to noise ratio of the measurement system. The minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.

2.0 Summary of Protocol

In this protocol, a gas sample is extracted from an engine exhaust system and then conveyed to a portable EC analyzer for measurement of CO and O_2 gas concentrations. This method provides measurement system performance specifications and sampling protocols to ensure reliable data. You may use additions to, or modifications of vendor supplied measurement systems (e.g., heated or unheated sample lines, thermocouples, flow meters, selective gas scrubbers, etc.) to meet the design specifications of this protocol. Do not make changes to the measurement system from the as-verified configuration (Section 3.12).

3.0 Definitions

3.1 Measurement System. The total equipment required for the measurement of CO and O_2 concentrations. The measurement system consists of the following major subsystems:

3.1.1 Data Recorder. A strip chart recorder, computer or digital recorder for logging measurement data from the analyzer output. You may record measurement data from the digital data display manually or electronically.

3.1.2 Electrochemical (EC) Cell. A device, similar to a fuel cell, used to sense the presence of a specific analyte and generate an electrical current output proportional to the analyte concentration.

3.1.3 Interference Gas Scrubber. A device used to remove or neutralize chemical compounds that may interfere with the selective operation of an EC cell.

3.1.4 Moisture Removal System. Any device used to reduce the concentration of moisture in the sample stream so as to protect the EC cells from the damaging effects of condensation and to minimize errors in measurements caused by the scrubbing of soluble gases.

3.1.5 Sample Interface. The portion of the system used for one or more of the following: sample acquisition; sample transport; sample conditioning or protection of the EC cell from any degrading effects of the engine exhaust effluent; removal of particulate matter and condensed moisture.

3.2 Nominal Range. The range of analyte concentrations over which each EC cell is operated (normally 25 percent to 150 percent of up-scale calibration gas value). Several nominal ranges can be used for any given cell so long as the calibration and repeatability checks for that range remain within specifications.

3.3 Calibration Gas. A vendor certified concentration of a specific analyte in an appropriate balance gas.

3.4 Zero Calibration Error. The analyte concentration output exhibited by the EC cell in response to zero-level calibration gas.

3.5 Up-Scale Calibration Error. The mean of the difference between the analyte concentration exhibited by the EC cell and the certified concentration of the up-scale calibration gas.

3.6 Interference Check. A procedure for quantifying analytical interference from components in the engine exhaust gas other than the targeted analytes.

3.7 Repeatability Check. A protocol for demonstrating that an EC cell operated over a given nominal analyte concentration range provides a stable and consistent response and is not significantly affected by repeated exposure to that gas.

3.8 Sample Flow Rate. The flow rate of the gas sample as it passes through the EC cell. In some situations, EC cells can experience drift with changes in flow rate. The flow rate must be monitored and documented during all phases of a sampling run.

3.9 Sampling Run. A timed three-phase event whereby an EC cell's response rises and plateaus in a sample conditioning phase, remains relatively constant during a measurement data phase, then declines during a refresh phase. The sample conditioning phase exposes the EC cell to the gas sample for a length of time sufficient to reach a constant response. The measurement data phase is the time interval during which gas sample measurements can be made that meet the acceptance criteria of this protocol. The refresh phase then purges the EC cells with CO-free air. The refresh phase replenishes requisite O_2 and moisture in the electrolyte reserve and provides a mechanism to de-gas or desorb any interference gas scrubbers or filters so as to enable a stable CO EC cell response. There are four primary types of sampling runs: pre- sampling calibrations; stack gas sampling; post-sampling calibration checks; and measurement system repeatability checks. Stack gas sampling runs can be chained together for extended evaluations, providing all other procedural specifications are met.

3.10 Sampling Day. A time not to exceed twelve hours from the time of the pre-sampling calibration to the post-sampling calibration check. During this time, stack gas sampling runs can be repeated without repeated recalibrations, providing all other sampling specifications have been met.

3.11 Pre-Sampling Calibration/Post-Sampling Calibration Check. The protocols executed at the beginning and end of each sampling day to bracket measurement readings with controlled performance checks.

3.12 Performance-Established Configuration. The EC cell and sampling system configuration that existed at the time that it initially met the performance requirements of this protocol.

4.0 Interferences.

When present in sufficient concentrations, NO and NO_2 are two gas species that have been reported to interfere with CO concentration measurements. In the likelihood of this occurrence, it is the protocol user's responsibility to employ and properly maintain an appropriate CO EC cell filter or scrubber for removal of these gases, as described in Section 6.2.12.

5.0 Safety. [Reserved]

6.0 Equipment and Supplies.

6.1 What equipment do I need for the measurement system?

The system must maintain the gas sample at conditions that will prevent moisture condensation in the sample transport lines, both before and as the sample gas contacts the EC cells. The essential components of the measurement system are described below.

6.2 Measurement System Components.

6.2.1 Sample Probe. A single extraction-point probe constructed of glass, stainless steel or other non-reactive material, and of length sufficient to reach any designated sampling point. The sample probe must be designed to prevent plugging due to condensation or particulate matter.

6.2.2 Sample Line. Non-reactive tubing to transport the effluent from the sample probe to the EC cell.

6.2.3 Calibration Assembly (optional). A three-way valve assembly or equivalent to introduce calibration gases at ambient pressure at the exit end of the sample probe during calibration checks. The assembly must be designed such that only stack gas or calibration gas flows in the sample line and all gases flow through any gas path filters.

6.2.4 Particulate Filter (optional). Filters before the inlet of the EC cell to prevent accumulation of particulate material in the measurement system and extend the useful life of the components. All filters must be fabricated of materials that are non-reactive to the gas mixtures being sampled.

6.2.5 Sample Pump. A leak-free pump to provide undiluted sample gas to the system at a flow rate sufficient to minimize the response time of the measurement system. If located upstream of the EC cells, the pump must be constructed of a material that is non-reactive to the gas mixtures being sampled.

6.2.8 Sample Flow Rate Monitoring. An adjustable rotameter or equivalent device used to adjust and maintain the sample flow rate through the analyzer as prescribed.

6.2.9 Sample Gas Manifold (optional). A manifold to divert a portion of the sample gas stream to the analyzer and the remainder to a by-pass discharge vent. The sample gas manifold may also include provisions for introducing calibration gases directly to the analyzer. The manifold must be constructed of a material that is non-reactive to the gas mixtures being sampled.

6.2.10 EC cell. A device containing one or more EC cells to determine the CO and O_2 concentrations in the sample gas stream. The EC cell(s) must meet the applicable performance specifications of Section 13 of this protocol.

6.2.11 Data Recorder. A strip chart recorder, computer or digital recorder to make a record of analyzer output data. The data recorder resolution (i.e., readability) must be no greater than 1 ppm for CO; 0.1 percent for O_2; and one degree (either °C or °F) for temperature. Alternatively, you may use a digital or analog meter having the same resolution to observe and manually record the analyzer responses.

6.2.12 Interference Gas Filter or Scrubber. A device to remove interfering compounds upstream of the CO EC cell. Specific interference gas filters or scrubbers used in the performance-established configuration of the analyzer must continue to be used. Such a filter or scrubber must have a means to determine when the removal agent is exhausted. Periodically replace or replenish it in accordance with the manufacturer's recommendations.

7.0 Reagents and Standards. What calibration gases are needed?

7.1 Calibration Gases. CO calibration gases for the EC cell must be CO in nitrogen or CO in a mixture of nitrogen and O_2. Use CO calibration gases with labeled concentration values certified by the manufacturer to be within ±5 percent of the label value. Dry ambient air (20.9 percent O_2) is acceptable for calibration of the O_2 cell. If needed, any lower percentage O_2 calibration gas must be a mixture of O_2 in nitrogen.

7.1.1 Up-Scale CO Calibration Gas Concentration. Choose one or more up-scale gas concentrations such that the average of the stack gas measurements for each stack gas sampling run are between 25 and 150 percent of those concentrations. Alternatively, choose an up-scale gas that does not exceed twice the concentration of the applicable outlet standard. If a measured gas value exceeds 150 percent of the up-scale CO calibration gas value at any time during the stack gas sampling run, the run must be discarded and repeated.

7.1.2 Up-Scale O_2 Calibration Gas Concentration.

Select an O_2 gas concentration such that the difference between the gas concentration and the average stack gas measurement or reading for each sample run is less than 15 percent O_2. When the average exhaust gas O_2 readings are above 6 percent, you may use dry ambient air (20.9 percent O_2) for the up-scale O_2 calibration gas.

7.1.3 Zero Gas. Use an inert gas that contains less than 0.25 percent of the up-scale CO calibration gas concentration. You may use dry air that is free from ambient CO and other combustion gas products (e.g., CO_2).

8.0 Sample Collection and Analysis

8.1 Selection of Sampling Sites.

8.1.1 Control Device Inlet. Select a sampling site sufficiently downstream of the engine so that the combustion gases should be well mixed. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

8.1.2 Exhaust Gas Outlet. Select a sampling site located at least two stack diameters downstream of any disturbance (e.g., turbocharger exhaust, crossover junction or recirculation take-off) and at least one-half stack diameter upstream of the gas discharge to the atmosphere. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

8.2 Stack Gas Collection and Analysis. Prior to the first stack gas sampling run, conduct that the pre-sampling calibration in accordance with Section 10.1. Use Figure 1 to record all data. Zero the analyzer with zero gas. Confirm and record that the scrubber media color is correct and not exhausted. Then position the probe at the sampling point and begin the sampling run at the same flow rate used during the up-scale calibration. Record the start time. Record all EC cell output responses and the flow rate during the “sample conditioning phase” once per minute until constant readings are obtained. Then begin the “measurement data phase” and record readings every 15 seconds for at least two minutes (or eight readings), or as otherwise required to achieve two continuous minutes of data that meet the specification given in Section 13.1. Finally, perform the “refresh phase” by introducing dry air, free from CO and other combustion gases, until several minute-to-minute readings of consistent value have been obtained. For each run use the “measurement data phase” readings to calculate the average stack gas CO and O_2 concentrations.

8.3 EC Cell Rate. Maintain the EC cell sample flow rate so that it does not vary by more than ±10 percent throughout the pre-sampling calibration, stack gas sampling and post-sampling calibration check. Alternatively, the EC cell sample flow rate can be maintained within a tolerance range that does not affect the gas concentration readings by more than ±3 percent, as instructed by the EC cell manufacturer.

9.0 Quality Control (Reserved)

10.0 Calibration and Standardization

10.1 Pre-Sampling Calibration. Conduct the following protocol once for each nominal range to be used on each EC cell before performing a stack gas sampling run on each field sampling day. Repeat the calibration if you replace an EC cell before completing all of the sampling runs. There is no prescribed order for calibration of the EC cells; however, each cell must complete the measurement data phase during calibration. Assemble the measurement system by following the manufacturer's recommended protocols including for preparing and preconditioning the EC cell. Assure the measurement system has no leaks and verify the gas scrubbing agent is not depleted. Use Figure 1 to record all data.

10.1.1 Zero Calibration. For both the O_2 and CO cells, introduce zero gas to the measurement system (e.g., at the calibration assembly) and record the concentration reading every minute until readings are constant for at least two consecutive minutes. Include the time and sample flow rate. Repeat the steps in this section at least once to verify the zero calibration for each component gas.

10.1.2 Zero Calibration Tolerance. For each zero gas introduction, the zero level output must be less than or equal to ±3 percent of the up-scale gas value or ±1 ppm, whichever is less restrictive, for the CO channel and less than or equal to ±0.3 percent O_2 for the O_2 channel.

10.1.3 Up-Scale Calibration. Individually introduce each calibration gas to the measurement system (e.g., at the calibration assembly) and record the start time. Record all EC cell output responses and the flow rate during this "sample conditioning phase" once per minute until readings are constant for at least two minutes. Then begin the "measurement data phase" and record readings every 15 seconds for a total of two minutes, or as otherwise required. Finally, perform the "refresh phase" by introducing dry air, free from CO and other combustion gases, until readings are constant for at least two consecutive minutes. Then repeat the steps in this section at least once to verify the calibration for each component gas. Introduce all gases to flow through the entire sample handling system (i.e., at the exit end of the sampling probe or the calibration assembly).

10.1.4 Up-Scale Calibration Error. The mean of the difference of the "measurement data phase" readings from the reported standard gas value must be less than or equal to ±5 percent or ±1 ppm for CO or ±0.5 percent O_2, whichever is less restrictive, respectively. The maximum allowable deviation from the mean measured value of any single "measurement data phase" reading must be less than or equal to ±2 percent or ±1 ppm for CO or ±0.5 percent O_2, whichever is less restrictive, respectively.

10.2 Post-Sampling Calibration Check. Conduct a stack gas post-sampling calibration check after the stack gas sampling run or set of runs and within 12 hours of the initial calibration. Conduct up-scale and zero calibration checks using the protocol in Section 10.1. Make no changes to the sampling system or EC cell calibration until all post-sampling calibration checks have been recorded. If either the zero or up-scale calibration error exceeds the respective specification in Sections 10.1.2 and 10.1.4 then all measurement data collected since the previous successful calibrations are invalid and re-calibration and re-sampling are required. If the sampling system is disassembled or the EC cell calibration is adjusted, repeat the calibration check before conducting the next analyzer sampling run.

11.0 Analytical Procedure

The analytical procedure is fully discussed in Section 8.

12.0 Calculations and Data Analysis

Determine the CO and O_2 concentrations for each stack gas sampling run by calculating the mean gas concentrations of the data recorded during the "measurement data phase".

13.0 Protocol Performance

Use the following protocols to verify consistent analyzer performance during each field sampling day.

13.1 Measurement Data Phase Performance Check. Calculate the mean of the readings from the "measurement data phase". The maximum allowable deviation from the mean for each of the individual readings is ±2 percent, or ±1 ppm,

whichever is less restrictive. Record the mean value and maximum deviation for each gas monitored. Data must conform to Section 10.1.4. The EC cell flow rate must conform to the specification in Section 8.3.

Example: A measurement data phase is invalid if the maximum deviation of any single reading comprising that mean is greater than ±2 percent *or* ±1 ppm (the default criteria). For example, if the mean = 30 ppm, single readings of below 29 ppm and above 31 ppm are disallowed).

13.2 Interference Check. Before the initial use of the EC cell and interference gas scrubber in the field, and semi-annually thereafter, challenge the interference gas scrubber with NO and NO_2 gas standards that are generally recognized as representative of diesel-fueled engine NO and NO_2 emission values. Record the responses displayed by the CO EC cell and other pertinent data on Figure 1 or a similar form.

13.2.1 Interference Response. The combined NO and NO_2 interference response should be less than or equal to ±5 percent of the up-scale CO calibration gas concentration.

13.3 Repeatability Check. Conduct the following check once for each nominal range that is to be used on the CO EC cell within 5 days prior to each field sampling program. If a field sampling program lasts longer than 5 days, repeat this check every 5 days. Immediately repeat the check if the EC cell is replaced or if the EC cell is exposed to gas concentrations greater than 150 percent of the highest up-scale gas concentration.

13.3.1 Repeatability Check Procedure. Perform a complete EC cell sampling run (all three phases) by introducing the CO calibration gas to the measurement system and record the response. Follow Section 10.1.3. Use Figure 1 to record all data. Repeat the run three times for a total of four complete runs. During the four repeatability check runs, do not adjust the system except where necessary to achieve the correct calibration gas flow rate at the analyzer.

13.3.2 Repeatability Check Calculations. Determine the highest and lowest average “measurement data phase” CO concentrations from the four repeatability check runs and record the results on Figure 1 or a similar form. The absolute value of the difference between the maximum and minimum average values recorded must not vary more than ±3 percent or ±1 ppm of the up-scale gas value, whichever is less restrictive.

14.0 Pollution Prevention (Reserved)

15.0 Waste Management (Reserved)

16.0 Alternative Procedures (Reserved)

17.0 References

(1) “Development of an Electrochemical Cell Emission Analyzer Test Protocol”, Topical Report, Phil Juneau, Emission Monitoring, Inc., July 1997.

(2) “Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Emissions from Natural Gas-Fired Engines, Boilers, and Process Heaters Using Portable Analyzers”, EMC Conditional Test Protocol 30 (CTM-30), Gas Research Institute Protocol GRI-96/0008, Revision 7, October 13, 1997.

(3) “ICAC Test Protocol for Periodic Monitoring”, EMC Conditional Test Protocol 34 (CTM-034), The Institute of Clean Air Companies, September 8, 1999.

(4) “Code of Federal Regulations”, Protection of Environment, 40 CFR, Part 60, Appendix A, Methods 1-4; 10.

Table 1: Appendix A—Sampling Run Data.

Facility_____ Engine I.D._____ Date_____											
Run Type:	(_)			(_)			(_)			(_)	
(X)	Pre-Sample Calibration			Stack Gas Sample			Post-Sample Cal. Check			Repeatability Check	
Run #	1	1	2	2	3	3	4	4	Time	Scrub. OK	Flow- Rate
Gas	O_2	CO	O_2	CO	O_2	CO	O_2	CO			
Sample Cond. Phase											
"											
"											
"											
"											
Measurement Data Phase											
"											
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[78 FR 6721, Jan. 30, 2013]

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Part 70 Operating Permit Renewal

Source Background and Description

Source Name:	**Indianapolis Airport Authority**
Source Location:	**2825 West Perimeter Road and 7800 Col. H. Weir Cook Memorial Drive Indianapolis, Indiana 46241**
County:	**Marion County, Decatur and Wayne Townships**
SIC Code:	**4581 (Airports, Flying Fields, and Terminal Services) 4961 (Steam and Air Conditioning Supply)**
Permit Renewal No.:	**T097-35016-00156**
Permit Reviewer:	**David Matousek**

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from the Indianapolis Airport Authority relating to the operation of a collocated airfield, aerospace vehicle maintenance center and central energy plant source. On October 7, 2014, the Indianapolis Airport Authority submitted an application to the OAQ requesting to renew its operating permit. The Indianapolis Airport Authority was issued its first Part 70 Operating Permit Renewal (T097-25348-00156) on July 7, 2010. There have been no source modifications since the issuance of Part 70 Operating Permit Renewal T097-25348-00156, on July 7, 2010.

Source Definition

This collocated airfield, aerospace vehicle maintenance center and central energy plant source consists of five (5) plants:

(a) Plant 1, Indianapolis Airport Authority (097-00156), is located at 2825 West Perimeter Road, Indianapolis, Indiana 46241 and 7800 Col. H. Weir Cook Memorial Drive (and various collocated addresses), Indianapolis, Indiana 46241;

(b) Plant 2, Johnson Melloh Solutions - IMC Central Energy Plant (097-00586), is located at 2745 South Hoffman Road, Suite 504, Indianapolis, Indiana 46241;

(c) Plant 3, AAR Aircraft Services, Indianapolis (097-00559), is located at 2825 West Perimeter Road, Indianapolis, Indiana 46241;

(d) Plant 5, Shuttle America Corporation (097-00668), is located at 2745 South Hoffman Road, Dock 67, Hangar 7A-7B, Indianapolis, IN 46241; and

(e) Plant 6, ASIG Aircraft Services International Group (097-00667), is located at 2050 Hoffman Road, Indianapolis, IN 46241.

These plants are located on one or more contiguous or adjacent properties, have the same two digit SIC code and are under common control, therefore they are considered one (1) major source, as defined by 326 IAC 2-7-1(22).

A Part 70 Operating Permit will be issued to the Indianapolis Airport Authority (097-00156) as the primary source, and Administrative Part 70 Operating Permits will be issued to Johnson Melloh Solutions – IMC Central Energy Plant (097-00586), AAR Aircraft Services, Indianapolis (097-00559), Shuttle America Corporation (097-00668) and ASIG Aircraft Services International Group (097-00667) solely for administrative purposes.

The source was initially separated into three (3) plants consisting of the Indianapolis Airport Authority (097-00156), AAR Aircraft Services, Indianapolis (097-00559) and Indianapolis Diversified Machining, Inc. (097-00560) under administrative amendment number 097-21243-00156, administrative amendment number 097-21245-00559, and administrative amendment number 097-21325-00560, all issued on October 14, 2005.

The source was reorganized into four (4) plants consisting of the Indianapolis Airport Authority (097-00156), BHMM Energy Services, LLC (097-00586), AAR Aircraft Services (097-00559), and Indianapolis Diversified Machining, Inc. (097-00560) under administrative amendment number 097-23165-00156, administrative amendment number 097-22919-00586, both issued on November 30, 2006, minor source modification number 097-25415-00559, issued on March 3, 2008, and Administrative Part 70 Operating Permit Renewal number T 097-25296-00560, issued on December 31, 2008.

The source was reorganized into six (6) plants consisting of the Indianapolis Airport Authority (097-00156), BHMM Energy Services, LLC (097-00586), AAR Aircraft Services (097-00559), Indianapolis Diversified Machining, Inc. (097-00560), Chautauqua Airlines (now Shuttle America Corporation) (097-00668) and Skytanking (now ASIG Aircraft Services International Group) (097-00667) under administrative amendment number 097-25348-00156, issued on July 7, 2010, significant permit modification number 097-28213-00559, issued on March 30, 2010, and administrative amendment number 097-28370-00668, issued on July 9, 2010. Indianapolis Diversified Machining, Inc. had its permit revoked under 097-29631-00560 on September 9, 2010.

Finally, the source was reorganized into five (5) plants consisting of the Indianapolis Airport Authority (097-00156), Johnson Melloh Solutions (097-00586), AAR Aircraft Services (097-00559), Chautauqua Airlines (now Shuttle America Corporation) (097-00668) and Skytanking (now ASIG Aircraft Services International Group) (097-00667) under Part 70 Operating Permit Renewal number 097-25348-00156, issued on July 7, 2010, significant permit modification number 097-28213-00559, issued on March 30, 2010, Administrative Part 70 Operating Permit number 097-28370, issued on July 9, 2010, and 097-28369-00667, issued on July 8, 2010. On October 6, 2014, a renewal application was received from Skytanking requesting a change in ownership from Skytanking to ASIG - Aircraft Services International Group. On April 20, 2015, Republic Airways Holdings (RAH), the owner of Chautauqua Airlines (now Shuttle America Corporation) requested IDEM, OAQ to update the operator of Chautauqua Airlines to Shuttle America Corporation. RAH remains the owner of the assets of Chautauqua Airlines (now Shuttle America Corporation).

Permitted Emission Units and Pollution Control Equipment

This stationary source, Plant 1, located at 2825 West Perimeter Road, Indianapolis, Indiana 46241 and 7800 Col. H. Weir Cook Memorial Drive, Indianapolis, Indiana 46241, consists of the following emission units and pollution control devices:

(a) Two (2) reciprocating internal combustion engine emergency generators in the New Indianapolis Airport Terminal located at 7800 Col. H. Weir Cook Memorial Drive, identified as emission unit 013 and emission unit 014. Each engine is diesel fuel-fired, compression ignition and rated at 2200 horsepower. Emission unit 013 exhausts to stack/vent V1 and emission unit 014 exhausts to stack/vent V2. Each engine was approved in 2008 for construction. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

Specifically Regulated Insignificant Activities

This stationary source, Plant 1, located at 2825 West Perimeter Road, Indianapolis, Indiana 46241 and 7800 Col. H. Weir Cook Memorial Drive, Indianapolis, Indiana 46241, consists of the following specifically regulated insignificant activities, as defined in 326 IAC 2-7-1(21):

(a) One (1) reciprocating internal combustion engine emergency generator in Fire Station #1, located at 8300 North Service Road, identified as emission unit 015. Emission unit 015 is diesel fuel-fired, compression ignition and rated at 840 horsepower. Emission unit 015 exhausts to stack/vent V3. Emission unit 015 was approved in 2008 for construction and has a manufacturing date of 2007. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(b) One (1) reciprocating internal combustion engine emergency generator in the New Indianapolis Airport Parking Garage, located at 7801 Airport Terminal Drive identified as emission unit 016. Emission unit 016 is diesel fuel-fired, compression ignition and rated at 1495 horsepower. Emission unit 016 exhausts to stack/vent V4A and V4B. Emission unit 016 was approved in 2008 for construction and has a manufacturing date of 2006. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(c) One (1) reciprocating internal combustion engine emergency generator in the Airport Operations Center - Emergency Operations Center (AOC-EOC), located at 8101 South Service Road identified as emission unit 018. Emission unit 018 is diesel fuel-fired, compression ignition and rated at 1528 horsepower. Emission unit 018 exhausts to stack/vent V6. Emission unit 018 was approved in 2008 for construction. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(d) One (1) reciprocating internal combustion engine emergency generator in Parking Access Revenue Control (PARC), located at 8081 Col. H. Weir Cook Memorial Drive identified as emission unit 021. Emission unit 021 is diesel fuel-fired, compression ignition and rated at 133 horsepower. Emission unit 021 exhausts to stack/vent V7. Emission unit 021 was approved in 2008 for construction. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(e) One (1) Caterpillar Standby 500 diesel-fired emergency generator identified as Caterpillar Standby 500, rated at 831 horsepower, located in the Midfield Electrical Vault. This emergency generator is a replacement of an existing 750 horsepower generator. Approved in 2007 for construction. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(f) The following degreasing operation that does not individually exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6: One (1) System One cold cleaner degreaser located in the Airfield Maintenance Building at 2500 South High School Road. [326 IAC 8-3-2] [326 IAC 8-3-8]

(g) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, including but not limited to the following:

(1) One (1) Kewanee boiler, identified as hot water heater, identified as emission unit #4, approved in 2007 for construction, with maximum heat input capacity of 8.998 million Btu per hour, located in the Airfield Maintenance building at 2500 South High School Road. [326 IAC 6.5]

(2) One (1) Weil McClain boiler, identified as hot water heater, identified as emission unit #5, approved in 2007 for construction, with maximum heat input capacity of 2.247 million Btu per hour, located in the International Arrivals building at 2500 South High School Road. [326 IAC 6.5]

(3) Two (2) natural gas fired boilers in the Airport Operations Center-Emergency Operations Center (AOC-EOC), located at 8101 South Service Road identified as emission unit 019 and 020. Each boiler is rated at 1.0 million Btu per hour. Emission unit 019 and emission unit 020 were approved in 2008 for construction. [326 IAC 6.5]

(4) One (1) boiler, identified as emission unit 23, permitted in 2010, with a maximum heat input capacity of 3 MMBtu/hr, burning natural gas, and located in the Airfield Maintenance Building at 7800 Col. H. Weir Cook Memorial Drive. [326 IAC 6.5]

(h) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]

(i) One (1) reciprocating internal combustion engine emergency generator at Terminal Fire Pumps located at 7800 Col. H. Cook Memorial Drive, identified as emission unit 024. Emission unit 024 is diesel fuel-fired, rated at 755 horsepower, approved in 2008 for construction, with a manufacture date of 2008. [40 CFR 60, Subpart IIII] [326 IAC 6.5]

(j) One (1) reciprocating internal combustion engine diesel-fired emergency generator, approved in 2012 for construction with a manufacture date of 1994, identified as emission unit 025, located at Building 60 at 7800 Col. H. Weir Cook Memorial Drive, with a maximum capacity of 380 hp. [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(k) One (1) reciprocating internal combustion engine diesel-fired emergency generator, approved in 2012 for construction, identified as emission unit 026, located at Fire House #2 at 7800 Col. H. Weir Cook Memorial Drive, with a maximum capacity of 476 hp. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(l) One (1) reciprocating internal combustion engine diesel-fired emergency generator, located at Eagle Hub, 7800 Col. H. Weir Cook Memorial Drive. The Eagle Hub Generator is diesel fuel-fired, rated at 2025 horsepower, approved in 1992 for construction. [40 CFR 60, Subpart ZZZZ] [326 IAC 6.5]

(m) The following diesel emergency generators not exceeding one thousand six hundred (1600) horsepower located at 7800 Col. H. Weir Cook Memorial Drive, construction commenced prior to July 11, 2005:

(1) One (1) Caterpillar-Perkins emergency generator, identified as EG2, rated at 70 horsepower, located in the Old South Tug Guard Shack. [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(2) One (1) Caterpillar-Perkins emergency generator, identified as EG3, rated at 70 horsepower, located at international arrivals. [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(3) One (1) Caterpillar-Perkins emergency generator, identified as EG4, rated at 70 horsepower, located in the Midfield Road Access Gate. [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(4) One (1) Cummins Model 1010 Straight 6 emergency generator, identified as EG6, rated at 750 horsepower, located in the Airfield Maintenance Electrical Vault. [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(5) One (1) Generac Model 2000 emergency generator, identified as EG7, rated at 340 horsepower, located in the Airfield Maintenance building. [40 CFR 63, Subpart ZZZZ] [326 IAC 6.5]

(n) One (1) paint booth, identified as emission unit Paint Booth, equipped with two (2) HVLP paint systems used to paint maintenance equipment, equipped with dry filters, installed in 1974, located in the Airfield Maintenance building at 7800 Col. H Weir Cook Memorial Drive. [326 IAC 6.5]

Other Insignificant Activities

This stationary source, Plant 1, located at 2825 West Perimeter Road, Indianapolis, Indiana 46241 and 7800 Col. H. Weir Cook Memorial Drive, Indianapolis, Indiana 46241, consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21), that are not specifically regulated:

(a) One (1) No. 6 Recycled Oil Storage Tank, identified as Stand A, with a maximum capacity of 840,000 gallons, with a floating roof, and constructed in 1978, prior to May 19, 1978.

Emission Units and Pollution Control Equipment Removed From the Source

The source has removed the following emission units:

A.3(b)(2) Two 50,000 gallon storage tanks, UST, identified as Stand B-East and Stand B-West.

A.4(f)(2) One (1) cold cleaner degreaser at IMC Facility Maintenance; one (1) cold cleaner degreaser at IMC tool repair cage.

A.4(l)(1) One (1) Caterpillar-Perkins emergency generator, identified as EG1, rated at 226 horsepower, located in the Old Terminal Building-LAN Computer Room. [40 CFR 63, Subpart ZZZZ]

A.4(l)(5) One (1) Cummins Model 1009 Straight 6 emergency generator, identified as EG5, rated at 535 horsepower, located in the Old Terminal – Substation – Main Concourse. [40 CFR 63, Subpart ZZZZ]

Existing Approvals

Since the issuance of the Part 70 Operating Permit Renewal (T097-25348-00156) on July 7, 2010, the source has constructed or has been operating under the following additional approvals:

(a) Administrative Amendment No. 097-29870-00156, issued on November 18, 2010;

(b) Administrative Amendment No. 097-31891-00156, issued on August 17, 2012; and

(c) Administrative Amendment No. 097-32560-00156, issued on January 11, 2013.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the State Implementation Plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located in Marion County, Decatur and Wayne Township.

Pollutant	Designation
SO_2	Non-attainment effective October 4, 2013, for the Center Township, Perry Township, and Wayne Township. Better than national standards for the remainder of the county.
CO	Attainment effective February 18, 2000, for the part of the city of Indianapolis bounded by 11th Street on the north; Capitol Avenue on the west; Georgia Street on the south; and Delaware Street on the east. Unclassifiable or attainment effective November 15, 1990, for the remainder of Indianapolis and Marion County.
O_3	Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard.[1]
$PM_{2.5}$	Attainment effective July 11, 2013, for the annual $PM_{2.5}$ standard.
$PM_{2.5}$	Unclassifiable or attainment effective December 13, 2009, for the 24-hour $PM_{2.5}$ standard.
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.

[1]Attainment effective October 18, 2000, for the 1-hour ozone standard for the Indianapolis area, including Marion County, and is a maintenance area for the 1-hour ozone National Ambient Air Quality Standards (NAAQS) for purposes of 40 CFR 51, Subpart X*. The 1-hour designation was revoked effective June 15, 2005.

(a) Ozone Standards

Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Marion County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$

Marion County has been classified as attainment for $PM_{2.5}$. Therefore, direct $PM_{2.5}$, SO_2, and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(c) SO_2

U.S. EPA, in the Federal Register Notice 78 FR 47191 dated August 5, 2013, has designated Marion County, Wayne Township as nonattainment for SO_2. Therefore, SO_2 emissions were reviewed pursuant to the requirements of Emission Offset, 326 IAC 2-3.

(d) Other Criteria Pollutants

Marion County has been classified as attainment or unclassifiable in Indiana for CO, PM_{10}, NO_2 and lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

This source contains a nested source (located at Plant 2, Johnson Melloh Solutions - IMC Central Energy Plant (097-00586)) consisting of a combination of fossil fuel-fired boilers totaling more than 250 MMBtu/hr or more heat input capacity. The nested source is considered one of the 28 source categories, as specified in 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7. Therefore, fugitive emissions from the nested source are counted toward the determination of PSD, Emission Offset (EO), and Part 70 Permit applicability.

The remaining operations at the source are not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard (NSPS) that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

In previous determinations, the storage tank identified as Stand A was subject to 40 CFR 60, Subpart K. This storage tank now contains No. 6 fuel oil which is a petroleum liquid exempted from regulation by 40 CFR 60, Subpart K. 40 CFR 60, Subpart K was an applicable NSPS that was in effect on August 7, 1980 and fugitive emissions from the tank were counted toward the determination of PSD, Emission Offset (EO), and Part 70 Permit applicability. They are no longer counted.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the entire source (five (5) plants consisting of the Indianapolis Airport Authority (097-00156), Johnson Melloh Solutions (097-00586), AAR Aircraft Services (097-00559), Shuttle America Corporation (097-00668) and ASIG Aircraft Services International Group (097-00667).

Unrestricted Potential Emissions	
Pollutant	**Entire Source (TPY)**
PM	88.25
PM_{10}	100.02
$PM_{2.5}$	100.02
SO_2	365.44
NO_x	367.97
VOC	162.82
CO	196.30
Single HAP (Toluene)	7.17
Total HAP	16.33

Appendix A of this TSD reflects the unrestricted potential emissions of the source.

On June 23, 2014, in the case of Utility Air Regulatory Group v. EPA, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court's decision. U.S. EPA's guidance states that U.S. EPA will no longer require PSD or Title V permits for sources "previously classified as 'Major' based solely on greenhouse gas emissions."

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHGs emissions to determine operating permit applicability or PSD applicability to a source or modification.

(a) The potential to emit (as defined in 326 IAC 2-7-1(30)) of PM10, PM2.5, SO2, NOx, VOC, and CO are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7 and will be issued a Part 70 Operating Permit Renewal.

Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, because the source met the following:

(a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.

(b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any new control equipment is considered federally enforceable only after issuance of this Part 70 permit renewal, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Collocated Sources:	**Permit Number**	**Address - Indianapolis, Indiana 46241**
Indianapolis Airport Authority (IAA)	T097-25348-00156	2825 West Perimeter Road and 7800 Col. H. Weir Cook Dr.;
Johnson Melloh Solutions - IMC Central (JMS)	T097-34078-00586	2745 South Hoffman Road, Suite 504;
AAR Aircraft Services, Indianapolis (AAR)	T097-33261-00559	2825 West Perimeter Road;
Shuttle America Corporation (SAC)	T097-28370-00668	2745 South Hoffman Road, Dock 67, Hangar 7A-7B; and
ASIG Aircraft Services International Group (ASIG)	T097-28369-00667	2050 South Hoffman Road; Indianapolis, Indiana 46241

Potential to Emit - Nested Boilers (TPY) - One of 28 Source Categories								
Process / Emission Unit	**Location**	**PM**	**PM_{10}**	***$PM_{2.5}$**	**SO_2**	**VOC**	**CO**	**NO_x**
IMCCEP Boiler #1	JMS	6.05	14.07	14.07	86.22	6.66	85.90	83.20
IMCCEP Boiler #2	JMS							
IMCCEP Boiler #3	JMS							
IMCCEP Boiler #4	JMS							
Total for Nested Boilers		**6.05**	**14.07**	**14.07**	**86.22**	**6.66**	**85.90**	**83.20**
PSD Major Source Thresholds		**100**	**100**	**100**	**---**	**100**	**100**	**100**
Emission Offset/Nonattainment NSR Major Source Thresholds		**NA**	**NA**	**NA**	**100**	**NA**	**NA**	**NA**

Potential to Emit - Total Collocated Source (TPY) - Not One of 28 Source Categories								
Source Process / Emission Unit	**Location**	**PM[(b)]**	**PM_{10}**	**$PM_{2.5}$[(a)]**	**SO_2**	**VOC**	**CO**	**NO_x**
Total for Nested Boilers	JMS	6.05	14.07	14.07	86.22	6.66	85.90	83.20
Emergency Generator EU-13	IAA	0.49	0.22	0.22	1.33	0.39	10.29	8.36
Emergency Generator EU-14	IAA	0.49	0.22	0.22	1.33	0.39	10.29	8.36
Tank A	IAA	0.00	0.00	0.00	0.00	0.36	0.00	0.00
Emergency Generator EU-15	IAA	0.19	0.08	0.08	0.51	0.15	3.93	3.19
Emergency Generator EU-16	IAA	0.33	0.15	0.15	0.91	0.26	6.99	5.68
Emergency Generator EU-18	IAA	0.34	0.15	0.15	0.93	0.27	7.14	5.81
Emergency Generator EU-21	IAA	0.07	0.07	0.07	0.07	0.08	0.22	0.51
Emergency Generator EU-500	IAA	0.18	0.08	0.08	0.50	0.15	3.88	3.16
Degreasing	IAA	0.14	0.14	0.14	0.00	1.84	0.00	0.00
IAA Generators < 600 hp	IAA	0.30	0.30	0.30	0.28	0.00	0.91	4.24
IAA Generator Electric Vault	IAA	0.13	0.08	0.08	0.46	0.13	1.03	4.50
IAA Generator Eagle Hub	IAA	0.35	0.20	0.20	1.23	0.36	2.78	7.70
IAA Boilers < 100 MMBtu/hr	IAA	0.11	0.45	0.45	0.04	0.32	4.92	5.86
Boiler 23	IAA	0.02	0.10	0.10	0.01	0.07	1.10	1.31
Emergency Generator EU-24	IAA	0.13	0.08	0.08	0.76	0.13	1.04	2.45
IAA Natural Gas Heaters and Boiler	IAA	0.20	0.79	0.79	0.06	0.57	8.68	10.34
Emergency Generators EU-25/26	IAA	0.47	0.47	0.47	0.44	0.54	1.43	6.63
JMS Generators < 600 hp	JMS	1.30	1.30	1.30	1.22	1.51	3.99	18.52
JMS Generators > 600 hp	JMS	0.79	0.45	0.45	2.74	0.80	6.21	27.09
Ablative Coating Operation	AAR	5.25	5.25	5.25	0.00	25.00	0.00	0.00
AMU Heat and Cure Oven	AAR	0.02	0.08	0.08	0.01	0.06	0.92	1.10
Surface Coating P-2	AAR	0.92	0.92	0.92	0.00	25.00	0.00	0.00
NG Make-up Air Heating Unit B-1	AAR	0.30	1.20	1.20	0.09	0.87	13.25	15.77
Surface Coating EU-13/17/18	AAR	21.61	21.61	21.61	0.00	94.77	0.00	0.00
Shuttle America Corporation	SAC	0.00	0.00	0.00	0.00	negligible	0.00	0.00
ASIG Generators > 600 hp	ASIG	0.10	0.10	0.10	0.73	0.21	5.64	4.59
ASIG Aircraft Services International Group: Tanks	ASIG	0.00	0.00	0.00	0.00	0.56	0.00	0.00
Total PTE of Entire Source		**40.29**	**48.57**	**48.57**	**99.87**	**161.44**	**180.55**	**228.36**
Emission Offset/NA-NSR Major Source Thresholds		**NA**	**NA**	**NA**	**100**	**NA**	**NA**	**NA**
PSD Major Source Thresholds		**250**	**250**	**250**	**---**	**250**	**250**	**250**

HAP Emissions after Issuance	
Toluene	**7.13**
Hexane	2.80
Methyl Isobutyl Ketone	1.91
Xylene	1.64
Methyl Chloroform	0.95
Chromium	0.52
Methylene Chloride	0.41
Formaldehyde	0.24
Other Minor HAPs	0.29
Total HAP	**15.89**

On June 23, 2014, in the case of Utility Air Regulatory Group v. EPA, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court's decision. U.S. EPA's guidance states that U.S. EPA will no longer require PSD or Title V permits for sources "previously classified as 'Major' based solely on greenhouse gas emissions."

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHGs emissions to determine operating permit applicability or PSD applicability to a source or modification.

(a) This existing source, excluding the nested source, is not a major stationary source, under PSD (326 IAC 2-2), because no PSD regulated pollutant, is emitted at a rate of two hundred fifty (250) tons per year or more and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) The existing nested source is not a major stationary source, under PSD (326 IAC 2-2), because no PSD regulated pollutant, is emitted at a rate of one hundred (100) tons per year or more and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(c) This existing source is not a major stationary source under Emission Offset (326 IAC 2-3) because no nonattainment regulated pollutant is emitted at a rate of 100 tons per year or more.

(d) This existing source is not a major source of HAPs, as defined in 40 CFR 63.2, because HAPs emissions are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

Federal Rule Applicability

CAM:

(a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to each existing pollutant-specific emission unit that meets the following criteria:

(1) has a potential to emit before controls equal to or greater than the major source threshold for the pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant; and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

None of the emission units located at this source are operated with a control device.
Based on this evaluation, the requirements of 40 CFR Part 64, CAM are not applicable to any of the existing units as part of this Part 70 permit renewal.

NSPS:

(b) **40 CFR 60, Subpart D (Standards of Performance for Fossil-Fuel-Fired Steam Generators) (326 IAC 12):** The provisions of this subpart apply to each fossil-fuel-fired steam generating unit with a heat input rate of 250 MMBtu/hr and to each fossil-fuel and wood-residue-fired steam generating unit capable of firing fossil fuel at a heat input rate of more than 250 MMBtu/hr. Steam generating units subject to 40 CFR 60, Subpart Da or 40 CFR 60, Subpart KKKK are not subject to 40 CFR 60, Subpart D. The Kewanee boiler, Weil McClain boiler, boilers EU019 and EU020 located at the Airport Operation Center-Emergency Operation Center, and boiler EU023 located at the Airfield Maintenance Center each have a heat input capacity of less than 250 MMBtu/hr. Therefore, the provisions of 40 CFR 60, Subpart D are not included in the permit.

(c) **40 CFR 60, Subpart Da (Standards of Performance for Electric Utility Steam Generating Units) (326 IAC 12):** The provisions of 40 CFR 60, Subpart Da are applicable to each electric utility steam generating unit capable of combusting more than 250 MMBtu/hr heat input of fossil fuel (either alone or in combination with any other fuel) for which construction, modification, or reconstruction is commenced after September 18, 1978. An electric utility steam generating unit is defined in the rule as any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW net-electrical output to any utility power distribution system for sale. The Kewanee boiler, Weil McClain boiler, boilers EU019 and EU020 located at the Airport Operation Center-Emergency Operation Center, and boiler EU023 located at the Airfield Maintenance Center each have a heat input capacity of less than 250 MMBtu/hr and do not sell electricity to the grid. Therefore, the provisions of 40 CFR 60, Subpart Da are not included in the permit.

(d) **40 CFR 60, Subpart Db (Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units) (326 IAC 12):** The provisions of 40 CFR 60, Subpart Db are applicable to each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, that has a heat input capacity of greater than 100 MMBtu/hr. The Kewanee boiler, Weil McClain boiler, boilers EU019 and EU020 located at the Airport Operation Center-Emergency Operation Center, and boiler EU023 located at the Airfield Maintenance Center each have a heat input capacity of less than 100 MMBtu/hr. Therefore, the provisions of 40 CFR 60, Subpart Db are not included in the permit.

(e) **40 CFR 60, Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units) (326 IAC 12):** The provisions of 40 CFR 60, Subpart Dc are applicable to each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a design heat input capacity of 10 MMBtu/hr or greater but less than or equal to 100 MMBtu/hr. The Kewanee boiler, Weil McClain boiler, boilers EU019 and EU020 located at the Airport Operation Center-Emergency Operation Center, and boiler EU023 located at the Airfield Maintenance Center each have a heat input capacity of less than 10 MMBtu/hr. Therefore, the provisions of 40 CFR 60, Subpart Db are not included in the permit.

(f) **40 CFR 60, Subpart K (Standards of Performance for Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced after June 11, 1973, and Prior to May 19, 1978) (326 IAC 12):** This subpart applies to each petroleum liquid storage vessel with a storage capacity greater than 40,000 gallons (151,412 liters) but not exceeding 65,000 gallons (246,052 liters), which was constructed after March 8, 1974 and prior to May 19, 1978, or has a capacity greater than 65,000 gallons, which commenced construction after June 11, 1973, and prior to May 19, 1978. A petroleum liquid means petroleum, condensate, and any finished or intermediate products manufactured in a petroleum refinery, but does not mean No. 2 through No. 6 fuel oils, gas

turbine fuel oils No. 2-GT through No. 4-GT, or diesel fuels No. 2-D and 4-D. The No. 6 Recycled Oil Storage Tank, identified as Stand A was constructed after June 11, 1973 and prior to May 19, 1978 and has a storage capacity greater than 65,000 gallons. However, it does not contain a petroleum liquid. Therefore, the requirements of 40 CFR 60, Subpart K are not contained in the permit.

(g) **40 CFR 60, Subpart Ka (Standards of Performance for Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced after May 18, 1978, and Prior to July 23, 1984) (326 IAC 12):** The affected facility to which 40 CFR 60, Subpart Ka applies is each petroleum liquid storage vessel with a capacity greater than 40,000 gallons (151,416 liters) for which construction commenced after May 18, 1978 and prior to July 23, 1984. Stand A does not contain a petroleum liquid and was constructed prior to May 18, 1978. Therefore, the requirements of 40 CFR 60, Subpart Ka are not included in the permit.

(h) **40 CFR 60, Subpart Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced after July 23, 1984) (326 IAC 12):** The affected facility to which 40 CFR 60, Subpart Kb applies is each storage vessel with a capacity greater than or equal to 19,812.90 gallons (75 cubic meters) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984. Stand A was constructed prior to July 23, 1984. Therefore, the requirements of 40 CFR 60, Subpart Kb are not included in the permit.

(i) **40 CFR 60, Subpart IIII (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines) (326 IAC 12):** The provisions of this subpart are applicable to owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE), that commenced construction after July 11, 2005, where the stationary CI ICE are manufactured after April 1, 2006, and are not fire pump engines; or are manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006. All owners or operators of stationary CI ICE modified or reconstructed after July 11, 2005 are subject to 40 CFR 60, Subpart IIII. Pursuant to 40 CFR 60.4200(a), the date that construction commences is the date the engine is ordered by the owner or operator. The following table provides details on the RICE operated by the Indianapolis Airport Authority:

Emission Unit	Type of Service	Ignition Type	HP Rating	Construction Date	Subject to Subpart IIII
EU013	Emergency Generator	CI	2200	2008	Yes
EU014	Emergency Generator	CI	2200	2008	Yes
EU015	Emergency Generator	CI	840	2008, 2007 engine	Yes
EU016	Emergency Generator	CI	1495	2008, 2006 engine	Yes
EU018	Emergency Generator	CI	1528	2008	Yes
EU021	Emergency Generator	CI	133	2008	Yes

Emission Unit	Type of Service	Ignition Type	HP Rating	Construction Date	Subject to Subpart IIII
Standby 500	Emergency Generator	CI	831	2007	Yes
EU024	Emergency Generator	CI	755	2008	Yes
EU025	Emergency Generator	CI	380	2012, 1994 engine	No
EU026	Emergency Generator	CI	476	2012	Yes
Eagle Hub	Emergency Generator	CI	2025	1992	No
EG2	Emergency Generator	CI	70	prior to July 11, 2005	No
EG3	Emergency Generator	CI	70	prior to July 11, 2005	No
EG4	Emergency Generator	CI	70	prior to July 11, 2005	No
Cummins Model 1010	Emergency Generator	CI	750	prior to July 11, 2005	No
EG7	Emergency Generator	CI	340	prior to July 11, 2005	No

Emission units EU013, EU014, EU015, EU016, EU018, EU021, Standby 500, EU024, and EU026 CI RICE generator sets are still subject to the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60.4200, Subpart IIII), which is incorporated by reference as 326 IAC 12. Emission units EU013, EU014, EU015, EU016, EU018, EU021, Standby 500, EU024, and EU026 CI RICE generator sets are subject to 40 CFR 60, Subpart IIII because they are stationary CI RICE constructed after July 11, 2005 with engines manufactured after April 1, 2006.

Nonapplicable portions of the NSPS will not be included in the permit.

Emission unit EU016, with a pre-model year 2007 engine with a displacement of less than 10 liters per cylinder and not a fire pump engine is subject to the following portions of 40 CFR 60, Subpart IIII:

(1) 40 CFR 60.4200(a)(2), and (a)(4);
(2) 40 CFR 60.4203;
(3) 40 CFR 60.4205(a);
(4) 40 CFR 60.4206;
(5) 40 CFR 60.4207(b), and (d);
(6) 40 CFR 60.4209(a);
(7) 40 CFR 60.4211(a), (b)(3), (f)(1), (f)(2)(i), and (f)(3);
(8) 40 CFR 60.4214(b);
(9) 40 CFR 60.4218;
(10) 40 CFR 60.4219;
(11) Table 1; and
(12) Table 8.

Emission units EU013, EU014, EU015, EU018, EU021, Standby 500, and EU024, with model year 2007 through 2010 engines, with a displacement of less than 10 liters per cylinder and not fire pump engines are subject to the following portions of 40 CFR 60, Subpart IIII:

(1) 40 CFR 60.4200(a)(2), and (a)(4);
(2) 40 CFR 60.4203;
(3) 40 CFR 60.4205(b);
(4) 40 CFR 60.4206;
(5) 40 CFR 60.4207(b), and (d);
(6) 40 CFR 60.4209(a);
(7) 40 CFR 60.4211(a), (c), (f)(1), (f)(2)(i), and (f)(3);
(8) 40 CFR 60.4214(b);
(9) 40 CFR 60.4218;
(10) 40 CFR 60.4219;
(11) Table 2;
(12) Table 5; and
(13) Table 8.

Emission unit EU026, with a model year 2011 and later engine, with a displacement of less than 10 liters per cylinder and not a fire pump engine is subject to the following portions of 40 CFR 60, Subpart IIII:

(1) 40 CFR 60.4200(a)(2), and (a)(4);
(2) 40 CFR 60.4203;
(3) 40 CFR 60.4205(b);
(4) 40 CFR 60.4206;
(5) 40 CFR 60.4207(b), and (d);
(6) 40 CFR 60.4209(a);
(7) 40 CFR 60.4211(a), (c), (f)(1), (f)(2)(i), and (f)(3);
(8) 40 CFR 60.4214(b);
(9) 40 CFR 60.4218;
(10) 40 CFR 60.4219;
(11) Table 2;
(12) Table 5; and
(13) Table 8.

The provisions of 40 CFR 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the facilities described in this section except when otherwise specified in 40 CFR 60, Subpart IIII.

(j) **40 CFR 60, Subpart JJJJ (Standards of Performance for Stationary Spark Ignition Internal Combustion Engines) (326 IAC 12):** The provisions of this subpart are applicable to owners and operators of stationary spark ignition (SI) internal combustion engines (ICE). None of the reciprocating internal combustion engines (RICE) located at this source are spark ignition. Therefore, the requirements of 40 CFR 60, Subpart JJJJ are not included in the permit.

(k) There are no other New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit.

NESHAP:

(l) **40 CFR 63, Subpart T (National Emission Standards for Halogenated Solvent Cleaning) (326 IAC 20-6):** The provisions of this subpart apply to each individual batch vapor, in-line vapor, in-line cold, and batch cold solvent cleaning machine that uses any solvent containing methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, or chloroform, or any combination of these HAP solvents, in a total concentration greater than 5% by weight, as a cleaning or drying agent. The degreasing unit located at this source does not use a cleaning solvent regulated by this subpart. Therefore, the requirements of 40 CFR 63, Subpart T are not included in the permit.

(m) **40 CFR 63, Subpart GG – National Emission Standards for Aerospace Manufacturing and Rework Facilities**: This subpart applies to facilities that are engaged, either in part or in whole, in the manufacture or rework of commercial, civil, or military aerospace vehicles or components that are major sources of hazardous air pollutants (HAPs). This source is an area source of HAP; however, the potential to emit HAP at the time of rule promulgation was assumed by a U.S. EPA determination to be greater than major source thresholds. Therefore, based on EPA's “Once in Always In Policy” (OIAI Policy), the facilities at this source are still subject to the MACT standards under 40 CFR Part 63 (NESHAP), Subpart GG, because the source was considered a major source for HAPs on the "first compliance date" of NESHAP Subpart GG (December 7, 1998) and are required to comply permanently with the MACT standard (i.e., "Once in Always In").

For additional information on EPA's “Once in Always In Policy” (OIAI Policy), please refer to the EPA memo entitled "Potential to Emit for MACT Standards - Guidance on Timing Issues", May 16, 1995. This memo can be found at the following website: http://www.epa.gov/region07/air/title5/t5memos/pteguid.pdf

The activities subject to this subpart are limited to the manufacture or rework of aerospace vehicles or components. Affected sources include: each cleaning operation, each primer application operation, each topcoat application operation, each chemical milling maskant application operation, each waste storage and handling operation, and each spray booth or hangar that contains a primer or topcoat application operation subject to 40 CFR 63.745(g) or a depainting operation subject to 40 CFR 63.746(b)(4).

The surface coating operation, identified as Paint Booth, is not used in the manufacture or rework of aerospace vehicles or components. It is used for facility maintenance purposes. Therefore, the provisions of 40 CFR 63, Subpart GG are not included in the permit.

(n) **40 CFR 63, Subpart MMMM, National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products:** This subpart applies to miscellaneous metal parts and products including: motor vehicle parts and accessories, bicycles and sporting goods, recreational vehicles, extruded aluminum structural components, railroad cars, heavy duty trucks, medical equipment, lawn and garden equipment, electronic equipment, magnet wire, steel drums, industrial machinery, metal pipes, and numerous other industrial, household, and consumer products. Pursuant to 40 CFR 63.3881(c)(2), the provisions of 40 CFR 63, Subpart MMMM do not apply to facility maintenance operations. Therefore, the requirements of 40 CFR 63, Subpart MMMM (326 IAC 20-80) are not included in this Part 70 Operating Permit.

(o) **40 CFR 63, Subpart PPPP – National Emission Standards for Hazardous Air Pollutants for Surface Coating of Plastic Parts and Products**: This subpart applies to the surface coating of plastic parts and products including: motor vehicle parts and accessories for automobiles, trucks, recreational vehicles; sporting and recreational goods; toys; business machines; laboratory and medical equipment; and other consumer products. Pursuant to 40 CFR 63.4481(c)(2), the provisions of 40 CFR 63, Subpart PPPP do not apply to facility maintenance operations. Therefore, the requirements of 40 CFR 63, Subpart PPPP (326 IAC 20-81) are not included in this Part 70 Operating Permit.

(p) **40 CFR 63, Subpart HHHHHH – National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources:** This subpart applies to paint stripping operations using chemical strippers that contain methylene chloride in the paint removal process, auto body refinishing operations, spray application of coatings containing compounds of chromium, lead, manganese, nickel, or cadmium to any part or product made of metal or plastic, or combinations of metal and plastic that are not motor vehicles or mobile equipment. Pursuant to 40 CFR 63.11170(a)(2), the provisions of 40 CFR 63, Subpart HHHHHH do not apply to facility maintenance operations, since it does not perform paint stripping operations using chemical strippers, does not perform auto body refinishing, and does not use coatings containing compounds of chromium, lead, manganese, nickel, or cadmium. Therefore, 40 CFR 63, the requirements of Subpart HHHHHH are not included in this Part 70 Operating Permit.

(q) **40 CFR 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines) (326 IAC 20-82):** The emission units identified as EU013, EU014, EU015, EU016, EU018, EU021, Standby 500, EU024, EU026, EU025, Eagle Hub, EG2, EG3, EG4, and Cummins Model 1010 remain subject to the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR 63.6580, Subpart ZZZZ), which is incorporated by reference as 326 IAC 20-82. The provisions of 40 CFR 63, Subpart ZZZ are applicable to owners and operators of stationary reciprocating internal combustion engines (RICE) located at a major or area source of hazardous air pollutants (HAP), except if the stationary RICE is being tested at a test cell or stand. The emission units subject to this rule include the following:

Emission Unit	Type of Service	Ignition Type	HP Rating	Construction Date	New or Existing
EU013	Emergency Generator	CI	2200	2008	new
EU014	Emergency Generator	CI	2200	2008	new
EU015	Emergency Generator	CI	840	2008, 2007 engine	new
EU016	Emergency Generator	CI	1495	2008, post-June 12, 2006 engine	new
EU018	Emergency Generator	CI	1528	2008	new
EU021	Emergency Generator	CI	133	2008	new
Standby 500	Emergency Generator	CI	831	2007	new

Emission Unit	Type of Service	Ignition Type	HP Rating	Construction Date	New or Existing
EU024	Emergency Generator	CI	755	2008	new
EU026	Emergency Generator	CI	476	2012	new
EU025	Emergency Generator	CI	380	2012, 1994 engine	existing
Eagle Hub	Emergency Generator	CI	2025	1992	existing
EG2	Emergency Generator	CI	70	prior to July 11, 2005	existing
EG3	Emergency Generator	CI	70	prior to July 11, 2005	existing
EG4	Emergency Generator	CI	70	prior to July 11, 2005	existing
Cummins Model 1010	Emergency Generator	CI	750	prior to July 11, 2005	existing
EG7	Emergency Generator	CI	340	prior to July 11, 2005	existing

Non applicable portions of the NESHAP will not be included in the permit. New stationary RICE, identified as emission units EU013, EU014, EU015, EU016, EU018, EU021, Standby 500, EU024, and EU0026 are subject to the following portions of 40 CFR, Subpart ZZZZ:

(1) 40 CFR 63.6580;
(2) 40 CFR 63.6585(a), and (c); and
(3) 40 CFR 63.6590(a)(2)(iii), and (c)(1).
(4) 40 CFR 63.6665
(5) 40 CFR 63.6670
(6) 40 CFR 63.6675

Non applicable portions of the NESHAP will not be included in the permit. Existing stationary RICE, identified as Eagle Hub, Cummins Model 1010, EU025, EG2, EG3, EG4, and EG7 are subject to the following portions of 40 CFR, Subpart ZZZZ:

(1) 40 CFR 63.6580;
(2) 40 CFR 63.6585(a), and (c);
(3) 40 CFR 63.6590(a)(1)(iii);
(4) 40 CFR 63.6595(a)(1) and (c);
(5) 40 CFR 63.6603(a);
(6) 40 CFR 63.6605;
(7) 40 CFR 63.6625(e)(3), (f), (h), and (i);
(8) 40 CFR 63.6635
(9) 40 CFR 63.6640(a), (b), (e), (f)(1), (f)(2)(i), and (f)(4);
(10) 40 CFR 63.6645(a)(5);
(11) 40 CFR 63.6650(f)
(12) 40 CFR 63.6655(d), (e)(2), and (f);
(13) 40 CFR 63.6660
(14) 40 CFR 63.6665;

(15) 40 CFR 63.6670;
(16) 40 CFR 63.6675;
(17) Table 2d (item: 4);
(18) Table 6 (item: 9); and
(19) Table 8.

The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63, Subpart ZZZZ.

(r) **40 CFR 63, Subpart DDDDD (National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters) (326 IAC 20-95):** The provisions of this subpart are applicable to owners and operators of industrial, commercial, or institutional boilers or process heaters located at a major source of HAP. The Indianapolis Airport Authority is a minor source of HAP. Therefore, the requirements of 40 CFR 63, Subpart DDDDD are not included in the permit.

(s) **40 CFR 63, Subpart JJJJJJ (National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources):** The provisions of 40 CFR 63, Subpart JJJJJJ apply to owners and operators of industrial, commercial, or institutional boilers located at, or is part of, an area source of HAP. A boiler is defined in the subpart as an enclosed device using controlled flame combustion in which water is heated to recover thermal energy in the form of steam and/or hot water. Pursuant to 40 CFR 63.11195(e), gas-fired boilers are not subject to 40 CFR 63, Subpart JJJJJJ. The subpart defines gaseous fuels as natural gas, process gas, landfill gas, coal derived gas, refinery gas, hydrogen, and biogas. The Kewanee boiler, Weil McClain boiler, boilers EU019 and EU020 located at the Airport Operation Center-Emergency Operation Center and boiler EU023 located at the Airfield Maintenance Center are gas-fired boilers. Therefore, the requirements of 40 CFR 63, Subpart JJJJJJ are not included in the permit.

(t) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

State Rule Applicability - Entire Source

326 IAC 1-7 (Stack Height Provisions)
This rule applies to all sources with exhaust gas stacks that have uncontrolled potential emissions of twenty-five (25) tons per year or more of SO_2 or particulate matter (PM). Boilers #2, #3, and #4 at Plant 2, Johnson Melloh Solutions - IMC Central Energy Plant (097-00586) have uncontrolled potential SO_2 emissions of greater than twenty-five (25) tons per year. Therefore, Boilers #2, #3, and #4 are subject to the stack height provisions of 326 IAC 1-7 and the provisions are included in the permit for Johnson Melloh Solutions.

326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset)
This source is a minor source for Prevention of Significant Deterioration (PSD) and a minor source for Emission Offset (EO). See the Potential to Emit after Issuance Section of this Technical Support Document (TSD) for a more detailed discussion.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants)
The provisions of 326 IAC 2-4.1 apply to owners or operators who construct or reconstruct a major source of hazardous air pollutants, after July 27, 1997, except as specifically exempted by the rule. This is a minor source of HAP. Therefore, the requirements of 326 IAC 2-4.1 are not included in the permit.

326 IAC 2-6 (Emission Reporting)
This source, not located in Lake, Porter, or LaPorte County, is subject to 326 IAC 2-6 (Emission Reporting) because it is required to have an operating permit pursuant to 326 IAC 2-7 (Part 70). The potential to emit of VOC and PM10 is less than 250 tons per year; and the potential to emit of CO, NOx, and SO2 is less than 2,500 tons per year. Therefore, pursuant to 326 IAC 2-6-3(a)(2), triennial reporting is required. An emission statement shall be submitted in accordance with the compliance schedule in 326 IAC 2-6-3 by July 1, 2017, and every three (3) years thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 2-7-6(5) (Annual Compliance Certification)
The U.S. EPA Federal Register 79 FR 54978 notice does not exempt Title V Permittees from the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D), but the submittal of the Title V annual compliance certification to IDEM satisfies the requirement to submit the Title V annual compliance certifications to EPA. IDEM does not intend to revise any permits since the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D) still apply, but Permittees can note on their Title V annual compliance certification that submission to IDEM has satisfied reporting to EPA per Federal Register 79 FR 54978. This only applies to Title V Permittees and Title V compliance certifications.

326 IAC 5-1 (Opacity Limitations)
This source is subject to the opacity limitations specified in 326 IAC 5-1-2(2).

326 IAC 6-4 (Fugitive Dust Emissions)
This rule applies to all sources of fugitive dust emissions. This source has fugitive dust emissions; therefore, this rule applies to the source and the requirements are included in the permit.

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
This rule applies to any source of fugitive particulate matter emissions located in nonattainment areas for particulate matter as designated by the Air Pollution Control Board, except Lake County, which has potential fugitive particulate matter emissions of twenty-five (25) tons per year or more. This source does not have potential fugitive particulate matter emission of twenty-five tons per year of more. Therefore, the requirements of 326 IAC 6-5 are not included in the permit.

326 IAC 6.5 (PM Limitations Except Lake County)
326 IAC 6.5 applies to sources or facilities located in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties. Sources specifically listed in the rule shall comply with the limitations in 326 IAC 6.5-2 through 326 IAC 6.5-10, as applicable. Sources not specifically listed in 326 IAC 6.5-2 through 326 IAC 6.5-10 shall comply with 326 IAC 6.5-1-2, if they have the potential to emit one hundred (100) tons or more, or have actual emissions of ten (10) tons or more of particulate matter (PM). This source, located in Marion County, does not have the potential to emit one hundred (100) tons or more per year of PM. However, it does have the potential to emit ten (10) tons per year or more of PM and PM emissions are not limited below ten (10) per year. Therefore, 326 IAC 6.5 applies and the requirements are included in the permit.

326 IAC 6.8 PM Limitations for Lake County
This source is not subject to 326 IAC 6.8 because it is not located in Lake County.

326 IAC 12 (New Source Performance Standards)
This rule incorporates by reference the requirements of 40 CFR 60. See the Federal Rule Applicability section for the New Source Performance Standards applicable to this facility.

326 IAC 14 (Emission Standards for Hazardous Air Pollutants)
This rule incorporates by reference the requirements of 40 CFR 61. See the Federal Rule Applicability section for the National Emission Standards for Hazardous Air Pollutants (NESHAP) applicable to this facility.

326 IAC 20 (Hazardous Air Pollutants)
This rule incorporates by reference the requirements of 40 CFR 63. See the Federal Rule Applicability section for the National Emission Standards for Hazardous Air Pollutants (NESHAP) applicable to this facility.

State Rule Applicability – Individual Facilities

RICE Emergency Generators

326 IAC 6.5 (PM Limitations Except Lake County)
As discussed in the State Rule Applicability - Entire Source, this source is subject to the requirements of 326 IAC 6.5. Pursuant to 326 IAC 6.5-1-2(a), particulate matter (PM) emissions from the emergency RICE generators shall not exceed 0.03 grain per dry standard cubic foot unless a more restrictive emission limitation exists in an applicable New Source Performance Standard pursuant to 326 IAC 6.5-1-1(d). The emission limitation under 326 IAC 6.5 is the most restrictive emission limitation. Appendix A to this TSD includes a detailed analysis. Therefore, the requirements of 326 IAC 6.5 are included in the permit for the RICE emergency generators.

326 IAC 8-1-6 (New Facilities, General Reduction Requirements)
The provisions of 326 IAC 8-1-6 are applicable to new facilities as of January 1, 1980, that have potential emissions of twenty-five (25) tons per year or more of VOC, are located anywhere in the state, and are not otherwise regulated by another Article 8 rule, 326 IAC 20-48 (Emission Standards for Hazardous Air Pollutants for Boat Manufacturing), or 326 IAC 20-56 (Reinforced Plastic Composites Production). None of the emergency RICE generators have potential VOC emissions of 25 TPY or greater. Therefore, the requirements of 326 IAC 8-1-6 are not included in the permit.

326 IAC 9 (Carbon Monoxide Emission Rules)
This rule is applicable to all stationary sources of carbon monoxide (CO) emissions commencing operation after March 21, 1972, where the CO emissions are from petroleum refining, ferrous metal smelting, refuse incineration and refuse burning equipment. This source is not engaged in any of the activities regulated by 326 IAC 9. Therefore, the requirements of 326 IAC 9 are not included in the permit.

326 IAC 10-5 (Nitrogen Oxide Reduction Program for Internal Combustion Engines (ICE))
The provisions of 326 IAC 10-5 are applicable to all owners or operators of any large NOx SIP Call engine. A large NOx SIP Call engine is defined in the rule as a stationary internal combustion engine identified and designated as large in the NOx SIP Call engine inventory as emitting more than one (1) ton of NOx per average ozone season day in 1995. The NOx SIP Call engine inventory is an inventory of internal combustion engines compiled by the U.S. EPA as part of the NOx SIP Call rule. None of the emergency RICE generators located at this source are large NOx SIP Call engines. Therefore, the requirements of 326 IAC 10-5 are not included in the permit.

Natural Gas-Fired Boilers and Water Heaters

326 IAC 6.5 (PM Limitations Except Lake County)
As discussed in the State Rule Applicability - Entire Source, this source is subject to the requirements of 326 IAC 6.5. Pursuant to 326 IAC 6.5-1-1(b), particulate limitations shall not be established for combustion units that burn only natural gas at sources or facilities identified in 326

IAC 6.5-2 through 326 IAC 6.5-10, as long as the units continue to burn only natural gas. The Indianapolis Airport Authority is not specifically listed in 326 IAC 6.5-2 through 326 IAC 6.5-10. Therefore, emission limitations can be established for the boilers located at this source. Pursuant to 326 IAC 6.5-1-2(b)(3), particulate matter (PM) emissions from the boilers identified as emission units #4, #5, 019, 020, and 23 shall not exceed 0.01 grain per dry standard cubic foot (dscf) while combusting natural gas.

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)
The provisions of 326 IAC 6-2 apply to combustion units that are indirect heating units. An indirect heating unit is defined in 326 IAC 1-2-19 as "The combustion of fuel to produce usable heat that is transferred through a heat-conducting materials barrier or by a heat storage medium to a material to be heated so that the material being treated is not contacted by, and adds no substance to the products of combustion." The most common example of an indirect heating unit is a boiler. In general, 326 IAC 6-2 applies to emission units that combust fuel for the purpose of generating heat and use water or other liquid media to transfer the heat to a manufacturing process of storage device. Pursuant to 326 IAC 6-2-1(e), if an emission limitation established by 326 IAC 6-2 is inconsistent with applicable emission limitations under 326 IAC 6.5, then the limitation contained in 326 IAC 6.5 shall prevail. The steam generators identified as emission units #4, #5, 019, 020, and 23 have an applicable emission limitation under 326 IAC 6.5. Therefore, the requirements of 326 IAC 6-2 are not included in the permit.

326 IAC 8-1-6 (New Facilities, General Reduction Requirements)
The provisions of 326 IAC 8-1-6 are applicable to new facilities as of January 1, 1980, that have potential emissions of twenty-five (25) tons per year or more of VOC, are located anywhere in the state, and are not otherwise regulated by another Article 8 rule, 326 IAC 20-48 (Emission Standards for Hazardous Air Pollutants for Boat Manufacturing), or 326 IAC 20-56 (Reinforced Plastic Composites Production). 326 IAC 8-1-6 requires source subject to the rule to reduce VOC emissions using the Best Available Control Technology (BACT). The steam generators identified as emission units #4, #5, 019, 020, and 23 do not have potential VOC emissions of 25 TPY or more. Therefore, the requirements of 326 IAC 8-1-6 are not included in the permit.

326 IAC 9 (Carbon Monoxide Emission Rules)
This rule is applicable to all stationary sources of carbon monoxide (CO) emissions commencing operation after March 21, 1972, where the CO emissions are from petroleum refining, ferrous metal smelting, refuse incineration and refuse burning equipment. This source is not engaged in any of the activities regulated under 326 IAC 9. Therefore, the requirements of 326 IAC 9 are not included in the permit.

Degreaser

326 IAC 8-1-6 (New Facilities, General Reduction Requirements)
The provisions of 326 IAC 8-1-6 are applicable to new facilities as of January 1, 1980, that have potential emissions of twenty-five (25) tons per year or more of VOC, are located anywhere in the state, and are not otherwise regulated by another Article 8 rule, 326 IAC 20-48 (Emission Standards for Hazardous Air Pollutants for Boat Manufacturing), or 326 IAC 20-56 (Reinforced Plastic Composites Production). 326 IAC 8-1-6 requires source subject to the rule to reduce VOC emissions using the Best Available Control Technology (BACT). The degreasing operation is an insignificant activity with potential VOC emissions of less than 25 TPY. Therefore, the requirements of 326 IAC 8-1-6 are not included in the permit.

326 IAC 8-3-2 (Cold Cleaner Degreaser Control Equipment and Operating Requirements)
The provisions of 326 IAC 8-3-2 apply to each owner or operator of a degreaser using solvents that contain one (1) or more volatile organic compounds (VOC). The degreasing operations located at this source use cold cleaner degreasers containing VOC. Therefore, the provisions of 326 IAC 8-3-2 are included in the permit. Pursuant to 326 IAC 8-3-2 (Cold cleaner degreaser

control equipment and operating requirements), for cold cleaning operations constructed after January 1, 1980, the Permittee shall comply with the following:

(a) The owner or operator of a cold cleaner degreaser shall ensure the following control equipment and operating requirements are met:

(1) Equip the degreaser with a cover;

(2) Equip the degreaser with a device for draining cleaned parts;

(3) Close the degreaser cover whenever parts are not being handled in the degreaser;

(4) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

(5) Provide a permanent, conspicuous label that lists the operation requirements in subdivisions (3), (4), (6), and (7);

(6) Store waste solvent only in closed containers.

(7) Prohibit the disposal or transfer of waste solvent in such a manner that could allow greater than twenty percent (20%) of the waste solvent (by weight) to evaporate into the atmosphere.

(b) The owner or operator of a cold cleaner degreaser subject to this subsection shall ensure the following additional control equipment and operating requirements are met:

(1) Equip the degreaser with one (1) of the following control devices if the solvent is heated to a temperature of greater than forty-eight and nine-tenths (48.9) degrees Celsius (one hundred twenty (120) degrees Fahrenheit):

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

(B) A water cover when solvent used is insoluble in, and heavier than, water.

(C) A refrigerated chiller.

(D) Carbon adsorption.

(E) An alternative system of demonstrated equivalent or better control as those outlined in clauses (A) through (D) that is approved by the department. An alternative system shall be submitted to the U.S. EPA as a SIP revision.

(2) Ensure the degreaser cover is designed so that it can be easily operated with one (1) hand if the solvent is agitated or heated.

(3) If used, solvent spray:

(A) must be a solid, fluid stream; and

(B) shall be applied at a pressure that does not cause excessive splashing.

326 IAC 8-3-8 (Material Requirements for Cold Cleaner Degreasers)
The provisions of 326 IAC 8-3-8 apply to all cold cleaner degreasers subject to 326 IAC 8-3-2 and located anywhere in the state. This source contains a cold cleaner degreaser subject to 326 8-3-2. Therefore, the provisions of 326 IAC 8-3-8 are included in the permit. Pursuant to 326 IAC 8-3-8, on and after January 1, 2015, material requirements for cold cleaner degreasers are as follows:

(a) The Permittee shall not operate a cold cleaner degreaser with a solvent that has a VOC composite partial vapor pressure that exceeds one (1) millimeter of mercury (nineteen-thousandths (0.019) pound per square inch) measured at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

(b) The Permittee shall maintain the following records for each purchase:

(1) The name and address of the solvent supplier

(2) The date of purchase (or invoice/bill date of contract servicer indicating service date;

(3) The type of solvent purchased;

(4) The total volume of solvent purchased;

(5) The true vapor pressure of the solvent measured in millimeters of mercury at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

326 IAC 8-5 (Miscellaneous Operations)
The provisions of 326 IAC 8-5 are applicable to facilities or sources engaged in asphalt paving, synthesized pharmaceutical manufacturing, pneumatic rubber tire manufacturing, graphic arts operations, and fuel grade ethanol production at dry mills. This source is not engaged in any of the activities regulated by this rule. Therefore, the requirements of 326 IAC 8-5 are not included in the permit.

326 IAC 8-6 (Organic Solvent Emission Limitations)
The provisions of 326 IAC 8-6 apply to existing sources as of January 1, 1980, located in Lake and Marion County, with potential emissions of 100 tons of VOC per year and not limited by another Article 8 rule. This rule also applies to sources commencing operations after October 7, 1974, and prior to January 1, 1980, located anywhere in the state, with potential emissions of 100 tons of VOC per year and not limited by another Article 8 rule. The degreasing operation located at this source are subject to 326 IAC 8-3. Therefore, the requirements of 326 IAC 8-6 are not included in the permit.

Diesel Storage Tank - Stand A

326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)
The provisions of 326 IAC 8-9 apply to stationary storage vessels used to store volatile organic liquids (VOL) constructed on and after October 1, 1995, and located in Clark, Floyd, Lake or Porter Counties. Stand A is located in Marion County. Therefore, the requirements of 326 IAC 8-9 are not included in the permit.

Surface Coating Operations

326 IAC 6.5 (PM Limitations Except Lake County)
As discussed in the State Rule Applicability - Entire Source, this source is subject to the requirements of 326 IAC 6.5. Pursuant to 326 IAC 6.5-1-2(h), the surface coating process, identified as Paint Booth, shall be controlled by a dry particulate filter, water wash, or an equivalent control device, operated in accordance with manufacturer's specifications.

326 IAC 8-1-6 (New Facilities, General Reduction Requirements)
The provisions of 326 IAC 8-1-6 are applicable to new facilities as of January 1, 1980, that have potential emissions of twenty-five (25) tons per year or more of VOC, are located anywhere in the state, and are not otherwise regulated by another Article 8 rule, 326 IAC 20-48 (Emission Standards for Hazardous Air Pollutants for Boat Manufacturing), or 326 IAC 20-56 (Reinforced Plastic Composites Production). 326 IAC 8-1-6 requires source subject to the rule to reduce VOC emissions using the Best Available Control Technology (BACT). The surface coating operation identified as Paint Booth does not have potential VOC emissions of 25 TPY or more. Therefore, the requirements of 326 IAC 8-1-6 are not included in the permit.

326 IAC 8-2-9 (Miscellaneous Metal and Plastic Parts Coating Operations)
This rule applies to surface coating located in any county except Lake or Porter Counties involved in the surface coating of: large and small farm machinery, small household appliances, office equipment, commercial and industrial machinery and equipment, any other industrial category that coats metal parts or products under the Standard Industrial Classification Code of major groups #33, #34, #35, #36, #37, #38, and #39. This source located in Marion County does not engage in surface coating of any of the products or equipment regulated by the rule. Therefore, the requirements of 326 IAC 8-2-9 are not included in the permit.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance determination requirements applicable to this source are as follows:

Compliance Determination Requirements		
Emission Unit	**Parameter**	**Frequency**
Paint Booth	Dry Filter Placement, Integrity, and loading	Daily
	Over Spray	Weekly
	Spray Coating Emissions	Monthly

There are no compliance monitoring requirements included in the permit other than those required under an applicable NSPS or NESHAP.

Recommendation

The staff recommends to the Commissioner that the Part 70 Operating Permit Renewal be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on October 7, 2014.

Conclusion

The operation of this stationary airfield, aerospace vehicle maintenance center and central energy plant shall be shall be subject to the conditions of the attached Part 70 Operating Permit Renewal No. T097-35016-00156.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to David Matousek at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 232-8253 or toll free at 1-800-451-6027 extension 2-8253.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: http://www.in.gov/idem/5881.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

Appendix A to the Technical Support Document - Emission Calculations
PSD Analysis - Entire Source after Issuance

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	T097-35016-00156	2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive
Johnson Melloh Solutions (JMS)	T097-34078-00586	2745 South Hoffman Road, Suite 504
AAR Aircraft Services, Indianapolis (AAR)	T097-33261-00559	2825 West Perimeter Road
Shuttle America Corporation (SAC)	T097-35018-00668	2745 South Hoffman Road, Dock 67, Hng 7A-7B
ASIG Aircraft Services International Group	T097-35006-00667	2050 South Hoffman Road

Permit Reviewer: David Matousek

Date: December 10, 2014

Potential to Emit - Nested Boilers (TPY) - One of 28 Source Categories

Process / Emission Unit	Location	PM	PM_{10}	$PM_{2.5}$	SO_2	VOC	CO	NO_x
IMCCEP Boiler #1	JMS	6.05	14.07	14.07	86.22	6.66	85.90	83.20
IMCCEP Boiler #2	JMS							
IMCCEP Boiler #3	JMS							
IMCCEP Boiler #4	JMS							
Total for Nested Boilers		**6.05**	**14.07**	**14.07**	**86.22**	**6.66**	**85.90**	**83.20**
PSD Major Source Thresholds		**100**	**100**	**100**	**100**	**100**	**100**	**100**

Potential to Emit - Total Collocated Source (TPY) - Not One of 28 Source Categories

Source Process / Emission Unit	Location	PM	PM_{10}	$PM_{2.5}$	SO_2	VOC	CO	NO_x
Total for Nested Boilers	JMS	6.05	14.07	14.07	86.22	6.66	85.90	83.20
Emergency Generator EU-13	IAA	0.49	0.22	0.22	1.33	0.39	10.29	8.36
Emergency Generator EU-14	IAA	0.49	0.22	0.22	1.33	0.39	10.29	8.36
Tank A	IAA	0.00	0.00	0.00	0.00	0.36	0.00	0.00
Emergency Generator EU-15	IAA	0.19	0.08	0.08	0.51	0.15	3.93	3.19
Emergency Generator EU-16	IAA	0.33	0.15	0.15	0.91	0.26	6.99	5.68
Emergency Generator EU-18	IAA	0.34	0.15	0.15	0.93	0.27	7.14	5.81
Emergency Generator EU-21	IAA	0.07	0.07	0.07	0.07	0.08	0.22	0.51
Emergency Generator EU-500	IAA	0.18	0.08	0.08	0.50	0.15	3.88	3.16
Degreasing / Surface Coating	IAA	0.14	0.14	0.14	0.00	1.84	0.00	0.00
IAA Generators < 600 hp	IAA	0.30	0.30	0.30	0.28	0.00	0.91	4.24
IAA Generator Electric Vault	IAA	0.13	0.08	0.08	0.46	0.13	1.03	4.50
IAA Generator Eagle Hub	IAA	0.35	0.20	0.20	1.23	0.36	2.78	7.70
IAA Boilers < 100 MMBtu/hr	IAA	0.11	0.45	0.45	0.04	0.32	4.92	5.86
Boiler 23	IAA	0.02	0.10	0.10	0.01	0.07	1.10	1.31
Emergency Generator EU-24	IAA	0.13	0.08	0.08	0.76	0.13	1.04	2.45
IAA Natural Gas Heaters and Boiler	IAA	0.20	0.79	0.79	0.06	0.57	8.68	10.34
Emergency Generators EU-25/26	IAA	0.47	0.47	0.47	0.44	0.54	1.43	6.63
JMS Generators < 600 hp	JMS	1.30	1.30	1.30	1.22	1.51	3.99	18.52
JMS Generators > 600 hp	JMS	0.79	0.45	0.45	2.74	0.80	6.21	27.09
Ablative Coating Operation	AAR	5.25	5.25	5.25	0.00	25.00	0.00	0.00
AMU Heat and Cure Oven	AAR	0.02	0.08	0.08	0.01	0.06	0.92	1.10
Surface Coating P-2	AAR	0.92	0.92	0.92	0.00	25.00	0.00	0.00
NG Make-up Air Heating Unit B-1	AAR	0.30	1.20	1.20	0.09	0.87	13.25	15.77
Surface Coating EU-13/17/18	AAR	21.61	21.61	21.61	0.00	94.77	0.00	0.00
Shuttle America Corporation	SAC	0.00	0.00	0.00	0.00	negligible	0.00	0.00
ASIG Aircraft Services International Group: Generators > 600 hp	ASIG	0.10	0.10	0.10	0.73	0.21	5.64	4.59
ASIG Aircraft Services International Group: Tanks	ASIG	0.00	0.00	0.00	0.00	0.56	0.00	0.00
Total PTE of Entire Source		**40.29**	**48.57**	**48.57**	**99.87**	**161.44**	**180.55**	**228.36**
Emission Offset/NA-NSR		**---**	**---**	**---**	**100.00**	**---**	**---**	**---**
PSD Major Source Thresholds		**250**	**250**	**250**	**---**	**250**	**250**	**250**

Appendix A to the Technical Support Document - Emission Calculations
Indianapolis Airport Authority - HAP Emissions After Issuance

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	T097-35016-00156	2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive
Johnson Melloh Solutions (JMS)	T097-34078-00586	2745 South Hoffman Road, Suite 504
AAR Aircraft Services, Indianapolis (AAR)	T097-33261-00559	2825 West Perimeter Road
Shuttle America Corporation (SAC)	T097-35018-00668	2745 South Hoffman Road, Dock 67, Hng 7A-7B
ASIG Aircraft Services International Group	T097-35006-00667	2050 South Hoffman Road

Permit Reviewer: David Matousek
Date: December 10, 2014

Indianapolis Airport Authority HAP Summary

HAP	EU13	EU14	EU15	EU16	EU18	EU21	EU500	Degrease Surface Coating	Gen < 600	Electric Vault Generator	Eagle Hub Generator	Boiler < 100	Boiler 23	Gen 024	NG Heaters <100	Gen 025/026	IAA Total
1,1,1-Trichloroethane																	
1,3-butadiene									3.76E-05							5.86E-05	**9.62E-05**
2-methylnaphthalene																	
3-methylchloranthrene																	
7,12-dimethylbenz(a)anthracene																	
Acenaphthene																	
Acenaphthylene																	
Acetaldehyde	9.70E-05	9.70E-05	3.70E-05	6.59E-05	6.74E-05	1.79E-04	3.66E-05		7.38E-04	3.31E-05	8.93E-05			3.33E-05		1.15E-03	**2.62E-03**
Acrolein	3.03E-05	3.03E-05	1.16E-05	2.06E-05	2.11E-05	2.15E-05	1.15E-05		8.90E-05	1.03E-05	2.79E-05			1.04E-05		1.39E-04	**4.23E-04**
Anthracene																	
Arsenic																	
Benz(a)anthracene																	
Benzene	2.99E-03	2.99E-03	1.14E-03	2.03E-03	2.08E-03	2.17E-04	1.13E-03		8.98E-04	1.02E-03	2.75E-03	1.23E-04	2.76E-05	1.03E-03	2.17E-04	1.40E-03	**0.02**
Benzo(a)pyrene																	
Benzo(b)fluoranthene																	
Benzo(g,h,i)perylene																	
Benzo(k)fluoranthene																	
Beryllium																	
Cadmium												6.44E-05	1.45E-05		1.14E-04		**1.93E-04**
Chromium												8.20E-05	1.84E-05		1.45E-04		**2.45E-04**
Chrysene																	
Dibenzo(a,h)anthracene																	
Dichlorobenzene												7.03E-05	1.58E-05		1.24E-04		**2.10E-04**
Diisocyanate																	
Ethylbenzene								7.98E-02									**0.08**
Fluoranthene																	
Fluorene																	
Formaldehyde	3.04E-04	3.04E-04	1.16E-04	2.06E-04	2.11E-04	2.75E-04	1.15E-04		1.14E-03	1.04E-04	2.80E-04	4.39E-03	9.86E-04	1.04E-04	7.75E-03	1.77E-03	**0.02**
Glycol																	
Hexane												**0.11**	**0.02**		**0.19**		**0.32**
Indo(1,2,3-cd)pyrene																	
Lead												2.93E-05	6.57E-06		5.17E-05		**8.75E-05**
Manganese												2.23E-05	4.99E-06		3.93E-05		**6.65E-05**
Mercury																	
Methanol																	
Methyl Chloroform																	
Methyl Isobutyl Ketone																	
Methylene Chloride																	
Naphthalene																	
Nickel												1.23E-04	2.76E-05		2.17E-04		**3.68E-04**
Phenanthrene																	
Phenol																	
Polycyclic Organic Matter	8.16E-04	8.16E-04	3.12E-04	5.55E-04	5.67E-04	3.92E-05	3.08E-04		1.62E-04	2.78E-04	7.51E-04			2.80E-04		2.52E-04	**5.14E-03**
Pyrene																	
Selenium																	
Toluene	1.08E-03	1.08E-03	4.13E-04	7.35E-04	7.51E-04	9.51E-05	4.09E-04	6.21E-01	3.94E-04	3.69E-04	9.96E-04	1.99E-04	4.47E-05	3.71E-04	3.52E-04	6.13E-04	**0.63**
Trimethylpentane																	**0.00**
Xylene	7.43E-04	7.43E-04	2.84E-04	5.05E-04	5.16E-04	6.65E-05	2.81E-04	1.74E-01	2.74E-04	2.53E-04	6.84E-04			2.55E-04		4.27E-04	**0.18**
Process Total	**6.06E-03**	**6.06E-03**	**2.31E-03**	**4.12E-03**	**4.21E-03**	**8.93E-04**	**2.29E-03**	**0.87**	**3.73E-03**	**2.07E-03**	**5.58E-03**	**0.11**	**0.02**	**2.08E-03**	**0.20**	**5.80E-03**	**1.25**

Appendix A to the Technical Support Document - Emission Calculations
Sourcewide HAP Emissions After Issuance - Including Nested Source

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	T097-35016-00156	2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive
Johnson Melloh Solutions (JMS)	T097-34078-00586	2745 South Hoffman Road, Suite 504
AAR Aircraft Services, Indianapolis (AAR)	T097-33261-00559	2825 West Perimeter Road
Shuttle America Corporation (SAC)	T097-35018-00668	2745 South Hoffman Road, Dock 67, Hng 7A-7B
ASIG Aircraft Services International Group	T097-35006-00667	2050 South Hoffman Road

Permit Reviewer: David Matousek
Date: December 10, 2014

Sourcewide HAP Emissions

HAP	JMS IMCCEP Boilers	JMS Gen < 600	JMS Gen > 600	AAR Ablative	AAR AMU Oven	AAR P-2	AAR B-1	AAR EU13, 17, 18	Total from SAC	ASIG Generator	ASIG Tanks	Subtotal	IAA Total	Source Total
1,1,1-Trichloroethane	5.09E-04											5.09E-04	0.00E+00	**5.09E-04**
1,3-butadiene		1.64E-04										1.64E-04	9.62E-05	**2.60E-04**
2-methylnaphthalene	2.90E-05											2.90E-05	0.00E+00	**2.90E-05**
3-methylchloranthrene	2.18E-06											2.18E-06	0.00E+00	**2.18E-06**
7,12-dimethylbenz(a)anthracene	1.94E-05											1.94E-05	0.00E+00	**1.94E-05**
Acenaphthene	4.71E-05											4.71E-05	0.00E+00	**4.71E-05**
Acenaphthylene	2.19E-06											2.19E-06	0.00E+00	**2.19E-06**
Acetaldehyde		3.22E-03	1.99E-04							5.32E-05		3.47E-03	2.62E-03	**0.01**
Acrolein		3.89E-04	6.23E-05							1.66E-05		4.67E-04	4.23E-04	**8.91E-04**
Anthracene	4.83E-06											4.83E-06	0.00E+00	**4.83E-06**
Arsenic	1.39E-03											1.39E-03	0.00E+00	**1.39E-03**
Benz(a)anthracene	1.03E-05											1.03E-05	0.00E+00	**1.03E-05**
Benzene	2.54E-03	3.92E-03	6.13E-03		2.30E-05		3.31E-04			1.64E-03		0.01	0.02	**0.03**
Benzo(a)pyrene	1.45E-06											1.45E-06	0.00E+00	**1.45E-06**
Benzo(b)fluoranthene	2.18E-06											2.18E-06	0.00E+00	**2.18E-06**
Benzo(g,h,i)perylene	5.97E-06											5.97E-06	0.00E+00	**5.97E-06**
Benzo(k)fluoranthene	2.18E-06											2.18E-06	0.00E+00	**2.18E-06**
Beryllium	9.13E-04											9.13E-04	0.00E+00	**9.13E-04**
Cadmium	1.91E-03				1.20E-05		1.73E-04					2.09E-03	1.93E-04	**2.29E-03**
Chromium	2.18E-03				1.53E-05		2.21E-04	5.20E-01				0.52	2.45E-04	**0.52**
Chrysene	6.78E-06											6.78E-06	0.00E+00	**6.78E-06**
Dibenzo(a,h)anthracene	4.70E-06											4.70E-06	0.00E+00	**4.70E-06**
Dichlorobenzene	1.45E-03				1.31E-05		1.89E-04					1.65E-03	2.10E-04	**1.86E-03**
Diisocyanate								1.00E-02				0.01	0.00E+00	**0.01**
Ethylbenzene	1.37E-04			6.94E-03				1.00E-02				0.02	0.08	**0.10**
Fluoranthene	1.32E-05											1.32E-05	0.00E+00	**1.32E-05**
Fluorene	1.22E-05											1.22E-05	0.00E+00	**1.22E-05**
Formaldehyde	2.00E-01	4.96E-03	6.23E-04		8.21E-04		1.18E-02			1.67E-04		0.22	0.02	**0.24**
Glycol								1.00E-02				0.01	0.00E+00	**0.01**
Hexane	2.18E+00				1.97E-02		2.84E-01					2.48	0.32	**2.80**
Indo(1,2,3-cd)pyrene	6.26E-06											6.26E-06	0.00E+00	**6.26E-06**
Lead	2.71E-03				5.48E-06		7.88E-05					2.79E-03	8.75E-05	**2.88E-03**
Manganese	2.15E-03				4.16E-06		5.99E-05					2.22E-03	6.65E-05	**2.28E-03**
Mercury	1.14E-03											1.14E-03	0.00E+00	**1.14E-03**
Methanol								1.00E-02				1.00E-02	0.00E+00	**0.01**
Methyl Chloroform								9.50E-01				0.95	0.00E+00	**0.95**
Methyl Isobutyl Ketone				1.19E+00		3.97E-01		3.20E-01				1.91	0.00E+00	**1.91**
Methylene Chloride								4.10E-01				0.41	0.00E+00	**0.41**
Naphthalene	2.99E-03											2.99E-03	0.00E+00	**2.99E-03**
Nickel	2.82E-03				2.30E-05		3.31E-04					3.18E-03	3.68E-04	**3.55E-03**
Phenanthrene	3.82E-05											3.82E-05	0.00E+00	**3.82E-05**
Phenol								8.00E-02				0.08	0.00E+00	**0.08**
Polycyclic Organic Matter	7.11E-03	7.06E-04	1.68E-03							4.48E-04		0.01	5.14E-03	**0.02**
Pyrene	1.37E-05											1.37E-05	0.00E+00	**1.37E-05**
Selenium	4.73E-04											4.73E-04	0.00E+00	**4.73E-04**
Toluene	1.67E-02	1.72E-03	2.22E-03	5.56E+00	3.72E-05		5.36E-04	9.20E-01		5.94E-04		6.51	0.63	**7.13**
Trimethylpentane												0.00	0.00	**0.00**
Xylene	2.35E-04	1.20E-03	1.52E-03	7.94E-01		4.39E-01		2.30E-01		4.08E-04		1.47	0.18	**1.64**
Process Total	**2.43**	**0.02**	**0.01**	**7.56**	**0.02**	**0.84**	**0.30**	**3.47**	**0.00**	**3.32E-03**	**0.00E+00**	**14.64**	**1.25**	**15.89**

Appendix A to the Technical Support Document - Emission Calculations
Sourcewide Limited Potential to Emit

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	T097-35016-00156	2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive
Johnson Melloh Solutions (JMS)	T097-34078-00586	2745 South Hoffman Road, Suite 504
AAR Aircraft Services, Indianapolis (AAR)	T097-33261-00559	2825 West Perimeter Road
Shuttle America Corporation (SAC)	T097-35018-00668	2745 South Hoffman Road, Dock 67, Hng 7A-7B
ASIG Aircraft Services International Group	T097-35006-00667	2050 South Hoffman Road

Permit Reviewer: David Matousek
Date: December 10, 2014

Summary of Potential to Emit

		Limited Potential To Emit (ton/yr)							HAP	
Process / Emission Unit	Location	PM	PM_{10}	$PM_{2.5}$	SO_2	NOx	VOC	CO	Total	Single
Emergency Diesel Generator EU-13	IAA	0.49	0.22	0.22	1.33	8.36	0.39	10.29	6.06E-03	2.99E-03
Emergency Diesel Generator EU-14	IAA	0.49	0.22	0.22	1.33	8.36	0.39	10.29	6.06E-03	2.99E-03
Tank A	IAA	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.00	0.00
Emergency Diesel Generator EU-15	IAA	0.19	0.08	0.08	0.51	3.19	0.15	3.93	2.31E-03	1.14E-03
Emergency Diesel Generator EU-16	IAA	0.33	0.15	0.15	0.91	5.68	0.26	6.99	4.12E-03	2.03E-03
Emergency Diesel Generator EU-18	IAA	0.34	0.15	0.15	0.93	5.81	0.27	7.14	4.21E-03	2.08E-03
Emergency Diesel Generator EU-21	IAA	0.07	0.07	0.07	0.07	0.51	0.08	0.22	8.93E-04	2.75E-04
Emergency Diesel Generator EU-500	IAA	0.18	0.08	0.08	0.50	3.16	0.15	3.88	2.29E-03	1.13E-03
Degreasing/Surface Coating	IAA	0.14	0.14	0.14	0.00	0.00	1.84	0.00	0.87	0.62
Generators < 600 hp	IAA	0.30	0.30	0.30	0.28	4.24	0.00	0.91	3.73E-03	8.98E-04
Generators > 600 hp, Elec Vault	IAA	0.13	0.08	0.08	0.46	4.50	0.13	1.03	2.07E-03	1.02E-03
Generators > 600 hp, Eagle Hub	IAA	0.35	0.20	0.20	1.23	7.70	0.36	2.78	5.58E-03	2.75E-03
Boilers < 100 MMBtu/hr	IAA	0.11	0.45	0.45	0.04	5.86	0.32	4.92	0.11	0.11
Boiler 23	IAA	0.02	0.10	0.10	0.01	1.31	0.07	1.10	0.02	0.02
Emergency Diesel Generator 024	IAA	0.13	0.08	0.08	0.76	2.45	0.13	1.04	2.08E-03	1.03E-03
Natural gas heaters and boiler	IAA	0.20	0.79	0.79	0.06	10.34	0.57	8.68	0.20	0.19
Diesel Emergency Generators 025 and 026	IAA	0.47	0.47	0.47	0.44	6.63	0.54	1.43	5.80E-03	1.77E-03
IMCCEP Boiler # 1 (worst case)	JMS	6.05	14.07	14.07	86.22	83.20	6.66	85.90	2.43	2.18
IMCCEP Boiler # 2 (worst case)	JMS									
IMCCEP Boiler # 3 (worst case)	JMS									
IMCCEP Boiler # 4 (worst case)	JMS									
Generators < 600 hp	JMS	1.30	1.30	1.30	1.22	18.52	1.51	3.99	1.63E-02	4.96E-03
Generators > 600 hp	JMS	0.79	0.45	0.45	2.74	27.09	0.80	6.21	1.24E-02	6.13E-03
Ablative Coating Operation	AAR	5.25	5.25	5.25	0.00	0.00	25.00	0.00	7.56	**5.56**
Natural Gas-Fired AMU Heat & Cure Oven	AAR	0.02	0.08	0.08	0.01	1.10	0.06	0.92	0.02	0.02
Surface Coating P-2	AAR	0.92	0.92	0.92	0.00	0.00	25.00	0.00	0.84	0.44
NG Make-Up Air Heating Unit B-1	AAR	0.30	1.20	1.20	0.09	15.77	0.87	13.25	0.30	0.28
Surface Coating (Emission Units 013, 017, 018)	AAR	21.61	21.61	21.61	0.00	0.00	94.77	0.00	3.47	0.95
Shuttle America Corporation	SAC	0.0	0.0	0.0	0.0	0.0	negligible	0.0	negligible	negligible
ASIG: Generators > 600 hp	ASIG	0.10	0.10	0.10	0.73	4.59	0.21	5.64	3.32E-03	1.64E-03
ASIG: Tanks	ASIG	0.00	0.00	0.00	0.00	0.00	0.56	0.00	0.00	0.00
Totals:		**40.29**	**48.57**	**48.57**	**99.87**	**228.36**	**161.44**	**180.55**	**15.89**	**NA**

Appendix A to the Technical Support Document - Emission Calculations
Source Wide Potential to Emit

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	T097-35016-00156	2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive
Johnson Melloh Solutions (JMS)	T097-34078-00586	2745 South Hoffman Road, Suite 504
AAR Aircraft Services, Indianapolis (AAR)	T097-33261-00559	2825 West Perimeter Road
Shuttle America Corporation (SAC)	T097-35018-00668	2745 South Hoffman Road, Dock 67, Hng 7A-7B
ASIG Aircraft Services International Group	T097-35006-00667	2050 South Hoffman Road

Permit Reviewer: David Matousek
Date: December 10, 2014

Summary of Potential to Emit

		Potential To Emit (ton/yr)							HAP	
Process / Emission Unit	Location	PM	PM_{10}	$PM_{2.5}$	SO_2	NOx	VOC	CO	Total	Toluene*
Emergency Diesel Generator EU-13	IAA	0.49	0.22	0.22	1.33	8.36	0.39	10.29	6.06E-03	1.08E-03
Emergency Diesel Generator EU-14	IAA	0.49	0.22	0.22	1.33	8.36	0.39	10.29	6.06E-03	1.08E-03
Tank A	IAA	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.00	0.00
Emergency Diesel Generator EU-15	IAA	0.19	0.08	0.08	0.51	3.19	0.15	3.93	2.31E-03	4.13E-04
Emergency Diesel Generator EU-16	IAA	0.33	0.15	0.15	0.91	5.68	0.26	6.99	4.12E-03	7.35E-04
Emergency Diesel Generator EU-18	IAA	0.34	0.15	0.15	0.93	5.81	0.27	7.14	4.21E-03	7.51E-04
Emergency Diesel Generator EU-21	IAA	0.07	0.07	0.07	0.07	0.51	0.08	0.22	8.93E-04	9.51E-05
Emergency Diesel Generator EU-500	IAA	0.18	0.08	0.08	0.50	3.16	0.15	3.88	2.29E-03	4.09E-04
Degreasing/Surface Coating	IAA	0.14	0.14	0.14	0.00	0.00	1.84	0.00	0.87	6.21E-01
Generators < 600 hp	IAA	0.30	0.30	0.30	0.28	4.24	0.00	0.91	3.73E-03	3.94E-04
Generators > 600 hp, Elec. Vault	IAA	0.13	0.08	0.08	0.46	4.50	0.13	1.03	2.07E-03	3.69E-04
Generators > 600 hp, Eagle Hub	IAA	0.35	0.20	0.20	1.23	7.70	0.36	2.78	5.58E-03	9.96E-04
Boilers < 100 MMBtu/hr	IAA	0.11	0.45	0.45	0.04	5.86	0.32	4.92	0.11	1.99E-04
Boiler 23	IAA	0.02	0.10	0.10	0.01	1.31	0.07	1.10	0.02	4.47E-05
Emergency Diesel Generator 024	IAA	0.13	0.08	0.08	0.76	2.45	0.13	1.04	2.08E-03	3.71E-04
Natural gas heaters and boiler	IAA	0.20	0.79	0.79	0.06	10.34	0.57	8.68	0.20	3.52E-04
Diesel Emergency Generators 025 and 026	IAA	0.47	0.47	0.47	0.44	6.63	0.54	1.43	5.80E-03	6.13E-04
IMCCEP Boiler # 1 (worst case)	JMS	0.79	1.31	1.31	15.73	7.91	0.30	4.54	0.13	2.49E-03
IMCCEP Boiler # 2 (worst case)	JMS	1.58	2.61	2.61	31.46	15.82	0.60	9.09	0.26	4.98E-03
IMCCEP Boiler # 3 (worst case)	JMS	7.66	12.64	12.64	152.30	99.54	2.88	44.01	1.24	2.41E-02
IMCCEP Boiler # 4 (worst case)	JMS	7.66	12.64	12.64	152.30	99.54	2.88	44.01	1.24	2.41E-02
Generators < 600 hp	JMS	1.30	1.30	1.30	1.22	18.52	1.51	3.99	1.63E-02	1.72E-03
Generators > 600 hp	JMS	0.79	0.45	0.45	2.74	27.09	0.80	6.21	1.24E-02	2.22E-03
Ablative Coating Operation	AAR	5.25	5.25	5.25	0.00	0.00	26.37	0.00	7.56	**5.56**
Natural Gas-Fired AMU Heat & Cure Oven	AAR	0.02	0.08	0.08	0.01	1.10	0.06	0.92	0.02	3.72E-05
Surface Coating P-2	AAR	0.92	0.92	0.92	0.00	0.00	25.00	0.00	0.84	0.00
NG Make-Up Air Heating Unit B-1	AAR	0.30	1.20	1.20	0.09	15.77	0.87	13.25	0.30	5.36E-04
Surface Coating (Emission Units 013, 017, 018)	AAR	57.93	57.93	57.93	0.00	0.00	94.77	0.00	3.47	9.20E-01
Shuttle America Corporation	SAC	0.0	0.0	0.0	0.0	0.0	negligible	0.0	negligible	negligible
ASIG: Generators > 600 hp	ASIG	0.10	0.10	0.10	0.73	4.59	0.21	5.64	3.32E-03	5.94E-04
ASIG: Tanks	ASIG	0.0	0.0	0.0	0.0	0.0	0.56	0.0	0.00E+00	0.00
Totals:		**88.25**	**100.02**	**100.02**	**365.44**	**367.97**	**162.82**	**196.30**	**16.33**	**7.17**

* Worst case HAP is toluene

Appendix A to the Technical Support Document - Emission Calculations
Indianapolis Airport Authority - Generator 13

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	T097-35016-00156	2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive
Johnson Melloh Solutions (JMS)	T097-34078-00586	2745 South Hoffman Road, Suite 504
AAR Aircraft Services, Indianapolis (AAR)	T097-33261-00559	2825 West Perimeter Road
Shuttle America Corporation (SAC)	T097-35018-00668	2745 South Hoffman Road, Dock 67, Hng 7A-7B
ASIG Aircraft Services International Group	T097-35006-00667	2050 South Hoffman Road

Permit Reviewer: David Matousek

Date: December 10, 2014

Output Horsepower Rating (hp)	2200.0
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	1,100,000
Sulfur Content (S) of Fuel (% by weight)	0.300

	Pollutant						
	PM**	PM10*	PM2.5*	SO2	NOx**	VOC*	CO**
Emission Factor in lb/hp-hr	8.82E-04	4.01E-04	4.01E-04	2.43E-03 *(.00809S)*	1.52E-02	7.05E-04	1.87E-02
Potential Emission in tons/yr	0.49	0.22	0.22	1.33	8.36	0.39	10.29

*PM10 emission factor in lb/hp-hr was calculated using the emission factor in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.4-2). Assume PM2.5 = PM10. VOC = Table 3.4-1.

**PM, NOx and CO emission factors taken from 40 CFR 60, Subpart IIII Table 1

Hazardous Air Pollutants (HAPs)

	Pollutant						
	Benzene	Toluene	Xylene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	5.43E-06	1.97E-06	1.35E-06	5.52E-07	1.76E-07	5.52E-08	1.48E-06
Potential Emission in tons/yr	2.99E-03	1.08E-03	7.43E-04	3.04E-04	9.70E-05	3.03E-05	8.16E-04

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.4-3).

Potential Emission of Total HAPs (tons/yr)	6.06E-03

Methodology

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]

Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Appendix A to the Technical Support Document - Emission Calculations
IAA Emergency Generator 14

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	T097-35016-00156	2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive
Johnson Melloh Solutions (JMS)	T097-34078-00586	2745 South Hoffman Road, Suite 504
AAR Aircraft Services, Indianapolis (AAR)	T097-33261-00559	2825 West Perimeter Road
Shuttle America Corporation (SAC)	T097-35018-00668	2745 South Hoffman Road, Dock 67, Hng 7A-7B
ASIG Aircraft Services International Group	T097-35006-00667	2050 South Hoffman Road

Permit Reviewer: David Matousek

Date: December 10, 2014

Output Horsepower Rating (hp)	2200.0
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	1,100,000
Sulfur Content (S) of Fuel (% by weight)	0.300

	Pollutant						
	PM**	PM10*	PM2.5*	SO2	NOx**	VOC	CO**
Emission Factor in lb/hp-hr	8.82E-04	4.01E-04	4.01E-04	2.43E-03 *(.00809S)*	1.52E-02	7.05E-04	1.87E-02
Potential Emission in tons/yr	0.49	0.22	0.22	1.33	8.36	0.39	10.29

*PM10 emission factor in lb/hp-hr was calculated using the emission factor in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.4-2). PM2.5 = PM10, VOC Table 3.4-1

**PM, NOx and CO emission factors taken from 40 CFR 60, Subpart IIII Table 1

Hazardous Air Pollutants (HAPs)

	Pollutant						
	Benzene	Toluene	Xylene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	5.43E-06	1.97E-06	1.35E-06	5.52E-07	1.76E-07	5.52E-08	1.48E-06
Potential Emission in tons/yr	2.99E-03	1.08E-03	7.43E-04	3.04E-04	9.70E-05	3.03E-05	8.16E-04

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.4-3).

Potential Emission of Total HAPs (tons/yr)	6.06E-03

Methodology

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]

Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Appendix A to the Technical Support Document - Emission Calculations
IAA - Tank A - Waste Fuel Oil - No. 6

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	T097-35016-00156	2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive
Johnson Melloh Solutions (JMS)	T097-34078-00586	2745 South Hoffman Road, Suite 504
AAR Aircraft Services, Indianapolis (AAR)	T097-33261-00559	2825 West Perimeter Road
Shuttle America Corporation (SAC)	T097-35018-00668	2745 South Hoffman Road, Dock 67, Hng 7A-7B
ASIG Aircraft Services International Group	T097-35006-00667	2050 South Hoffman Road

Permit Reviewer: David Matousek

Date: December 10, 2014

Storage Tanks ID	Product Stored	Type of Tank	Tank Volumes	Tank Volumes (gal)	Date Installed
Stand A	No. 6 Fuel Oil	Internal Floating Roof	113,825	840,000	1978
Stand B-East	(Removed under 35016)				
Stand B-West					

Storage Tanks ID	Tank Volumes (gal)	Turnovers	Throughput (Gal)	Working Loss	Working Loss Lbs/1000 gal	Breathing Loss
Stand A	840,000	57.14	40000000	204	0.0051	512
Stand B-East	(Removed under 35016)					
Stand B-West						
			40000000	204	0.0051	512

Maximum Product throughput (gal/yr)	40,000,000
Maximum working loss (lbs/1000 gal)	0.0051
Max emissions from Working Loss (lbs/yr)	204
Breathing Loss for Product, (lbs/yr)	512.18
Total Emissions from Product (tons/yr)	0.36

The US EPA TANKS program was used to estimate the breathing and working losses from each tank, assuming jet fuel and usage from previous permits.

For each Tank, the withdrawal loss was then divided by the throughput that was placed in the TANKS4 program to determine the worst case unit working loss (lbs/1000 gallons)

Appendix A to the Technical Support Document - Emission Calculations
IAA Emergency Generator 15

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	**T097-35016-00156**	**2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive**
Johnson Melloh Solutions (JMS)	**T097-34078-00586**	**2745 South Hoffman Road, Suite 504**
AAR Aircraft Services, Indianapolis (AAR)	**T097-33261-00559**	**2825 West Perimeter Road**
Shuttle America Corporation (SAC)	**T097-35018-00668**	**2745 South Hoffman Road, Dock 67, Hng 7A-7B**
ASIG Aircraft Services International Group	**T097-35006-00667**	**2050 South Hoffman Road**

Permit Reviewer: David Matousek

Date: December 10, 2014

Output Horsepower Rating (hp)	840
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	420,000
Sulfur Content (S) of Fuel (% by weight)	0.3

	Pollutant						
	PM**	PM10*	PM2.5*	SO2	NOx**	VOC	CO**
Emission Factor in lb/hp-hr	8.82E-04	4.01E-04	4.01E-04	2.43E-03 *(.00809S)*	1.52E-02	7.05E-04	1.87E-02
Potential Emission in tons/yr	0.19	0.08	0.08	0.51	3.19	0.15	3.93

*PM10 emission factor in lb/hp-hr was calculated using the emission factor in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.4-2). PM2.5 = PM10, VOC = Table 3.4-1.

**PM, NOx and CO emission factors taken from 40 CFR 60, Subpart IIII Table 1

Hazardous Air Pollutants (HAPs)

	Pollutant						
	Benzene	Toluene	Xylene	Form.	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	5.43E-06	1.97E-06	1.35E-06	5.52E-07	1.76E-07	5.52E-08	1.48E-06
Potential Emission in tons/yr	1.14E-03	4.13E-04	2.84E-04	1.16E-04	3.70E-05	1.16E-05	3.12E-04

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.4-3).

Potential Emission of Total HAPs (tons/yr)	**2.31E-03**

Methodology

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Form. = formaldehyde

Appendix A to the Technical Support Document - Emission Calculations
IAA Emergency Generator 16

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	**T097-35016-00156**	**2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive**
Johnson Melloh Solutions (JMS)	**T097-34078-00586**	**2745 South Hoffman Road, Suite 504**
AAR Aircraft Services, Indianapolis (AAR)	**T097-33261-00559**	**2825 West Perimeter Road**
Shuttle America Corporation (SAC)	**T097-35018-00668**	**2745 South Hoffman Road, Dock 67, Hng 7A-7B**
ASIG Aircraft Services International Group	**T097-35006-00667**	**2050 South Hoffman Road**

Permit Reviewer: David Matousek

Date: December 10, 2014

Output Horsepower Rating (hp)	1495
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	747,500
Sulfur Content (S) of Fuel (% by weight)	0.300

	Pollutant						
	PM**	PM10*	PM2.5*	SO2	NOx**	VOC	CO**
Emission Factor in lb/hp-hr	8.82E-04	4.01E-04	4.01E-04	2.43E-03 *(.00809S)*	1.52E-02	7.05E-04	1.87E-02
Potential Emission in tons/yr	0.33	0.15	0.15	0.91	5.68	0.26	6.99

*PM10 emission factor in lb/hp-hr was calculated using the emission factor in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.4-2). PM2.5=PM10, VOC = Table 3.4-1.

**PM, NOx and CO emission factors taken from 40 CFR 60, Subpart IIII Table 1

Hazardous Air Pollutants (HAPs)

	Pollutant						
	Benzene	Toluene	Xylene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	5.43E-06	1.97E-06	1.35E-06	5.52E-07	1.76E-07	5.52E-08	1.48E-06
Potential Emission in tons/yr	2.03E-03	7.35E-04	5.05E-04	2.06E-04	6.59E-05	2.06E-05	5.55E-04

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.4-3).

Potential Emission of Total HAPs (tons/yr)	**4.12E-03**

Methodology

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Appendix A to the Technical Support Document - Emission Calculations
IAA Emergency Generator 18

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	**T097-35016-00156**	**2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive**
Johnson Melloh Solutions (JMS)	**T097-34078-00586**	**2745 South Hoffman Road, Suite 504**
AAR Aircraft Services, Indianapolis (AAR)	**T097-33261-00559**	**2825 West Perimeter Road**
Shuttle America Corporation (SAC)	**T097-35018-00668**	**2745 South Hoffman Road, Dock 67, Hng 7A-7B**
ASIG Aircraft Services International Group	**T097-35006-00667**	**2050 South Hoffman Road**

Permit Reviewer: David Matousek

Date: December 10, 2014

Output Horsepower Rating (hp)	1528
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	764,000
Sulfur Content (S) of Fuel (% by weight)	0.300

	Pollutant						
	PM**	PM10*	PM2.5*	SO2	NOx**	VOC	CO**
Emission Factor in lb/hp-hr	8.82E-04	4.01E-04	4.01E-04	2.43E-03 *(.00809S)*	1.52E-02	7.05E-04	1.87E-02
Potential Emission in tons/yr	0.34	0.15	0.15	0.93	5.81	0.27	7.14

*PM10 emission factor in lb/hp-hr was calculated using the emission factor in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.4-2). PM2.5=PM10, VOC = Table 3.4-1.

**PM, NOx and CO emission factors taken from 40 CFR 60, Subpart IIII Table 1

Hazardous Air Pollutants (HAPs)

	Pollutant						
	Benzene	Toluene	Xylene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	5.43E-06	1.97E-06	1.35E-06	5.52E-07	1.76E-07	5.52E-08	1.48E-06
Potential Emission in tons/yr	2.08E-03	7.51E-04	5.16E-04	2.11E-04	6.74E-05	2.11E-05	5.67E-04

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.4-3).

Potential Emission of Total HAPs (tons/yr)	**4.21E-03**

Methodology

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]

Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Appendix A to the Technical Support Document - Emission Calculations
IAA Emergency Generator 21

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	**T097-35016-00156**	**2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive**
Johnson Melloh Solutions (JMS)	**T097-34078-00586**	**2745 South Hoffman Road, Suite 504**
AAR Aircraft Services, Indianapolis (AAR)	**T097-33261-00559**	**2825 West Perimeter Road**
Shuttle America Corporation (SAC)	**T097-35018-00668**	**2745 South Hoffman Road, Dock 67, Hng 7A-7B**
ASIG Aircraft Services International Group	**T097-35006-00667**	**2050 South Hoffman Road**

Permit Reviewer: David Matousek

Date: December 10, 2014

Output Horsepower Rating (hp)	133
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	66,500
Sulfur Content (S) of Fuel (% by weight)	0.300

	Pollutant						
	PM	PM10*	PM2.5*	SO2	NOx**	VOC	CO
Emission Factor in lb/hp-hr	2.20E-03	2.20E-03	2.20E-03	2.05E-03	1.52E-02	2.51E-03	6.68E-03
Potential Emission in tons/yr	0.07	0.07	0.07	0.07	0.51	0.08	0.22

*PM10 emission factor in lb/hp-hr was calculated using the emission factor in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1). PM=PM10=PM2.5. VOC and CO Table 3.3-1.

**NOx emission factor was taken from 40 CFR 60, Subpart IIII Table 1

Hazardous Air Pollutants (HAPs)

	Pollutant						
	Benzene	Toluene	Xylene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	6.53E-06	2.86E-06	2.00E-06	8.26E-06	5.37E-06	6.48E-07	1.18E-06
Potential Emission in tons/yr	2.17E-04	9.51E-05	6.65E-05	2.75E-04	1.79E-04	2.15E-05	3.92E-05

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-2).

Potential Emission of Total HAPs (tons/yr)	**8.93E-04**

Methodology

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.3-1 , 3.3-2, 3.3-3

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]

Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Appendix A to the Technical Support Document - Emission Calculations
Emergency Standby Generator 500 Hours

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	**T097-35016-00156**	**2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive**
Johnson Melloh Solutions (JMS)	**T097-34078-00586**	**2745 South Hoffman Road, Suite 504**
AAR Aircraft Services, Indianapolis (AAR)	**T097-33261-00559**	**2825 West Perimeter Road**
Shuttle America Corporation (SAC)	**T097-35018-00668**	**2745 South Hoffman Road, Dock 67, Hng 7A-7B**
ASIG Aircraft Services International Group	**T097-35006-00667**	**2050 South Hoffman Road**

Permit Reviewer: David Matousek

Date: December 10, 2014

Output Horsepower Rating (hp)	831
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	415,500
Sulfur Content (S) of Fuel (% by weight)	0.300

	Pollutant						
	PM**	PM10*	PM2.5*	SO2	NOx**	VOC	CO**
Emission Factor in lb/hp-hr	8.82E-04	4.01E-04	4.01E-04	2.43E-03 *(.00809S)*	1.52E-02	7.05E-04	1.87E-02
Potential Emission in tons/yr	0.18	0.08	0.08	0.50	3.16	0.15	3.88

*PM10 emission factor in lb/hp-hr was calculated using the emission factor in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.4-2). PM2.5 = PM10, VOC = Table 3.4-1

**PM, NOx and CO emission factors taken from 40 CFR 60, Subpart IIII Table 1

Hazardous Air Pollutants (HAPs)

	Pollutant						
	Benzene	Toluene	Xylene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	5.43E-06	1.97E-06	1.35E-06	5.52E-07	1.76E-07	5.52E-08	1.48E-06
Potential Emission in tons/yr	1.13E-03	4.09E-04	2.81E-04	1.15E-04	3.66E-05	1.15E-05	3.08E-04

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.4-3).

Potential Emission of Total HAPs (tons/yr)	**2.29E-03**

Methodology

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]

Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Appendix A to the Technical Support Document - Emission Calculations
IAA Surface Coating & Degreasing & Storage Tanks

Collocated Sources:	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	T097-35016-00156	2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive
Johnson Melloh Solutions (JMS)	T097-34078-00586	2745 South Hoffman Road, Suite 504
AAR Aircraft Services, Indianapolis (AAR)	T097-33261-00559	2825 West Perimeter Road
Chautauqua Airlines (CHA)	T097-35018-00668	2745 South Hoffman Road, Dock 67, Hng 7A-7B
ASIG Aircraft Services International Group	T097-35006-00667	2050 South Hoffman Road

Permit Reviewer: David Matousek
Date: December 10, 2014

Material	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	PM/PM10 (ton/yr)	lb VOC/gal solids	Transfer Efficiency
PPG DBU-1 Deltron Basecoat	8.6	66.00%	0.0%	66.0%	0.0%	47.00%	0.03750	1.000	5.64	5.64	0.21	5.08	0.93	0.14	12.01	70%
PPG DRR1170 Reducer	7.1	96.44%	0.0%	96.4%	0.0%	2.75%	0.01250	1.000	6.88	6.88	0.09	2.06	0.38	0.00	250.04	NA
Worst case coating/promotor, reducer, remover											**0.30**	**7.14**	**1.3**	**0.14**		
consumption, gallons per day							**1.20**									

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PM10 emission is assumed equal to PM
PM/PM10 Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

VOC Emission Summary		
Surface Coating	1.3	TPY
Degreasing	0.53	TPY
One Storage Tank	0.01	TPY
Total	**1.84**	**TPY**

Degreasing

1 tank x 145 gallons maximum usage each year x 7.36 lbs VOC/gallon x ton/2000 pounds = **0.53** tons VOC/yr

Ethyl Benzene	1%	0.0053	TPY
Toluene	1%	0.0053	TPY
Xylene	1%	0.0053	TPY
Total HAP		0.0159	TPY

HAP Emission Summary (TPY)	Ethyl Benzene	Toluene	Xylene
Surface Coating	0.075	0.62	0.17
Degreasing	0.005	0.01	0.01
One Storage Tank	negligible hap		
Total	0.08	0.62	0.17
Total HAP	**0.87**	**TPY**	

Hazardous Air Pollutants (HAPs)

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum Usage (unit/hour)	Weight % Xylene	Weight % Toluene	Weight % Ethyl Benzene	Xylene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Ethyl Benzene Emissions (ton/yr)	Combined HAP Emissions (ton/yr)
PPG DBU-1 Deltron Basecoat	8.6	0.03750	1.0	10.00%	40.00%	5.00%	0.14	0.57	0.07	0.78
PPG DRR1170 Reducer	7.1	0.012500	1.0	7.00%	13.00%	1.00%	0.03	0.05	0.004	0.08
Total State Potential Emissions							**0.17**	**0.62**	**0.07**	**0.86**

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

Appendix A to the Technical Support Document - Emission Calculations
IAA Emergency Generators
Diesel Fuel < 600 HP

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	T097-35016-00156	2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive
Johnson Melloh Solutions (JMS)	T097-34078-00586	2745 South Hoffman Road, Suite 504
AAR Aircraft Services, Indianapolis (AAR)	T097-33261-00559	2825 West Perimeter Road
Shuttle America Corporation (SAC)	T097-35018-00668	2745 South Hoffman Road, Dock 67, Hng 7A-7B
ASIG Aircraft Services International Group	T097-35006-00667	2050 South Hoffman Road
	Permit Reviewer:	David Matousek
	Date:	December 10, 2014

Unit Location	horsepower	
Main Terminal -LAN Room		(226 hp removed under 35016)
South Tug Guard Shack	70	
Gate 10 Guard Shack	70	
Midfield Road Access Gate	70	
Main Terminal -Main Concourse		(535 hp removed under 35016)
Airport Fire Station		(300 hp removed under 31891)
Airfield Maintenance Bldg.	340	
Midfield Program Office		(600 hp removed under 31891)
sum total	550	hp
	3.850	MMBtu/hr

max heat input MMBtu / hr
3.9

	PM	PM10/2.5	SOx	NOx	VOC	CO
Emission Factor lbs / MMBtu	0.31	0.31	0.29	4.41	2.51E-03	0.95
Potential Emissions lbs / hr	1.19	1.19	1.12	16.98	0.01	3.66
tons / yr @ 500 hrs / yr	0.30	0.30	0.28	4.24	0.00	0.91

Methodology

AP-42 App. A Conversion Factor: 7000 Btu/horsepower hr
Emission Factor (lbs / MMBtu): from AP-42 Table 3.3-1 & 3.3-2 Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines
Diesel fuel Btu: 137000 Btu/gal (per AP-42 Appendix A)
Potential Emissions (lbs / hr): emfac x heat input
Potential Emissions (tons / yr): lbs / hr emissions x 500 operating hrs / yr x ton / 2000 lbs

Hazardous Air Pollutants (HAPs)

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/MMBtu	9.33E-04	4.09E-04	2.85E-04	3.91E-05	1.18E-03	7.67E-04	9.25E-05	1.68E-04
Potential Emission in tons/yr	8.98E-04	3.94E-04	2.74E-04	3.76E-05	1.14E-03	7.38E-04	8.90E-05	1.62E-04

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Potential Emission of Total HAPs (tons/yr)	3.73E-03

Methodology

Emission Factors are from AP42 (Supplement B 10/96), Tables 3.3-1 and 3.3-2
Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Appendix A to the Technical Support Document - Emission Calculations
IAA Large Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (>600 HP)
Maximum Input Rate (>4.2 MMBtu/hr)
Airfield Maintenance Electrical Vault Generator Cummins Model 1010 Straight 6

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	T097-35016-00156	2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive
Johnson Melloh Solutions (JMS)	T097-34078-00586	2745 South Hoffman Road, Suite 504
AAR Aircraft Services, Indianapolis (AAR)	T097-33261-00559	2825 West Perimeter Road
Shuttle America Corporation (SAC)	T097-35018-00668	2745 South Hoffman Road, Dock 67, Hng 7A-7B
ASIG Aircraft Services International Group	T097-35006-00667	2050 South Hoffman Road

Permit Reviewer: David Matousek

Date: December 10, 2014

Output Horsepower Rating (hp)	750.0
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	375,000
Sulfur Content (S) of Fuel (% by weight)	0.300

	Pollutant						
	PM*	PM10*	PM2.5*	SO2*	NOx**	VOC*	CO*
Emission Factor in lb/hp-hr	7.00E-04	4.01E-04	4.01E-04	2.43E-03 *(.00809S)*	2.40E-02 **see below	7.05E-04	5.50E-03
Potential Emission in tons/yr	0.13	0.08	0.08	0.46	4.50	0.13	1.03

*Emission factor in lb/hp-hr was calculated using the emission factor in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.4-1). PM2.5=PM10

**NOx emission factor: uncontrolled = 0.024 lb/hp-hr, controlled by ignition timing retard = 0.013 lb/hp-hr

Hazardous Air Pollutants (HAPs)

	Pollutant						
	Benzene	Toluene	Xylene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	5.43E-06	1.97E-06	1.35E-06	5.52E-07	1.76E-07	5.52E-08	1.48E-06
Potential Emission in tons/yr	1.02E-03	3.69E-04	2.53E-04	1.04E-04	3.31E-05	1.03E-05	2.78E-04

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.4-3).

Potential Emission of Total HAPs (tons/yr)	**2.07E-03**

Methodology

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]

Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Appendix A to the Technical Support Document - Emission Calculations
IAA Large Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (>600 HP)
Maximum Input Rate (>4.2 MMBtu/hr)
Eagle Hub Emergency Generator

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	T097-35016-00156	2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive
Johnson Melloh Solutions (JMS)	T097-34078-00586	2745 South Hoffman Road, Suite 504
AAR Aircraft Services, Indianapolis (AAR)	T097-33261-00559	2825 West Perimeter Road
Shuttle America Corporation (SAC)	T097-35018-00668	2745 South Hoffman Road, Dock 67, Hng 7A-7B
ASIG Aircraft Services International Group	T097-35006-00667	2050 South Hoffman Road

Permit Reviewer: David Matousek

Date: December 10, 2014

Output Horsepower Rating (hp)	2,025.00
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	1,012,500
Sulfur Content (S) of Fuel (% by weight)	0.300

	Pollutant						
	PM*	PM10*	PM2.5*	SO2*	NOx**	VOC*	CO*
Emission Factor in lb/hp-hr	7.00E-04	4.01E-04	4.01E-04	2.43E-03 *(.00809S)*	1.52E-02 **see below	7.05E-04	5.50E-03
Potential Emission in tons/yr	0.35	0.20	0.20	1.23	7.70	0.36	2.78

*Emission factor in lb/hp-hr was calculated using the emission factor in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.4-1). PM2.5=PM10

**NOx emission factor: Provided by Permittee

Hazardous Air Pollutants (HAPs)

	Pollutant						
	Benzene	Toluene	Xylene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	5.43E-06	1.97E-06	1.35E-06	5.52E-07	1.76E-07	5.52E-08	1.48E-06
Potential Emission in tons/yr	2.75E-03	9.96E-04	6.84E-04	2.80E-04	8.93E-05	2.79E-05	7.51E-04

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.4-3).

Potential Emission of Total HAPs (tons/yr)	**5.58E-03**

Methodology

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]

Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Appendix A to the Technical Support Document - Emission Calculations
IAA Misc. Natural Gas Combustion Only
MMBTU/HR <100

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	T097-35016-00156	2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive
Johnson Melloh Solutions (JMS)	T097-34078-00586	2745 South Hoffman Road, Suite 504
AAR Aircraft Services, Indianapolis (AAR)	T097-33261-00559	2825 West Perimeter Road
Shuttle America Corporation (SAC)	T097-35018-00668	2745 South Hoffman Road, Dock 67, Hng 7A-7B
ASIG Aircraft Services International Group	T097-35006-00667	2050 South Hoffman Road

Permit Reviewer: David Matousek

Date: December 10, 2014

	Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	
EU-04	8.998	78.8	
EU-05	2.247	19.7	
EU-19	1.00	8.8	
EU-20	1.00	8.8	
EU-22	0.125	1.1	
(2) 2009 Boilers		0.0	2x 0.5 MMBtu boilers removed under 31891
Total	13.370	117.1	

		Pollutant						
Emission Factor in lb/MMCF		PM* 1.9	PM10* 7.6	PM2.5* 7.6	SO2 0.6	NOx 100 **see below	VOC 5.5	CO 84
Potential Emission in tons/yr	EU-04	0.07	0.30	0.30	0.02	3.94	0.22	3.31
	EU-05	0.02	0.07	0.07	0.01	0.98	0.05	0.83
	EU-19	0.01	0.03	0.03	2.63E-03	0.44	0.02	0.37
	EU-20	0.01	0.03	0.03	2.63E-03	0.44	0.02	0.37
	EU-22	1.04E-03	4.16E-03	4.16E-03	3.29E-04	0.05	3.01E-03	0.05
	(2) 2009 Boilers	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total:	**0.11**	**0.45**	**0.45**	**0.04**	**5.86**	**0.32**	**4.92**

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

		HAPs - Organics				
		Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf		2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	Total	1.2E-04	7.0E-05	4.4E-03	1.1E-01	2.0E-04

		HAPs - Metals				
		Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf		5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	Total	2.9E-05	6.4E-05	8.2E-05	2.2E-05	1.2E-04

Potential Emission of Total HAPs (tons/yr)	**1.1E-01**

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A to the Technical Support Document - Emission Calculations
IAA Boiler No. 23
Utility Boiler

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	T097-35016-00156	2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive
Johnson Melloh Solutions (JMS)	T097-34078-00586	2745 South Hoffman Road, Suite 504
AAR Aircraft Services, Indianapolis (AAR)	T097-33261-00559	2825 West Perimeter Road
Shuttle America Corporation (SAC)	T097-35018-00668	2745 South Hoffman Road, Dock 67, Hng 7A-7B
ASIG Aircraft Services International Group	T097-35006-00667	2050 South Hoffman Road

Permit Reviewer: David Matousek
Date: December 10, 2014

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
3.0	26.28

	Pollutant					
	PM*	PM10/2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.02	0.10	0.01	1.31	0.07	1.10

*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 280 (pre-NSPS) or 190 (post-NSPS), Low NOx Burner = 140, Flue gas recirculation = 100 (See Table 1.4-1)

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-01-006-01, 1-01-006-04
(AP-42 Supplement D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Hazardous Air Pollutants (HAPs)

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.10E-03	1.20E-03	7.50E-02	1.80E+00	3.40E-03
Potential Emission in tons/yr	2.8E-05	1.6E-05	9.9E-04	2.4E-02	4.5E-05

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.00E-04	1.10E-03	1.40E-03	3.80E-04	2.10E-03
Potential Emission in tons/yr	6.6E-06	1.4E-05	1.8E-05	5.0E-06	2.8E-05

Total HAPs **2.5E-02**

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A to the Technical Support Document - Emission Calculations
IAA Large Reciprocating Internal Combustion Engines - Diesel Fuel - EU024
Output Rating (>600 HP)
Maximum Input Rate (>4.2 MMBtu/hr)

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	T097-35016-00156	2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive
Johnson Melloh Solutions (JMS)	T097-34078-00586	2745 South Hoffman Road, Suite 504
AAR Aircraft Services, Indianapolis (AAR)	T097-33261-00559	2825 West Perimeter Road
Shuttle America Corporation (SAC)	T097-35018-00668	2745 South Hoffman Road, Dock 67, Hng 7A-7B
ASIG Aircraft Services International Group	T097-35006-00667	2050 South Hoffman Road

Permit Reviewer: David Matousek

Date: December 10, 2014

Emissions calculated based on output rating (hp)

Output Horsepower Rating (hp)	755.0
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	377,500
Sulfur Content (S) of Fuel (% by weight)	0.500

	Pollutant						
	PM*	PM10*	PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	7.00E-04	4.01E-04	4.01E-04	4.05E-03 *(.00809S)*	1.30E-02 **see below	7.05E-04	5.50E-03
Potential Emission in tons/yr	0.13	0.08	0.08	0.76	2.45	0.13	1.04

*PM10 emission factor in lb/hp-hr was calculated using the emission factor in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.4-2). PM10=PM2.5

**NOx emission factor: uncontrolled = 0.024 lb/hp-hr, controlled by ignition timing retard = 0.013 lb/hp-hr

Hazardous Air Pollutants (HAPs)

	Pollutant						
	Benzene	Toluene	Xylene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	5.43E-06	1.97E-06	1.35E-06	5.52E-07	1.76E-07	5.52E-08	1.48E-06
Potential Emission in tons/yr	1.03E-03	3.71E-04	2.55E-04	1.04E-04	3.33E-05	1.04E-05	2.80E-04

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Potential Emission of Total HAPs (tons/yr)	**2.08E-03**

Methodology

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4

Methodology

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]

Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Appendix A to the Technical Support Document - Emission Calculations
IAA Natural Gas Combustion Only < 100 MMBtu/hr

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	T097-35016-00156	2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive
Johnson Melloh Solutions (JMS)	T097-34078-00586	2745 South Hoffman Road, Suite 504
AAR Aircraft Services, Indianapolis (AAR)	T097-33261-00559	2825 West Perimeter Road
Shuttle America Corporation (SAC)	T097-35018-00668	2745 South Hoffman Road, Dock 67, Hng 7A-7B
ASIG Aircraft Services International Group	T097-35006-00667	2050 South Hoffman Road

Permit Reviewer: David Matousek

Date: December 10, 2014

Unit Location	MMBtu/hr
International Arrivals	2.25
12 Heaters Bldg. 100	10.56
10 Heaters Bldg. 105	2.50
Ten Heaters Bldg. 53	2.00
Eleven Heaters Bldg. 54	0.66
Eagle Hub	2.72
Four Ambi-Rad Htrs FH2	0.60
Five Ambi-Rad Htrs AMB5	0.75
Three Sterling Htrs AMB6	0.30
Two Heaters FH1	0.50
Six RG Htrs FH1	0.48
One Carrier roof top FH1	0.08
One Heater AMB2	0.13
Two Boilers	0.08
sum total	23.605

Heat Input Capacity MMBtu/hr	HHV MMBtu/MMCF	Potential Throughput MMCF/yr
23.605	1000	206.78

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.20	0.79	0.79	0.06	10.34	0.57	8.68

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

PM2.5 emission factor is filterable and condensable PM2.5 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu. MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Hazardous Air Pollutants (HAPs)

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMCF	2.10E-03	1.20E-03	7.50E-02	1.80E+00	3.40E-03
Potential Emission in tons/yr	2.2E-04	1.2E-04	7.8E-03	1.9E-01	3.5E-04
	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMCF	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	5.2E-05	1.1E-04	1.4E-04	3.9E-05	2.2E-04

0.20 Total HAP

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A to the Technical Support Document - Emission Calculations
IAA Reciprocating Internal Combustion Engines - Generators 025 and 026
Output Rating (<=600 HP) Maximum Input Rate (<=4.2 MMBtu/hr)

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	T097-35016-00156	2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive
Johnson Melloh Solutions (JMS)	T097-34078-00586	2745 South Hoffman Road, Suite 504
AAR Aircraft Services, Indianapolis (AAR)	T097-33261-00559	2825 West Perimeter Road
Shuttle America Corporation (SAC)	T097-35018-00668	2745 South Hoffman Road, Dock 67, Hng 7A-7B
ASIG Aircraft Services International Group	T097-35006-00667	2050 South Hoffman Road

Permit Reviewer: David Matousek

Date: December 10, 2014

Emissions calculated based on output rating (hp)

Output Horsepower Rating (hp)	380	Emergency Generator 025
Output Horsepower Rating (hp)	476	Emergency Generator 026
Total (hp)	**856**	

Maximum Hours Operated per Year	500	380 hp located at Building 60 and 476 hp located at Fire House 2
Potential Throughput (hp-hr/yr)	428,000	

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
Potential Emission in tons/yr	0.47	0.47	0.47	0.44	6.63	0.54	1.43

*PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Hazardous Air Pollutants (HAPs)

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	6.53E-06	2.86E-06	2.00E-06	2.74E-07	8.26E-06	5.37E-06	6.48E-07	1.18E-06
Potential Emission in tons/yr	1.40E-03	6.13E-04	4.27E-04	5.86E-05	1.77E-03	1.15E-03	1.39E-04	2.52E-04

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Potential Emission of Total HAPs (tons/yr)	**5.80E-03**

Appendix A to the Technical Support Document - Emission Calculations
Potential to Emit - Boiler #1 at Johnson Melloh Solutions - IMC Central Energy Plant

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	**T097-35016-00156**	**2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive**
Johnson Melloh Solutions (JMS)	**T097-34078-00586**	**2745 South Hoffman Road, Suite 504**
AAR Aircraft Services, Indianapolis (AAR)	**T097-33261-00559**	**2825 West Perimeter Road**
Shuttle America Corporation (SAC)	**T097-35018-00668**	**2745 South Hoffman Road, Dock 67, Hng 7A-7B**
ASIG Aircraft Services International Group	**T097-35006-00667**	**2050 South Hoffman Road**

Permit Reviewer: David Matousek

Date: December 10, 2014

Maximum Heat Input Capacity	12.6 MMBtu/hr	or	110,376 MMBtu/yr		
Heat Content Fuel Oil	139.50 MMBtu/kgal				
Heat Content Natural Gas	1,020.00 MMBtu/MMCF				
Max. Fuel Oil Usage (Current Permit S Content)	791.23 kgal/yr	at	2,800 ppm S	0.28 % S	
Maximum Natural Gas Usage	108.21 MMCF/yr				

Potential to Emit

	Emission Factor (Natural Gas / Fuel Oil)	Throughput	PTE (TPY)	Worst Case PTE (TPY)	Emission Factor Source
PM	1.9 lb/MMCF	108.21 MMCF/yr	0.10	0.79	AP-42, Ch. 1.4, 7/1998, Table 1.4-2
	2 lb/kgal	791.23 kgal/yr	0.79		AP-42, Ch. 1.3, 5/2010, Table 1.3-1
PM_{10} / Direct $PM_{2.5}$	7.6 lb/MMCF	108.21 MMCF/yr	0.41	1.31	AP-42, Ch. 1.4, 7/1998, Table 1.4-2
	3.3 lb/kgal	791.23 kgal/yr	1.31		AP-42, Ch. 1.3, 5/2010, Table 1.3-1, 1.3-2
SO_2	0.6 lb/MMCF	108.21 MMCF/yr	0.03	15.73	AP-42, Ch. 1.4, 7/1998, Table 1.4-2
	39.76 lb/kgal	791.23 kgal/yr	15.73		AP-42, Ch. 1.3, 5/2010, Table 1.3-1, 142S
VOC	5.5 lb/MMCF	108.21 MMCF/yr	0.30	0.30	AP-42, Ch. 1.4, 7/1998, Table 1.4-2
	0.252 lb/kgal	791.23 kgal/yr	0.10		AP-42, Ch. 1.3, 5/2010, Table 1.3-3
CO	84 lb/MMCF	108.21 MMCF/yr	4.54	4.54	AP-42, Ch. 1.4, 7/1998, Table 1.4-1
	5 lb/kgal	791.23 kgal/yr	1.98		AP-42, Ch. 1.3, 5/2010, Table 1.3-1
NO_x	100 lb/MMCF	108.21 MMCF/yr	5.41	7.91	AP-42, Ch. 1.4, 7/1998, Table 1.4-1
	20 lb/kgal	791.23 kgal/yr	7.91		AP-42, Ch. 1.3, 5/2010, Table 1.3-1
CO_2	53.06 kg/MMBtu	110,376 MMBtu/yr	6,455.68	9,149.39	40 CFR 98, Subpart C, Table C-1
	75.20 kg/MMBtu	110,376 MMBtu/yr	9,149.39		40 CFR 98, Subpart C, Table C-1
CH_4	1.00E-03 kg/MMBtu	110,376 MMBtu/yr	0.12	0.37	40 CFR 98, Subpart C, Table C-2
	3.00E-03 kg/MMBtu	110,376 MMBtu/yr	0.37		40 CFR 98, Subpart C, Table C-2
N_2O	1.00E-04 kg/MMBtu	110,376 MMBtu/yr	0.01	0.07	40 CFR 98, Subpart C, Table C-2
	6.00E-04 kg/MMBtu	110,376 MMBtu/yr	0.07		40 CFR 98, Subpart C, Table C-2
CO_2e				9,179.50	Calculated

Methodology:
1) Throughput (MMCF/yr) = Heat Input (MMBtu/hr) x 8,760 hr/yr x 1/Heat Content (MMBtu/MMCF)
2) Throughput (kgal/yr) = Heat Input (MMBtu/hr) x 8,760 hr/yr x 1/Heat Content (MMBtu/kgal)
3) PTE (TPY) = Emission Factor (lb/MMCF) x Usage (MMCF/yr) x 1 ton/2,000 lb
4) PTE (TPY) = Emission Factor (lb/kgal) x Usage (kgal/yr) x 1 ton/2,000 lb
5) PTE (TPY) = Emission Factor (kg/MMBtu) x 2.2046 lb/kg x Usage (MMBtu/yr) x 1 ton/2,000 lb
6) CO_2e (TPY) = CO_2 Emissions + (CH_4 Emissions x Global Warming Potential (25)) + (N_2O Emissions x (Global Warming Potential 298))
7) Worst Case PTE (TPY) = Highest Potential Emission Rate (TPY) of Fuel Oil Combustion and Natural Gas Combustion for each pollutant.

(Continued on Next Page)

Appendix A to the Technical Support Document - Emission Calculations
Potential to Emit - Boiler #1 at Johnson Melloh Solutions - IMC Central Energy Plant

(Continued from Previous Page)

Potential to Emit					
	Emission Factor (Natural Gas / Fuel Oil)	**Throughput**	**PTE (TPY)**	**Worst Case PTE (TPY)**	**Emission Factor Source**
	None	None	None		No emission factor
1,1,1-Trichloroethane	2.36E-04 lb/kgal	791.23 kgal/yr	9.34E-05	9.34E-05	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.40E-05 lb/MMCF	108.21 MMCF/yr	1.30E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
2-methylnaphthalene	None	None	None	1.30E-06	No emission factor
	1.80E-06 lb/MMCF	108.21 MMCF/yr	9.74E-08		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
3-methylchloranthrene	None	None	None	9.74E-08	No emission factor
	1.60E-05 lb/MMCF	108.21 MMCF/yr	8.66E-07		No emission factor
7,12-dimethylbenz(a)anthracene	None	None	None	8.66E-07	No emission factor
	1.80E-06 lb/MMCF	108.21 MMCF/yr	9.74E-08		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Acenaphthene	2.11E-05 lb/kgal	791.23 kgal/yr	8.35E-06	8.35E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	1.80E-06 lb/MMCF	108.21 MMCF/yr	9.74E-08		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Acenaphthylene	2.53E-07 lb/kgal	791.23 kgal/yr	1.00E-07	1.00E-07	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.40E-06 lb/MMCF	108.21 MMCF/yr	1.30E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Anthracene	1.22E-06 lb/kgal	791.23 kgal/yr	4.83E-07	4.83E-07	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.00E-04 lb/MMCF	108.21 MMCF/yr	1.08E-05		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Arsenic	4.00E-06 lb/MMBtu	110,376 MMBtu/yr	2.21E-04	2.21E-04	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	1.80E-06 lb/MMCF	108.21 MMCF/yr	9.74E-08		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Benz(a)anthracene	4.01E-06 lb/kgal	791.23 kgal/yr	1.59E-06	1.59E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.10E-03 lb/MMCF	108.21 MMCF/yr	1.14E-04		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Benzene	2.14E-04 lb/kgal	791.23 kgal/yr	8.47E-05	1.14E-04	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	1.20E-06 lb/MMCF	108.21 MMCF/yr	6.49E-08		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Benzo(a)pyrene	None	None	None	6.49E-08	No emission factor
	1.80E-06 lb/MMCF	108.21 MMCF/yr	9.74E-08		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Benzo(b)fluoranthene	None	None	None	9.74E-08	No emission factor
	1.20E-06 lb/MMCF	108.21 MMCF/yr	6.49E-08		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Benzo(g,h,i)perylene	2.26E-06 lb/kgal	791.23 kgal/yr	8.94E-07	8.94E-07	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	1.80E-06 lb/MMCF	108.21 MMCF/yr	9.74E-08		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Benzo(k)fluoranthene	None	None	None	9.74E-08	No emission factor
	1.20E-05 lb/MMCF	108.21 MMCF/yr	6.49E-07		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Beryllium	3.00E-06 lb/MMBtu	110,376 MMBtu/yr	1.66E-04	1.66E-04	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	1.10E-03 lb/MMCF	108.21 MMCF/yr	5.95E-05		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Cadmium	3.00E-06 lb/MMBtu	110,376 MMBtu/yr	1.66E-04	1.66E-04	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	1.40E-03 lb/MMCF	108.21 MMCF/yr	7.57E-05		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Chromium	3.00E-06 lb/MMBtu	110,376 MMBtu/yr	1.66E-04	1.66E-04	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	1.80E-06 lb/MMCF	108.21 MMCF/yr	9.74E-08		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Chrysene	2.38E-06 lb/kgal	791.23 kgal/yr	9.42E-07	9.42E-07	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	1.20E-06 lb/MMCF	108.21 MMCF/yr	6.49E-08		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Dibenzo(a,h)anthracene	1.67E-06 lb/kgal	791.23 kgal/yr	6.61E-07	6.61E-07	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	1.20E-03 lb/MMCF	108.21 MMCF/yr	6.49E-05		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Dichlorobenzene	None	None	None	6.49E-05	No emission factor
	None	None	None		No emission factor
Ethylbenzene	6.36E-05 lb/kgal	791.23 kgal/yr	2.52E-05	2.52E-05	AP-42, Ch. 1.3, Table 1.3-9, 5/2010

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Appendix A to the Technical Support Document - Emission Calculations
Potential to Emit - Boiler #1 at Johnson Melloh Solutions - IMC Central Energy Plant
(Continued from Previous Page)

Potential to Emit					
	Emission Factor (Natural Gas / Fuel Oil)	**Throughput**	**PTE (TPY)**	**Worst Case PTE (TPY)**	**Emission Factor Source**
	3.00E-06 lb/MMCF	108.21 MMCF/yr	1.62E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Fluoranthene	4.84E-06 lb/kgal	791.23 kgal/yr	1.91E-06	1.91E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.80E-06 lb/MMCF	108.21 MMCF/yr	1.51E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Fluorene	4.47E-06 lb/kgal	791.23 kgal/yr	1.77E-06	1.77E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	7.50E-02 lb/MMCF	108.21 MMCF/yr	4.06E-03		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Formaldehyde	0.061 lb/kgal	791.23 kgal/yr	2.41E-02	2.41E-02	AP-42, Ch. 1.3, Table 1.3-8, 5/2010
	1.8 lb/MMCF	108.21 MMCF/yr	0.10		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Hexane	None	None	None	0.10	No emission factor
	1.80E-06 lb/MMCF	108.21 MMCF/yr	9.74E-08		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Indo(1,2,3-cd)pyrene	2.14E-06 lb/kgal	791.23 kgal/yr	8.47E-07	8.47E-07	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	None	None	None		No emission factor
Lead	9.00E-06 lb/MMBtu	110,376 MMBtu/yr	4.97E-04	4.97E-04	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	3.80E-04 lb/MMCF	108.21 MMCF/yr	2.06E-05		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Manganese	6.00E-06 lb/MMBtu	110,376 MMBtu/yr	3.31E-04	3.31E-04	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	2.60E-04 lb/MMCF	108.21 MMCF/yr	1.41E-05		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Mercury	3.00E-06 lb/MMBtu	110,376 MMBtu/yr	1.66E-04	1.66E-04	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	6.10E-04 lb/MMCF	108.21 MMCF/yr	3.30E-05		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Naphthalene	1.13E-03 lb/kgal	791.23 kgal/yr	4.47E-04	4.47E-04	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.10E-03 lb/MMCF	108.21 MMCF/yr	1.14E-04		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Nickel	3.00E-06 lb/MMBtu	110,376 MMBtu/yr	1.66E-04	1.66E-04	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	1.70E-05 lb/MMCF	108.21 MMCF/yr	9.20E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Phenanthrene	1.05E-05 lb/kgal	791.23 kgal/yr	4.15E-06	4.15E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	None	None	None		No emission factor
Polycyclic Organic Matter	0.0033 lb/kgal	791.23 kgal/yr	1.31E-03	1.31E-03	AP-42, Ch. 1.3, Table 1.3-8, 5/2010
	5.00E-06 lb/MMCF	108.21 MMCF/yr	2.71E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Pyrene	4.25E-06 lb/kgal	791.23 kgal/yr	1.68E-06	1.68E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.40E-05 lb/MMCF	108.21 MMCF/yr	1.30E-06		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Selenium	1.50E-06 lb/MMBtu	110,376 MMBtu/yr	8.28E-05	8.28E-05	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	3.40E-03 lb/MMCF	108.21 MMCF/yr	1.84E-04		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Toluene	6.30E-03 lb/kgal	791.23 kgal/yr	2.49E-03	2.49E-03	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	None	None	None		No emission factor
Xylene	1.09E-04 lb/kgal	791.23 kgal/yr	4.31E-05	4.31E-05	AP-42, Ch. 1.3, Table 1.3-9, 5/2010

Worst Case HAP at PTE **0.10 TPY** **(Hexane)**

Total HAP at PTE **0.13 TPY**

Appendix A to the Technical Support Document - Emission Calculations
Potential to Emit - Boiler #2 at Johnson Melloh Solutions - IMC Central Energy Plant

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	T097-35016-00156	2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive
Johnson Melloh Solutions (JMS)	T097-34078-00586	2745 South Hoffman Road, Suite 504
AAR Aircraft Services, Indianapolis (AAR)	T097-33261-00559	2825 West Perimeter Road
Shuttle America Corporation (SAC)	T097-35018-00668	2745 South Hoffman Road, Dock 67, Hng 7A-7B
ASIG Aircraft Services International Group	T097-35006-00667	2050 South Hoffman Road

Permit Reviewer: David Matousek

Date: December 10, 2014

Maximum Heat Input Capacity	25.2 MMBtu/hr	or	220,752 MMBtu/yr		
Heat Content Fuel Oil	139.50 MMBtu/kgal				
Heat Content Natural Gas	1,020.00 MMBtu/MMCF				
Max. Fuel Oil Usage (Current Permit S Content)	1,582.45 kgal/yr	at	2,800 ppm S	0.28 % S	
Maximum Natural Gas Usage	216.42 MMCF/yr				

Potential to Emit

	Emission Factor (Natural Gas / Fuel Oil)	Throughput	PTE (TPY)	Worst Case PTE (TPY)	Emission Factor Source
PM	1.9 lb/MMCF	216.42 MMCF/yr	0.21	1.58	AP-42, Ch. 1.4, 7/1998, Table 1.4-2
	2 lb/kgal	1,582.45 kgal/yr	1.58		AP-42, Ch. 1.3, 5/2010, Table 1.3-1
PM_{10} / Direct $PM_{2.5}$	7.6 lb/MMCF	216.42 MMCF/yr	0.82	2.61	AP-42, Ch. 1.4, 7/1998, Table 1.4-2
	3.3 lb/kgal	1,582.45 kgal/yr	2.61		AP-42, Ch. 1.3, 5/2010, Table 1.3-1, 1.3-2
SO_2	0.6 lb/MMCF	216.42 MMCF/yr	0.06	31.46	AP-42, Ch. 1.4, 7/1998, Table 1.4-2
	39.76 lb/kgal	1,582.45 kgal/yr	31.46		AP-42, Ch. 1.3, 5/2010, Table 1.3-1, 142S
VOC	5.5 lb/MMCF	216.42 MMCF/yr	0.60	0.60	AP-42, Ch. 1.4, 7/1998, Table 1.4-2
	0.252 lb/kgal	1,582.45 kgal/yr	0.20		AP-42, Ch. 1.3, 5/2010, Table 1.3-3
CO	84 lb/MMCF	216.42 MMCF/yr	9.09	9.09	AP-42, Ch. 1.4, 7/1998, Table 1.4-1
	5 lb/kgal	1,582.45 kgal/yr	3.96		AP-42, Ch. 1.3, 5/2010, Table 1.3-1
NO_x	100 lb/MMCF	216.42 MMCF/yr	10.82	15.82	AP-42, Ch. 1.4, 7/1998, Table 1.4-1
	20 lb/kgal	1,582.45 kgal/yr	15.82		AP-42, Ch. 1.3, 5/2010, Table 1.3-1
CO_2	53.06 kg/MMBtu	220,752 MMBtu/yr	12,911.35	18,298.79	40 CFR 98, Subpart C, Table C-1
	75.20 kg/MMBtu	220,752 MMBtu/yr	18,298.79		40 CFR 98, Subpart C, Table C-1
CH_4	1.00E-03 kg/MMBtu	220,752 MMBtu/yr	0.24	0.73	40 CFR 98, Subpart C, Table C-2
	3.00E-03 kg/MMBtu	220,752 MMBtu/yr	0.73		40 CFR 98, Subpart C, Table C-2
N_2O	1.00E-04 kg/MMBtu	220,752 MMBtu/yr	0.02	0.15	40 CFR 98, Subpart C, Table C-2
	6.00E-04 kg/MMBtu	220,752 MMBtu/yr	0.15		40 CFR 98, Subpart C, Table C-2
CO_2e				18,361.74	Calculated

Methodology:
1) Throughput (MMCF/yr) = Heat Input (MMBtu/hr) x 8,760 hr/yr x 1/Heat Content (MMBtu/MMCF)
2) Throughput (kgal/yr) = Heat Input (MMBtu/hr) x 8,760 hr/yr x 1/Heat Content (MMBtu/kgal)
3) PTE (TPY) = Emission Factor (lb/MMCF) x Usage (MMCF/yr) x 1 ton/2,000 lb
4) PTE (TPY) = Emission Factor (lb/kgal) x Usage (kgal/yr) x 1 ton/2,000 lb
5) PTE (TPY) = Emission Factor (kg/MMBtu) x 2.2046 lb/kg x Usage (MMBtu/yr) x 1 ton/2,000 lb
6) CO_2e (TPY) = CO_2 Emissions + (CH_4 Emissions x Global Warming Potential (25)) + (N_2O Emissions x (Global Warming Potential 298))
7) Worst Case PTE (TPY) = Highest Potential Emission Rate (TPY) of Fuel Oil Combustion and Natural Gas Combustion for each pollutant.

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Appendix A to the Technical Support Document - Emission Calculations
Potential to Emit - Boiler #2 at Johnson Melloh Solutions - IMC Central Energy Plant

(Continued from Previous Page)

Potential to Emit					
	Emission Factor (Natural Gas / Fuel Oil)	**Throughput**	**PTE (TPY)**	**Worst Case PTE (TPY)**	**Emission Factor Source**
	None	None	None		No emission factor
1,1,1-Trichloroethane	2.36E-04 lb/kgal	1,582.45 kgal/yr	1.87E-04	1.87E-04	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.40E-05 lb/MMCF	216.42 MMCF/yr	2.60E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
2-methylnaphthalene	None	None	None	2.60E-06	No emission factor
	1.80E-06 lb/MMCF	216.42 MMCF/yr	1.95E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
3-methylchloranthrene	None	None	None	1.95E-07	No emission factor
	1.60E-05 lb/MMCF	216.42 MMCF/yr	1.73E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
7,12-dimethylbenz(a)anthracene	None	None	None	1.73E-06	No emission factor
	1.80E-06 lb/MMCF	216.42 MMCF/yr	1.95E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Acenaphthene	2.11E-05 lb/kgal	1,582.45 kgal/yr	1.67E-05	1.67E-05	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	1.80E-06 lb/MMCF	216.42 MMCF/yr	1.95E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Acenaphthylene	2.53E-07 lb/kgal	1,582.45 kgal/yr	2.00E-07	2.00E-07	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.40E-06 lb/MMCF	216.42 MMCF/yr	2.60E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Anthracene	1.22E-06 lb/kgal	1,582.45 kgal/yr	9.65E-07	9.65E-07	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.00E-04 lb/MMCF	216.42 MMCF/yr	2.16E-05		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Arsenic	4.00E-06 lb/MMBtu	220,752 MMBtu/yr	4.42E-04	4.42E-04	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	1.80E-06 lb/MMCF	216.42 MMCF/yr	1.95E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Benz(a)anthracene	4.01E-06 lb/kgal	1,582.45 kgal/yr	3.17E-06	3.17E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.10E-03 lb/MMCF	216.42 MMCF/yr	2.27E-04		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Benzene	2.14E-04 lb/kgal	1,582.45 kgal/yr	1.69E-04	2.27E-04	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	1.20E-06 lb/MMCF	216.42 MMCF/yr	1.30E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Benzo(a)pyrene	None	None	None	1.30E-07	No emission factor
	1.80E-06 lb/MMCF	216.42 MMCF/yr	1.95E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Benzo(b)fluoranthene	None	None	None	1.95E-07	No emission factor
	1.20E-06 lb/MMCF	216.42 MMCF/yr	1.30E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Benzo(g,h,i)perylene	2.26E-06 lb/kgal	1,582.45 kgal/yr	1.79E-06	1.79E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	1.80E-06 lb/MMCF	216.42 MMCF/yr	1.95E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Benzo(k)fluoranthene	None	None	None	1.95E-07	No emission factor
	1.20E-05 lb/MMCF	216.42 MMCF/yr	1.30E-06		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Beryllium	3.00E-06 lb/MMBtu	220,752 MMBtu/yr	3.31E-04	3.31E-04	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	1.10E-03 lb/MMCF	216.42 MMCF/yr	1.19E-04		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Cadmium	3.00E-06 lb/MMBtu	220,752 MMBtu/yr	3.31E-04	3.31E-04	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	1.40E-03 lb/MMCF	216.42 MMCF/yr	1.51E-04		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Chromium	3.00E-06 lb/MMBtu	220,752 MMBtu/yr	3.31E-04	3.31E-04	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	1.80E-06 lb/MMCF	216.42 MMCF/yr	1.95E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Chrysene	2.38E-06 lb/kgal	1,582.45 kgal/yr	1.88E-06	1.88E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	1.20E-06 lb/MMCF	216.42 MMCF/yr	1.30E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Dibenzo(a,h)anthracene	1.67E-06 lb/kgal	1,582.45 kgal/yr	1.32E-06	1.32E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	1.20E-03 lb/MMCF	216.42 MMCF/yr	1.30E-04		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Dichlorobenzene	None	None	None	1.30E-04	No emission factor
	None	None	None		No emission factor
Ethylbenzene	6.36E-05 lb/kgal	1,582.45 kgal/yr	5.03E-05	5.03E-05	AP-42, Ch. 1.3, Table 1.3-9, 5/2010

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Appendix A to the Technical Support Document - Emission Calculations
Potential to Emit - Boiler #2 at Johnson Melloh Solutions - IMC Central Energy Plant
(Continued from Previous Page)

	Potential to Emit				
	Emission Factor (Natural Gas / Fuel Oil)	**Throughput**	**PTE (TPY)**	**Worst Case PTE (TPY)**	**Emission Factor Source**
	3.00E-06 lb/MMCF	216.42 MMCF/yr	3.25E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Fluoranthene	4.84E-06 lb/kgal	1,582.45 kgal/yr	3.83E-06	3.83E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.80E-06 lb/MMCF	216.42 MMCF/yr	3.03E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Fluorene	4.47E-06 lb/kgal	1,582.45 kgal/yr	3.54E-06	3.54E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	7.50E-02 lb/MMCF	216.42 MMCF/yr	8.12E-03		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Formaldehyde	0.061 lb/kgal	1,582.45 kgal/yr	4.83E-02	4.83E-02	AP-42, Ch. 1.3, Table 1.3-8, 5/2010
	1.8 lb/MMCF	216.42 MMCF/yr	0.19		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Hexane	None	None	None	0.19	No emission factor
	1.80E-06 lb/MMCF	216.42 MMCF/yr	1.95E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Indo(1,2,3-cd)pyrene	2.14E-06 lb/kgal	1,582.45 kgal/yr	1.69E-06	1.69E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	None	None	None		No emission factor
Lead	9.00E-06 lb/MMBtu	220,752 MMBtu/yr	9.93E-04	9.93E-04	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	3.80E-04 lb/MMCF	216.42 MMCF/yr	4.11E-05		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Manganese	6.00E-06 lb/MMBtu	220,752 MMBtu/yr	6.62E-04	6.62E-04	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	2.60E-04 lb/MMCF	216.42 MMCF/yr	2.81E-05		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Mercury	3.00E-06 lb/MMBtu	220,752 MMBtu/yr	3.31E-04	3.31E-04	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	6.10E-04 lb/MMCF	216.42 MMCF/yr	6.60E-05		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Naphthalene	1.13E-03 lb/kgal	1,582.45 kgal/yr	8.94E-04	8.94E-04	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.10E-03 lb/MMCF	216.42 MMCF/yr	2.27E-04		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Nickel	3.00E-06 lb/MMBtu	220,752 MMBtu/yr	3.31E-04	3.31E-04	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	1.70E-05 lb/MMCF	216.42 MMCF/yr	1.84E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Phenanthrene	1.05E-05 lb/kgal	1,582.45 kgal/yr	8.31E-06	8.31E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	None	None	None		No emission factor
Polycyclic Organic Matter	0.0033 lb/kgal	1,582.45 kgal/yr	2.61E-03	2.61E-03	AP-42, Ch. 1.3, Table 1.3-8, 5/2010
	5.00E-06 lb/MMCF	216.42 MMCF/yr	5.41E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Pyrene	4.25E-06 lb/kgal	1,582.45 kgal/yr	3.36E-06	3.36E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.40E-05 lb/MMCF	216.42 MMCF/yr	2.60E-06		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Selenium	1.50E-06 lb/MMBtu	220,752 MMBtu/yr	1.66E-04	1.66E-04	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	3.40E-03 lb/MMCF	216.42 MMCF/yr	3.68E-04		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Toluene	6.30E-03 lb/kgal	1,582.45 kgal/yr	4.98E-03	4.98E-03	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	None	None	None		No emission factor
Xylene	1.09E-04 lb/kgal	1,582.45 kgal/yr	8.62E-05	8.62E-05	AP-42, Ch. 1.3, Table 1.3-9, 5/2010

Worst Case HAP at PTE **0.19 TPY** **(Hexane)**

Total HAP at PTE **0.26 TPY**

Appendix A to the Technical Support Document - Emission Calculations
Potential to Emit - Boiler #3 at Johnson Melloh Solutions - IMC Central Energy Plant

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	**T097-35016-00156**	**2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive**
Johnson Melloh Solutions (JMS)	**T097-34078-00586**	**2745 South Hoffman Road, Suite 504**
AAR Aircraft Services, Indianapolis (AAR)	**T097-33261-00559**	**2825 West Perimeter Road**
Shuttle America Corporation (SAC)	**T097-35018-00668**	**2745 South Hoffman Road, Dock 67, Hng 7A-7B**
ASIG Aircraft Services International Group	**T097-35006-00667**	**2050 South Hoffman Road**

Permit Reviewer: David Matousek

Date: December 10, 2014

Maximum Heat Input Capacity	122 MMBtu/hr	or	1,068,720 MMBtu/yr		
Heat Content Fuel Oil	139.50 MMBtu/kgal				
Heat Content Natural Gas	1,020.00 MMBtu/MMCF				
Max. Fuel Oil Usage (Current Permit S Content)	7,661.08 kgal/yr	at	2,800 ppm S	0.28 % S	
Maximum Natural Gas Usage	1,047.76 MMCF/yr				

Potential to Emit

	Emission Factor (Natural Gas / Fuel Oil)	Throughput	PTE (TPY)	Worst Case PTE (TPY)	Emission Factor Source
PM	1.9 lb/MMCF	1,047.76 MMCF/yr	1.00	7.66	AP-42, Ch. 1.4, 7/1998, Table 1.4-2
	2 lb/kgal	7,661.08 kgal/yr	7.66		AP-42, Ch. 1.3, 5/2010, Table 1.3-1
PM_{10} / Direct $PM_{2.5}$	7.6 lb/MMCF	1,047.76 MMCF/yr	3.98	12.64	AP-42, Ch. 1.4, 7/1998, Table 1.4-2
	3.3 lb/kgal	7,661.08 kgal/yr	12.64		AP-42, Ch. 1.3, 5/2010, Table 1.3-1, 1.3-2
SO_2	0.6 lb/MMCF	1,047.76 MMCF/yr	0.31	152.30	AP-42, Ch. 1.4, 7/1998, Table 1.4-2
	39.76 lb/kgal	7,661.08 kgal/yr	152.30		AP-42, Ch. 1.3, 5/2010, Table 1.3-1, 142S
VOC	5.5 lb/MMCF	1,047.76 MMCF/yr	2.88	2.88	AP-42, Ch. 1.4, 7/1998, Table 1.4-2
	0.252 lb/kgal	7,661.08 kgal/yr	0.97		AP-42, Ch. 1.3, 5/2010, Table 1.3-3
CO	84 lb/MMCF	1,047.76 MMCF/yr	44.01	44.01	AP-42, Ch. 1.4, 7/1998, Table 1.4-1
	5 lb/kgal	7,661.08 kgal/yr	19.15		AP-42, Ch. 1.3, 5/2010, Table 1.3-1
NO_x	190 lb/MMCF	1,047.76 MMCF/yr	99.54	99.54	AP-42, Ch. 1.4, 7/1998, Table 1.4-1
	24 lb/kgal	7,661.08 kgal/yr	91.93		AP-42, Ch. 1.3, 5/2010, Table 1.3-1
CO_2	53.06 kg/MMBtu	1,068,720 MMBtu/yr	62,507.34	88,589.36	40 CFR 98, Subpart C, Table C-1
	75.2 kg/MMBtu	1,068,720 MMBtu/yr	88,589.36		40 CFR 98, Subpart C, Table C-1
CH_4	1.00E-03 kg/MMBtu	1,068,720 MMBtu/yr	1.18	3.53	40 CFR 98, Subpart C, Table C-2
	3.00E-03 kg/MMBtu	1,068,720 MMBtu/yr	3.53		40 CFR 98, Subpart C, Table C-2
N_2O	1.00E-04 kg/MMBtu	1,068,720 MMBtu/yr	0.12	0.71	40 CFR 98, Subpart C, Table C-2
	6.00E-04 kg/MMBtu	1,068,720 MMBtu/yr	0.71		40 CFR 98, Subpart C, Table C-2
CO_2e				88,889.19	Calculated

Methodology:
1) Throughput (MMCF/yr) = Heat Input (MMBtu/hr) x 8,760 hr/yr x 1/Heat Content (MMBtu/MMCF)
2) Throughput (kgal/yr) = Heat Input (MMBtu/hr) x 8,760 hr/yr x 1/Heat Content (MMBtu/kgal)
3) PTE (TPY) = Emission Factor (lb/MMCF) x Usage (MMCF/yr) x 1 ton/2,000 lb
4) PTE (TPY) = Emission Factor (lb/kgal) x Usage (kgal/yr) x 1 ton/2,000 lb
5) PTE (TPY) = Emission Factor (kg/MMBtu) x 2.2046 lb/kg x Usage (MMBtu/yr) x 1 ton/2,000 lb
6) CO_2e (TPY) = CO_2 Emissions + (CH_4 Emissions x Global Warming Potential (25)) + (N_2O Emissions x (Global Warming Potential 298))
7) Worst Case PTE (TPY) = Highest Potential Emission Rate (TPY) of Fuel Oil Combustion and Natural Gas Combustion for each pollutant.

(Continued on Next Page)

Appendix A to the Technical Support Document - Emission Calculations
Potential to Emit - Boiler #3 at Johnson Melloh Solutions - IMC Central Energy Plant

(Continued from Previous Page)

Potential to Emit					
	Emission Factor (Natural Gas / Fuel Oil)	**Throughput**	**PTE (TPY)**	**Worst Case PTE (TPY)**	**Emission Factor Source**
	None	None	None		No emission factor
1,1,1-Trichloroethane	2.36E-04 lb/kgal	7,661.08 kgal/yr	9.04E-04	9.04E-04	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.40E-05 lb/MMCF	1,047.76 MMCF/yr	1.26E-05		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
2-methylnaphthalene	None	None	None	1.26E-05	No emission factor
	1.80E-06 lb/MMCF	1,047.76 MMCF/yr	9.43E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
3-methylchloranthrene	None	None	None	9.43E-07	No emission factor
	1.60E-05 lb/MMCF	1,047.76 MMCF/yr	8.38E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
7,12-dimethylbenz(a)anthracene	None	None	None	8.38E-06	No emission factor
	1.80E-06 lb/MMCF	1,047.76 MMCF/yr	9.43E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Acenaphthene	2.11E-05 lb/kgal	7,661.08 kgal/yr	8.08E-05	8.08E-05	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	1.80E-06 lb/MMCF	1,047.76 MMCF/yr	9.43E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Acenaphthylene	2.53E-07 lb/kgal	7,661.08 kgal/yr	9.69E-07	9.69E-07	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.40E-06 lb/MMCF	1,047.76 MMCF/yr	1.26E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Anthracene	1.22E-06 lb/kgal	7,661.08 kgal/yr	4.67E-06	4.67E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.00E-04 lb/MMCF	1,047.76 MMCF/yr	1.05E-04		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Arsenic	4.00E-06 lb/MMBtu	1,068,720 MMBtu/yr	2.14E-03	2.14E-03	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	1.80E-06 lb/MMCF	1,047.76 MMCF/yr	9.43E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Benz(a)anthracene	4.01E-06 lb/kgal	7,661.08 kgal/yr	1.54E-05	1.54E-05	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.10E-03 lb/MMCF	1,047.76 MMCF/yr	1.10E-03		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Benzene	2.14E-04 lb/kgal	7,661.08 kgal/yr	8.20E-04	1.10E-03	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	1.20E-06 lb/MMCF	1,047.76 MMCF/yr	6.29E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Benzo(a)pyrene	None	None	None	6.29E-07	No emission factor
	1.80E-06 lb/MMCF	1,047.76 MMCF/yr	9.43E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Benzo(b)fluoranthene	None	None	None	9.43E-07	No emission factor
	1.20E-06 lb/MMCF	1,047.76 MMCF/yr	6.29E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Benzo(g,h,i)perylene	2.26E-06 lb/kgal	7,661.08 kgal/yr	8.66E-06	8.66E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	1.80E-06 lb/MMCF	1,047.76 MMCF/yr	9.43E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Benzo(k)fluoranthene	None	None	None	9.43E-07	No emission factor
	1.20E-05 lb/MMCF	1,047.76 MMCF/yr	6.29E-06		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Beryllium	3.00E-06 lb/MMBtu	1,068,720 MMBtu/yr	1.60E-03	1.60E-03	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	1.10E-03 lb/MMCF	1,047.76 MMCF/yr	5.76E-04		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Cadmium	3.00E-06 lb/MMBtu	1,068,720 MMBtu/yr	1.60E-03	1.60E-03	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	1.40E-03 lb/MMCF	1,047.76 MMCF/yr	7.33E-04		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Chromium	3.00E-06 lb/MMBtu	1,068,720 MMBtu/yr	1.60E-03	1.60E-03	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	1.80E-06 lb/MMCF	1,047.76 MMCF/yr	9.43E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Chrysene	2.38E-06 lb/kgal	7,661.08 kgal/yr	9.12E-06	9.12E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	1.20E-06 lb/MMCF	1,047.76 MMCF/yr	6.29E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Dibenzo(a,h)anthracene	1.67E-06 lb/kgal	7,661.08 kgal/yr	6.40E-06	6.40E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	1.20E-03 lb/MMCF	1,047.76 MMCF/yr	6.29E-04		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Dichlorobenzene	None	None	None	6.29E-04	No emission factor
	None	None	None		No emission factor
Ethylbenzene	6.36E-05 lb/kgal	7,661.08 kgal/yr	2.44E-04	2.44E-04	AP-42, Ch. 1.3, Table 1.3-9, 5/2010

(Continued on Next Page)

Appendix A to the Technical Support Document - Emission Calculations
Potential to Emit - Boiler #3 at Johnson Melloh Solutions - IMC Central Energy Plant
(Continued from Previous Page)

Potential to Emit					
	Emission Factor (Natural Gas / Fuel Oil)	**Throughput**	**PTE (TPY)**	**Worst Case PTE (TPY)**	**Emission Factor Source**
	3.00E-06 lb/MMCF	1,047.76 MMCF/yr	1.57E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Fluoranthene	4.84E-06 lb/kgal	7,661.08 kgal/yr	1.85E-05	1.85E-05	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.80E-06 lb/MMCF	1,047.76 MMCF/yr	1.47E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Fluorene	4.47E-06 lb/kgal	7,661.08 kgal/yr	1.71E-05	1.71E-05	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	7.50E-02 lb/MMCF	1,047.76 MMCF/yr	3.93E-02		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Formaldehyde	0.061 lb/kgal	7,661.08 kgal/yr	2.34E-01	2.34E-01	AP-42, Ch. 1.3, Table 1.3-8, 5/2010
	1.8 lb/MMCF	1,047.76 MMCF/yr	0.94		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Hexane	None	None	None	0.94	No emission factor
	1.80E-06 lb/MMCF	1,047.76 MMCF/yr	9.43E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Indo(1,2,3-cd)pyrene	2.14E-06 lb/kgal	7,661.08 kgal/yr	8.20E-06	8.20E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	None	None	None		No emission factor
Lead	9.00E-06 lb/MMBtu	1,068,720 MMBtu/yr	4.81E-03	4.81E-03	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	3.80E-04 lb/MMCF	1,047.76 MMCF/yr	1.99E-04		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Manganese	6.00E-06 lb/MMBtu	1,068,720 MMBtu/yr	3.21E-03	3.21E-03	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	2.60E-04 lb/MMCF	1,047.76 MMCF/yr	1.36E-04		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Mercury	3.00E-06 lb/MMBtu	1,068,720 MMBtu/yr	1.60E-03	1.60E-03	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	6.10E-04 lb/MMCF	1,047.76 MMCF/yr	3.20E-04		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Naphthalene	1.13E-03 lb/kgal	7661.08 kgal/yr	4.33E-03	4.33E-03	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.10E-03 lb/MMCF	1,047.76 MMCF/yr	1.10E-03		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Nickel	3.00E-06 lb/MMBtu	1,068,720 MMBtu/yr	1.60E-03	1.60E-03	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	1.70E-05 lb/MMCF	1,047.76 MMCF/yr	8.91E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Phenanthrene	1.05E-05 lb/kgal	7,661.08 kgal/yr	4.02E-05	4.02E-05	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	None	None	None		No emission factor
Polycyclic Organic Matter	0.0033 lb/kgal	7,661.08 kgal/yr	1.26E-02	1.26E-02	AP-42, Ch. 1.3, Table 1.3-8, 5/2010
	5.00E-06 lb/MMCF	1,047.76 MMCF/yr	2.62E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Pyrene	4.25E-06 lb/kgal	7,661.08 kgal/yr	1.63E-05	1.63E-05	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.40E-05 lb/MMCF	1,047.76 MMCF/yr	1.26E-05		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Selenium	1.50E-06 lb/MMBtu	1,068,720 MMBtu/yr	8.02E-04	8.02E-04	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	3.40E-03 lb/MMCF	1,047.76 MMCF/yr	1.78E-03		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Toluene	6.30E-03 lb/kgal	7,661.08 kgal/yr	2.41E-02	2.41E-02	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	None	None	None		No emission factor
Xylene	1.09E-04 lb/kgal	7,661.08 kgal/yr	4.18E-04	4.18E-04	AP-42, Ch. 1.3, Table 1.3-9, 5/2010

Worst Case HAP at PTE **0.94 TPY** **(Hexane)**

Total HAP at PTE **1.24 TPY**

Appendix A to the Technical Support Document - Emission Calculations
Potential to Emit - Boiler #4 at Johnson Melloh Solutions - IMC Central Energy Plant

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	T097-35016-00156	2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive
Johnson Melloh Solutions (JMS)	T097-34078-00586	2745 South Hoffman Road, Suite 504
AAR Aircraft Services, Indianapolis (AAR)	T097-33261-00559	2825 West Perimeter Road
Shuttle America Corporation (SAC)	T097-35018-00668	2745 South Hoffman Road, Dock 67, Hng 7A-7B
ASIG Aircraft Services International Group	T097-35006-00667	2050 South Hoffman Road

Permit Reviewer: David Matousek

Date: December 10, 2014

Maximum Heat Input Capacity	122 MMBtu/hr	or	1,068,720 MMBtu/yr		
Heat Content Fuel Oil	139.50 MMBtu/kgal				
Heat Content Natural Gas	1,020.00 MMBtu/MMCF				
Max. Fuel Oil Usage (Current Permit S Content)	7,661.08 kgal/yr	at	2,800 ppm S	0.28 % S	
Maximum Natural Gas Usage	1,047.76 MMCF/yr				

Potential to Emit

	Emission Factor (Natural Gas / Fuel Oil)	Throughput	PTE (TPY)	Worst Case PTE (TPY)	Emission Factor Source
PM	1.9 lb/MMCF	1,047.76 MMCF/yr	1.00		AP-42, Ch. 1.4, 7/1998, Table 1.4-2
	2 lb/kgal	7,661.08 kgal/yr	7.66	7.66	AP-42, Ch. 1.3, 5/2010, Table 1.3-1
PM_{10} / Direct $PM_{2.5}$	7.6 lb/MMCF	1,047.76 MMCF/yr	3.98		AP-42, Ch. 1.4, 7/1998, Table 1.4-2
	3.3 lb/kgal	7,661.08 kgal/yr	12.64	12.64	AP-42, Ch. 1.3, 5/2010, Table 1.3-1, 1.3-2
SO_2	0.6 lb/MMCF	1,047.76 MMCF/yr	0.31		AP-42, Ch. 1.4, 7/1998, Table 1.4-2
	39.76 lb/kgal	7,661.08 kgal/yr	152.30	152.30	AP-42, Ch. 1.3, 5/2010, Table 1.3-1
VOC	5.5 lb/MMCF	1,047.76 MMCF/yr	2.88		AP-42, Ch. 1.4, 7/1998, Table 1.4-2
	0.252 lb/kgal	7,661.08 kgal/yr	0.97	2.88	AP-42, Ch. 1.3, 5/2010, Table 1.3-3
CO	84 lb/MMCF	1,047.76 MMCF/yr	44.01		AP-42, Ch. 1.4, 7/1998, Table 1.4-1
	5 lb/kgal	7,661.08 kgal/yr	19.15	44.01	AP-42, Ch. 1.3, 5/2010, Table 1.3-1
NO_x	190 lb/MMCF	1,047.76 MMCF/yr	99.54		AP-42, Ch. 1.4, 7/1998, Table 1.4-1
	24 lb/kgal	7,661.08 kgal/yr	91.93	99.54	AP-42, Ch. 1.3, 5/2010, Table 1.3-1
CO_2	53.06 kg/MMBtu	1,068,720 MMBtu/yr	62,507.34		40 CFR 98, Subpart C, Table C-1
	75.2 kg/MMBtu	1,068,720 MMBtu/yr	88,589.36	88,589.36	40 CFR 98, Subpart C, Table C-1
CH_4	1.00E-03 kg/MMBtu	1,068,720 MMBtu/yr	1.18		40 CFR 98, Subpart C, Table C-2
	3.00E-03 kg/MMBtu	1,068,720 MMBtu/yr	3.53	3.53	40 CFR 98, Subpart C, Table C-2
N_2O	1.00E-04 kg/MMBtu	1,068,720 MMBtu/yr	0.12		40 CFR 98, Subpart C, Table C-2
	6.00E-04 kg/MMBtu	1,068,720 MMBtu/yr	0.71	0.71	40 CFR 98, Subpart C, Table C-2
CO_2e				88,889.19	Calculated

Methodology:
1) Throughput (MMCF/yr) = Heat Input (MMBtu/hr) x 8,760 hr/yr x 1/Heat Content (MMBtu/MMCF)
2) Throughput (kgal/yr) = Heat Input (MMBtu/hr) x 8,760 hr/yr x 1/Heat Content (MMBtu/kgal)
3) PTE (TPY) = Emission Factor (lb/MMCF) x Usage (MMCF/yr) x 1 ton/2,000 lb
4) PTE (TPY) = Emission Factor (lb/kgal) x Usage (kgal/yr) x 1 ton/2,000 lb
5) PTE (TPY) = Emission Factor (kg/MMBtu) x 2.2046 lb/kg x Usage (MMBtu/yr) x 1 ton/2,000 lb
6) CO_2e (TPY) = CO_2 Emissions + (CH_4 Emissions x Global Warming Potential (25)) + (N_2O Emissions x (Global Warming Potential 298))
7) Worst Case PTE (TPY) = Highest Potential Emission Rate (TPY) of Fuel Oil Combustion and Natural Gas Combustion for each pollutant.

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Appendix A to the Technical Support Document - Emission Calculations
Potential to Emit - Boiler #4 at Johnson Melloh Solutions - IMC Central Energy Plant

(Continued from Previous Page)

Potential to Emit					
	Emission Factor (Natural Gas / Fuel Oil)	**Throughput**	**PTE (TPY)**	**Worst Case PTE (TPY)**	**Emission Factor Source**
	None	None	None		No emission factor
1,1,1-Trichloroethane	2.36E-04 lb/kgal	7,661.08 kgal/yr	9.04E-04	9.04E-04	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.40E-05 lb/MMCF	1,047.76 MMCF/yr	1.26E-05		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
2-methylnaphthalene	None	None	None	1.26E-05	No emission factor
	1.80E-06 lb/MMCF	1,047.76 MMCF/yr	9.43E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
3-methylchloranthrene	None	None	None	9.43E-07	No emission factor
	1.60E-05 lb/MMCF	1,047.76 MMCF/yr	8.38E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
7,12-dimethylbenz(a)anthracene	None	None	None	8.38E-06	No emission factor
	1.80E-06 lb/MMCF	1,047.76 MMCF/yr	9.43E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Acenaphthene	2.11E-05 lb/kgal	7,661.08 kgal/yr	8.08E-05	8.08E-05	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	1.80E-06 lb/MMCF	1,047.76 MMCF/yr	9.43E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Acenaphthylene	2.53E-07 lb/kgal	7,661.08 kgal/yr	9.69E-07	9.69E-07	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.40E-06 lb/MMCF	1,047.76 MMCF/yr	1.26E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Anthracene	1.22E-06 lb/kgal	7,661.08 kgal/yr	4.67E-06	4.67E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.00E-04 lb/MMCF	1,047.76 MMCF/yr	1.05E-04		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Arsenic	4.00E-06 lb/MMBtu	1,068,720 MMBtu/yr	2.14E-03	2.14E-03	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	1.80E-06 lb/MMCF	1,047.76 MMCF/yr	9.43E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Benz(a)anthracene	4.01E-06 lb/kgal	7,661.08 kgal/yr	1.54E-05	1.54E-05	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.10E-03 lb/MMCF	1,047.76 MMCF/yr	1.10E-03		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Benzene	2.14E-04 lb/kgal	7,661.08 kgal/yr	8.20E-04	1.10E-03	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	1.20E-06 lb/MMCF	1,047.76 MMCF/yr	6.29E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Benzo(a)pyrene	None	None	None	6.29E-07	No emission factor
	1.80E-06 lb/MMCF	1,047.76 MMCF/yr	9.43E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Benzo(b)fluoranthene	None	None	None	9.43E-07	No emission factor
	1.20E-06 lb/MMCF	1,047.76 MMCF/yr	6.29E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Benzo(g,h,i)perylene	2.26E-06 lb/kgal	7,661.08 kgal/yr	8.66E-06	8.66E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	1.80E-06 lb/MMCF	1,047.76 MMCF/yr	9.43E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Benzo(k)fluoranthene	None	None	None	9.43E-07	No emission factor
	1.20E-05 lb/MMCF	1,047.76 MMCF/yr	6.29E-06		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Beryllium	3.00E-06 lb/MMBtu	1,068,720 MMBtu/yr	1.60E-03	1.60E-03	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	1.10E-03 lb/MMCF	1,047.76 MMCF/yr	5.76E-04		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Cadmium	3.00E-06 lb/MMBtu	1,068,720 MMBtu/yr	1.60E-03	1.60E-03	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	1.40E-03 lb/MMCF	1,047.76 MMCF/yr	7.33E-04		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Chromium	3.00E-06 lb/MMBtu	1,068,720 MMBtu/yr	1.60E-03	1.60E-03	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	1.80E-06 lb/MMCF	1,047.76 MMCF/yr	9.43E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Chrysene	2.38E-06 lb/kgal	7,661.08 kgal/yr	9.12E-06	9.12E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	1.20E-06 lb/MMCF	1,047.76 MMCF/yr	6.29E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Dibenzo(a,h)anthracene	1.67E-06 lb/kgal	7,661.08 kgal/yr	6.40E-06	6.40E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	1.20E-03 lb/MMCF	1,047.76 MMCF/yr	6.29E-04		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Dichlorobenzene	None	None	None	6.29E-04	No emission factor
	None	None	None		No emission factor
Ethylbenzene	6.36E-05 lb/kgal	7,661.08 kgal/yr	2.44E-04	2.44E-04	AP-42, Ch. 1.3, Table 1.3-9, 5/2010

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Appendix A to the Technical Support Document - Emission Calculations
Potential to Emit - Boiler #4 at Johnson Melloh Solutions - IMC Central Energy Plant
(Continued from Previous Page)

Potential to Emit					
	Emission Factor (Natural Gas / Fuel Oil)	**Throughput**	**PTE (TPY)**	**Worst Case PTE (TPY)**	**Emission Factor Source**
	3.00E-06 lb/MMCF	1,047.76 MMCF/yr	1.57E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Fluoranthene	4.84E-06 lb/kgal	7,661.08 kgal/yr	1.85E-05	1.85E-05	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.80E-06 lb/MMCF	1,047.76 MMCF/yr	1.47E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Fluorene	4.47E-06 lb/kgal	7,661.08 kgal/yr	1.71E-05	1.71E-05	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	7.50E-02 lb/MMCF	1,047.76 MMCF/yr	3.93E-02		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Formaldehyde	0.061 lb/kgal	7,661.08 kgal/yr	2.34E-01	2.34E-01	AP-42, Ch. 1.3, Table 1.3-8, 5/2010
	1.8 lb/MMCF	1,047.76 MMCF/yr	0.94		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Hexane	None	None	None	0.94	No emission factor
	1.80E-06 lb/MMCF	1,047.76 MMCF/yr	9.43E-07		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Indo(1,2,3-cd)pyrene	2.14E-06 lb/kgal	7,661.08 kgal/yr	8.20E-06	8.20E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	None	None	None		No emission factor
Lead	9.00E-06 lb/MMBtu	1,068,720 MMBtu/yr	4.81E-03	4.81E-03	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	3.80E-04 lb/MMCF	1,047.76 MMCF/yr	1.99E-04		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Manganese	6.00E-06 lb/MMBtu	1,068,720 MMBtu/yr	3.21E-03	3.21E-03	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	2.60E-04 lb/MMCF	1,047.76 MMCF/yr	1.36E-04		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Mercury	3.00E-06 lb/MMBtu	1,068,720 MMBtu/yr	1.60E-03	1.60E-03	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	6.10E-04 lb/MMCF	1,047.76 MMCF/yr	3.20E-04		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Naphthalene	1.13E-03 lb/kgal	7661.08 kgal/yr	4.33E-03	4.33E-03	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.10E-03 lb/MMCF	1,047.76 MMCF/yr	1.10E-03		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Nickel	3.00E-06 lb/MMBtu	1,068,720 MMBtu/yr	1.60E-03	1.60E-03	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	1.70E-05 lb/MMCF	1,047.76 MMCF/yr	8.91E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Phenanthrene	1.05E-05 lb/kgal	7,661.08 kgal/yr	4.02E-05	4.02E-05	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	None	None	None		No emission factor
Polycyclic Organic Matter	0.0033 lb/kgal	7,661.08 kgal/yr	1.26E-02	1.26E-02	AP-42, Ch. 1.3, Table 1.3-8, 5/2010
	5.00E-06 lb/MMCF	1,047.76 MMCF/yr	2.62E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Pyrene	4.25E-06 lb/kgal	7,661.08 kgal/yr	1.63E-05	1.63E-05	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.40E-05 lb/MMCF	1,047.76 MMCF/yr	1.26E-05		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Selenium	1.50E-06 lb/MMBtu	1,068,720 MMBtu/yr	8.02E-04	8.02E-04	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	3.40E-03 lb/MMCF	1,047.76 MMCF/yr	1.78E-03		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Toluene	6.30E-03 lb/kgal	7,661.08 kgal/yr	2.41E-02	2.41E-02	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	None	None	None		No emission factor
Xylene	1.09E-04 lb/kgal	7,661.08 kgal/yr	4.18E-04	4.18E-04	AP-42, Ch. 1.3, Table 1.3-9, 5/2010

Worst Case HAP at PTE **0.94 TPY** **(Hexane)**

Total HAP at PTE **1.24 TPY**

Appendix A to the Technical Support Document - Emission Calculations
Limited Potential to Emit - Boiler #1 to #4 at Johnson Melloh Solutions - IMC Central Energy Plant

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	**T097-35016-00156**	**2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive**
Johnson Melloh Solutions (JMS)	**T097-34078-00586**	**2745 South Hoffman Road, Suite 504**
AAR Aircraft Services, Indianapolis (AAR)	**T097-33261-00559**	**2825 West Perimeter Road**
Shuttle America Corporation (SAC)	**T097-35018-00668**	**2745 South Hoffman Road, Dock 67, Hng 7A-7B**
ASIG Aircraft Services International Group	**T097-35006-00667**	**2050 South Hoffman Road**

Permit Reviewer: **David Matousek**

Date: **December 10, 2014**

Combined Heat Input Capacity of Boiler #1 to #4	281.8	MMBtu/hr	or		2,468,568	MMBtu/yr
Heat Content Fuel Oil	139.50	MMBtu/kgal	at	S Wt % =	0.28	%
Heat Content Natural Gas	1,020.00	MMBtu/MMCF				

Case 1 - All Natural Gas				
Combustion on all Natural Gas	2,420.16	MMCF/yr	2,468,568	MMBtu/yr

Case 2 - Limited Fuel Oil with Makeup Natural Gas				
Make Up Natural Gas after All F.O. Used	1,830.80	MMCF/yr	1,867,413	MMBtu/yr
Limited Fuel Oil Usage (S=0.28)	4,309.356	kgal/yr or	601,155	MMBtu/yr
			2,468,568	MMBtu/yr

Limited Potential to Emit

	Emission Factor (Natural Gas / Fuel Oil)	Case 1 All N.G (TPY)	Case 2 Limited F.O. + N.G. (TPY)	Limited PTE (TPY)	Emission Factor Source
PM	1.9 lb/MMCF	2.30	1.74	6.05	AP-42, Ch. 1.4, 7/1998, Table 1.4-2
	2 lb/kgal		4.31		AP-42, Ch. 1.3, 5/2010, Table 1.3-1
PM_{10} / Direct $PM_{2.5}$	7.6 lb/MMCF	9.20	6.96	14.07	AP-42, Ch. 1.4, 7/1998, Table 1.4-2
	3.3 lb/kgal		7.11		AP-42, Ch. 1.3, 5/2010, Table 1.3-1, 1.3-2
SO_2	0.6 lb/MMCF	0.73	0.55	86.22	AP-42, Ch. 1.4, 7/1998, Table 1.4-2
	39.76 lb/kgal		85.67		AP-42, Ch. 1.3, 5/2010, Table 1.3-1, 142S
VOC	5.5 lb/MMCF	6.66	5.03	6.66	AP-42, Ch. 1.4, 7/1998, Table 1.4-2
	0.252 lb/kgal		0.54		AP-42, Ch. 1.3, 5/2010, Table 1.3-3
CO	Emissions Set to Keep Nested Source under 100 TPY			85.90	Natural gas combustion is worst case.
NO_x	Emissions Set to Keep Nested Source under 100 TPY			83.20	Natural gas combustion is worst case.
CO_2	53.06 kg/MMBtu	144,382	109,221	159,053	40 CFR 98, Subpart C, Table C-1
	75.20 kg/MMBtu		49,832		40 CFR 98, Subpart C, Table C-1
CH_4	1.00E-03 kg/MMBtu	2.72	2.06	4.05	40 CFR 98, Subpart C, Table C-2
	3.00E-03 kg/MMBtu		1.99		40 CFR 98, Subpart C, Table C-2
N_2O	1.00E-04 kg/MMBtu	0.27	0.21	0.61	40 CFR 98, Subpart C, Table C-2
	6.00E-04 kg/MMBtu		0.40		40 CFR 98, Subpart C, Table C-2
CO_2e				159,336	Calculated

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Appendix A to the Technical Support Document - Emission Calculations
Limited Potential to Emit - Boiler #1 to #4 at Johnson Melloh Solutions - IMC Central Energy Plant

(Continued from Previous Page)

	Limited Potential to Emit				
	Emission Factor (Natural Gas / Fuel Oil)	**Case 1 All N.G (TPY)**	**Case 2 Limited F.O. + N.G. (TPY)**	**Limited PTE (TPY)**	**Emission Factor Source**
	None	0.00	0.00		No emission factor
1,1,1-Trichloroethane	2.36E-04 lb/kgal		5.09E-04	5.09E-04	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.40E-05 lb/MMCF	2.90E-05	2.20E-05		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
2-methylnaphthalene	None		0.00	2.90E-05	No emission factor
	1.80E-06 lb/MMCF	2.18E-06	1.65E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
3-methylchloranthrene	None		0.00	2.18E-06	No emission factor
	1.60E-05 lb/MMCF	1.94E-05	1.46E-05		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
7,12-dimethylbenz(a)anthracene	None		0.00	1.94E-05	No emission factor
	1.80E-06 lb/MMCF	2.18E-06	1.65E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Acenaphthene	2.11E-05 lb/kgal		4.55E-05	4.71E-05	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	1.80E-06 lb/MMCF	2.18E-06	1.65E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Acenaphthylene	2.53E-07 lb/kgal		5.45E-07	2.19E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.40E-06 lb/MMCF	2.90E-06	2.20E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Anthracene	1.22E-06 lb/kgal		2.63E-06	4.83E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.00E-04 lb/MMCF	2.42E-04	1.83E-04		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Arsenic	4.00E-06 lb/MMBtu		1.20E-03	1.39E-03	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	1.80E-06 lb/MMCF	2.18E-06	1.65E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Benz(a)anthracene	4.01E-06 lb/kgal		8.64E-06	1.03E-05	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.10E-03 lb/MMCF	2.54E-03	1.92E-03		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Benzene	2.14E-04 lb/kgal		4.61E-04	2.54E-03	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	1.20E-06 lb/MMCF	1.45E-06	1.10E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Benzo(a)pyrene	None		0.00	1.45E-06	No emission factor
	1.80E-06 lb/MMCF	2.18E-06	1.65E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Benzo(b)fluoranthene	None		0.00	2.18E-06	No emission factor
	1.20E-06 lb/MMCF	1.45E-06	1.10E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Benzo(g,h,i)perylene	2.26E-06 lb/kgal		4.87E-06	5.97E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	1.80E-06 lb/MMCF	2.18E-06	1.65E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Benzo(k)fluoranthene	None		0	2.18E-06	No emission factor
	1.20E-05 lb/MMCF	1.45E-05	1.10E-05		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Beryllium	3.00E-06 lb/MMBtu		9.02E-04	9.13E-04	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	1.10E-03 lb/MMCF	1.33E-03	1.01E-03		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Cadmium	3.00E-06 lb/MMBtu		9.02E-04	1.91E-03	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	1.40E-03 lb/MMCF	1.69E-03	1.28E-03		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Chromium	3.00E-06 lb/MMBtu		9.02E-04	2.18E-03	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	1.80E-06 lb/MMCF	2.18E-06	1.65E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Chrysene	2.38E-06 lb/kgal		5.13E-06	6.78E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	1.20E-06 lb/MMCF	1.45E-06	1.10E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Dibenzo(a,h)anthracene	1.67E-06 lb/kgal		3.60E-06	4.70E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	1.20E-03 lb/MMCF	1.45E-03	1.10E-03		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Dichlorobenzene	None		0.00	1.45E-03	No emission factor
	None	0.00	0.00		No emission factor
Ethylbenzene	6.36E-05 lb/kgal		1.37E-04	1.37E-04	AP-42, Ch. 1.3, Table 1.3-9, 5/2010

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Appendix A to the Technical Support Document - Emission Calculations
Limited Potential to Emit - Boiler #1 to #4 at Johnson Melloh Solutions - IMC Central Energy Plant
(Continued from Previous Page)

Potential to Emit					
	Emission Factor (Natural Gas / Fuel Oil)	Case 1 All N.G (TPY)	Case 2 Limited F.O. + N.G. (TPY)	Limited PTE (TPY)	Emission Factor Source
	3.00E-06 lb/MMCF	3.63E-06	2.75E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Fluoranthene	4.84E-06 lb/kgal		1.04E-05	1.32E-05	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.80E-06 lb/MMCF	3.39E-06	2.56E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Fluorene	4.47E-06 lb/kgal		9.63E-06	1.22E-05	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	7.50E-02 lb/MMCF	9.08E-02	0.0687		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Formaldehyde	0.061 lb/kgal		0.1314	0.200	AP-42, Ch. 1.3, Table 1.3-8, 5/2010
	1.8 lb/MMCF	2.18	1.65		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Hexane	None		0.00	2.18	No emission factor
	1.80E-06 lb/MMCF	2.18E-06	1.65E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Indo(1,2,3-cd)pyrene	2.14E-06 lb/kgal		4.61E-06	6.26E-06	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	None	0.00	0.00		No emission factor
Lead	9.00E-06 lb/MMBtu		2.71E-03	2.71E-03	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	3.80E-04 lb/MMCF	4.60E-04	3.48E-04		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Manganese	6.00E-06 lb/MMBtu		1.80E-03	2.15E-03	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	2.60E-04 lb/MMCF	3.15E-04	2.38E-04		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Mercury	3.00E-06 lb/MMBtu		9.02E-04	1.14E-03	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	6.10E-04 lb/MMCF	7.38E-04	5.58E-04		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Naphthalene	1.13E-03 lb/kgal		2.43E-03	2.99E-03	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.10E-03 lb/MMCF	2.54E-03	1.92E-03		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Nickel	3.00E-06 lb/MMBtu		9.02E-04	2.82E-03	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	1.70E-05 lb/MMCF	2.06E-05	1.56E-05		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Phenanthrene	1.05E-05 lb/kgal		2.26E-05	3.82E-05	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	None	0.00	0.00		No emission factor
Polycyclic Organic Matter	0.0033 lb/kgal		7.11E-03	7.11E-03	AP-42, Ch. 1.3, Table 1.3-8, 5/2010
	5.00E-06 lb/MMCF	6.05E-06	4.58E-06		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Pyrene	4.25E-06 lb/kgal		9.16E-06	1.37E-05	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	2.40E-05 lb/MMCF	2.90E-05	2.20E-05		AP-42, Ch. 1.4, Table 1.4-4, 7/1998
Selenium	1.50E-06 lb/MMBtu		4.51E-04	4.73E-04	AP-42, Ch. 1.3, Table 1.3-10, 5/2010
	3.40E-03 lb/MMCF	4.11E-03	3.11E-03		AP-42, Ch. 1.4, Table 1.4-3, 7/1998
Toluene	6.30E-03 lb/kgal		1.36E-02	1.67E-02	AP-42, Ch. 1.3, Table 1.3-9, 5/2010
	None	0.00	0.00		No emission factor
Xylene	1.09E-04 lb/kgal		2.35E-04	2.35E-04	AP-42, Ch. 1.3, Table 1.3-9, 5/2010

Worst Case HAP at Limited PTE **2.18** **TPY** **(Hexane)**

Total HAP at Limited PTE **2.43** **TPY**

Methodology:

1) Throughput (MMCF/yr) = Heat Input (MMBtu/hr) x 8,760 hr/yr x 1/Heat Content (MMBtu/MMCF)
2) Throughput (kgal/yr) = Heat Input (MMBtu/hr) x 8,760 hr/yr x 1/Heat Content (MMBtu/kgal)
3) PTE (TPY) = Emission Factor (lb/MMCF) x Usage (MMCF/yr) x 1 ton/2,000 lb
4) PTE (TPY) = Emission Factor (lb/kgal) x Usage (kgal/yr) x 1 ton/2,000 lb
5) PTE (TPY) = Emission Factor (kg/MMBtu) x 2.2046 lb/kg x Usage (MMBtu/yr) x 1 ton/2,000 lb
6) CO_2e (TPY) = CO_2 Emissions + (CH_4 Emissions x Global Warming Potential (25)) + (N_2O Emissions x (Global Warming Potential 298))
7) Worst Case PTE (TPY) = Highest Potential Emission Rate (TPY) of Fuel Oil Combustion and Natural Gas Combustion for each pollutant.

Appendix A to the Technical Support Document - Emission Calculations
JMS Fire Pump Engines
Diesel Fuel < 600 HP

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	T097-35016-00156	2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive
Johnson Melloh Solutions (JMS)	T097-34078-00586	2745 South Hoffman Road, Suite 504
AAR Aircraft Services, Indianapolis (	T097-33261-00559	2825 West Perimeter Road
Shuttle America Corporation (SAC)	T097-35018-00668	2745 South Hoffman Road, Dock 67, Hng 7A-7B
ASIG Aircraft Services International	T097-35006-00667	2050 South Hoffman Road

Permit Reviewer: David Matousek
Date: December 10, 2014

Unit Location	horsepower	
Main Terminal -LAN Room	480	Fire Pump Engine # 1
South Tug Guard Shack	480	Fire Pump Engine # 2
Gate 10 Guard Shack	480	Fire Pump Engine # 3
Midfield Road Access Gate	480	Fire Pump Engine # 4
Main Terminal -Main Concourse	480	Fire Pump Engine # 5
sum total	2400	hp
	16.8000	MMBtu/hr

max heat input MMBtu / hr
16.8

	PM	PM10/2.5	SOx	NOx	VOC	CO
Emission Factor lbs / MMBtu	0.31	0.31	0.29	4.41	0.36	0.95
Potential Emissions lbs / hr	5.21	5.21	4.87	74.09	6.05	15.96
tons / yr @ 500 hrs / yr	1.30	1.30	1.22	18.52	1.51	3.99

Methodology

AP-42 App. A Conversion Factor: 7.00E+03 Btu/horsepower hr
Emission Factor (lbs / MMBtu): from AP-42 Table 3.3-1 & 3.3-2 Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines
Diesel fuel Btu: 140000 Btu/gal (per AP-42 Appendix A)
Potential Emissions (lbs / hr): emfac x heat input
Potential Emissions (tons / yr): lbs / hr emissions x 500 operating hrs / yr x ton / 2000 lbs
if limited to: 500 annual operating hours, then 16785.7 gal/yr max annual diesel fuel consumption

Hazardous Air Pollutants (HAPs)

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/MMBtu	9.33E-04	4.09E-04	2.85E-04	3.91E-05	1.18E-03	7.67E-04	9.25E-05	1.68E-04
Potential Emission in tons/yr	3.92E-03	1.72E-03	1.20E-03	1.64E-04	4.96E-03	3.22E-03	3.89E-04	7.06E-04

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Methodology

Potential Emission of Total HAPs (tons/yr)	1.63E-02

Emission Factors are from AP42 (Supplement B 10/96), Tables 3.3-1 and 3.3-2
Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Appendix A to the Technical Support Document - Emission Calculations
JMS Large Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (>600 HP)
Maximum Input Rate (>4.2 MMBtu/hr)

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	T097-35016-00156	2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive
Johnson Melloh Solutions (JMS)	T097-34078-00586	2745 South Hoffman Road, Suite 504
AAR Aircraft Services, Indianapolis (AAR)	T097-33261-00559	2825 West Perimeter Road
Shuttle America Corporation (SAC)	T097-35018-00668	2745 South Hoffman Road, Dock 67, Hng 7A-7B
ASIG Aircraft Services International Group	T097-35006-00667	2050 South Hoffman Road

Permit Reviewer: David Matousek

Date: December 10, 2014

Output Horsepower Rating (hp)	1505.0	Emergency Generator # 1
Output Horsepower Rating (hp)	1505.0	Emergency Generator # 2
Output Horsepower Rating (hp)	1505.0	Emergency Generator # 3
Total	**4515.0**	

Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	2,257,500
Sulfur Content (S) of Fuel (% by weight)	0.300

	Pollutant						
	PM*	PM10*	PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	7.00E-04	4.01E-04	4.01E-04	2.43E-03 *(.00809S)*	2.40E-02 **see below	7.05E-04	5.50E-03
Potential Emission in tons/yr	0.79	0.45	0.45	2.74	27.09	0.80	6.21

*PM10 emission factor in lb/hp-hr was calculated using the emission factor in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

**NOx emission factor: uncontrolled = 0.024 lb/hp-hr, controlled by ignition timing retard = 0.013 lb/hp-hr

Hazardous Air Pollutants (HAPs)

	Pollutant						
	Benzene	Toluene	Xylene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	5.43E-06	1.97E-06	1.35E-06	5.52E-07	1.76E-07	5.52E-08	1.48E-06
Potential Emission in tons/yr	6.13E-03	2.22E-03	1.52E-03	6.23E-04	1.99E-04	6.23E-05	1.68E-03

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Potential Emission of Total HAPs (tons/yr)	**1.24E-02**

Methodology

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]

Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Appendix A to the Technical Support Document - Emission Calculations
VOC and Particulate
From Surface Coating Operations
AAR Ablative Coating Operation

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	T097-35016-00156	2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive
Johnson Melloh Solutions (JMS)	T097-34078-00586	2745 South Hoffman Road, Suite 504
AAR Aircraft Services, Indianapolis (AAR)	T097-33261-00559	2825 West Perimeter Road
Shuttle America Corporation (SAC)	T097-35018-00668	2745 South Hoffman Road, Dock 67, Hng 7A-7B
ASIG Aircraft Services International Group	T097-35006-00667	2050 South Hoffman Road

Permit Reviewer: David Matousek
Date: December 10, 2014

Material	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
PR1200 RTV Primer	6.34	94.50%	0.0%	94.5%	0.0%	4.55%	0.25	1.00	5.99	5.99	1.50	35.95	6.56	0.10	131.68	75%
Ablative Coating (MA25S)	5.12	48.05%	0.0%	48.1%	0.0%	51.95%	1.77	1.00	2.46	2.46	4.35	104.51	19.07	5.16	4.74	75%
RTV 560	11.84	0.71%	0.0%	0.7%	0.0%	99.46%	2.00	1.00	0.08	0.08	0.17	4.04	0.74	0.00	0.08	100%
Acetone	6.59	100%	100.0%	0.0%	0.0%	0.00%	0.50	1.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!	100%
State Potential Emissions			**Add worst case coating to all solvents**								**6.02**	**144.49**	**26.37**	**5.25**		
METHODOLOGY											**326 IAC 8-1-6 VOC Minor Limit**		**25.00**	**TPY**		

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

Appendix A to the Technical Support Document - Emission Calculations
HAP Emission Calculations
AAR Ablative Coating Operation

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	T097-35016-00156	2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive
Johnson Melloh Solutions (JMS)	T097-34078-00586	2745 South Hoffman Road, Suite 504
AAR Aircraft Services, Indianapolis (AAR)	T097-33261-00559	2825 West Perimeter Road
Shuttle America Corporation (SAC)	T097-35018-00668	2745 South Hoffman Road, Dock 67, Hng 7A-7B
ASIG Aircraft Services International Group	T097-35006-00667	2050 South Hoffman Road

Permit Reviewer: David Matousek

Date: December 10, 2014

Material	Density (lb/gal)	Gallons of Material (gal/unit)	Maximum (unit/hr)	Wt% Xylene	Wt% Ehtylbenzene	Wt% MIBK	Wt% Toluene	Xylene (TPY)	Ethylbenzene (TPY)	MIBK (TPY)	Toluene (TPY)
PR1200 RTV Primer	6.34	0.25	1	0.00%	0.10%	0.00%	0.10%	0.00	0.01	0.00	0.01
Ablative Coating (MA25S)	5.12	1.77	1	2.00%	0.00%	3.00%	14.00%	0.79	0.00	1.19	5.56
RTV 560	11.84	2	1	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00
Acetone	6.59	0.5	1	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00
							Total Single HAP	**0.79**	**0.01**	**1.19**	**5.56**
							Total HAP		**7.56**		

Appendix A to the Technical Support Document - Emission Calculations
Natural Gas Combustion Only
MM BTU/HR <100
AAR AMU Heat & Cure Oven

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	T097-35016-00156	2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive
Johnson Melloh Solutions (JMS)	T097-34078-00586	2745 South Hoffman Road, Suite 504
AAR Aircraft Services, Indianapolis (AAR)	T097-33261-00559	2825 West Perimeter Road
Shuttle America Corporation (SAC)	T097-35018-00668	2745 South Hoffman Road, Dock 67, Hng 7A-7B
ASIG Aircraft Services International Group	T097-35006-00667	2050 South Hoffman Road

Permit Reviewer: David Matousek

Date: December 10, 2014

Heat Input Capacity MMBtu/hr	HHV mmBtu / mmscf	Potential Throughput MMCF/yr
2.50	1000	21.9

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.02	0.08	0.08	0.01	1.10	0.06	0.92

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

PM2.5 emission factor is filterable and condensable PM2.5 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Hazardous Air Pollutants (HAPs)

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	2.3E-05	1.3E-05	8.2E-04	2.0E-02	3.7E-05

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	5.5E-06	1.2E-05	1.5E-05	4.2E-06	2.3E-05

Total HAPs 0.021

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A to the Technical Support Document - Emission Calculations
VOC and Particulate
Surface Coating Operation P-2

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	T097-35016-00156	2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive
Johnson Melloh Solutions (JMS)	T097-34078-00586	2745 South Hoffman Road, Suite 504
AAR Aircraft Services, Indianapolis (AAR)	T097-33261-00559	2825 West Perimeter Road
Shuttle America Corporation (SAC)	T097-35018-00668	2745 South Hoffman Road, Dock 67, Hng 7A-7B
ASIG Aircraft Services International Group	T097-35006-00667	2050 South Hoffman Road

Permit Reviewer: David Matousek
Date: December 10, 2014

Material	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (units/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Stripper PR-2002	8.34	100.00%	44.4%	55.6%	44.4%	0.00%	110.0	0.0041	8.34	4.64	9.18	0.00	0.00	0%
Primer	13.39	21.30%	0.0%	21.3%	0.0%	52.40%	14.0	0.0041	2.85	2.85	0.72	0.27	5.44	90%
White Topcoat	11.12	26.00%	0.0%	26.0%	0.0%	57.92%	24.0	0.0041	2.89	2.89	1.25	0.36	4.99	90%
Gray Topcoat	11.02	23.50%	0.0%	23.5%	0.0%	62.80%	20.0	0.0041	2.59	2.59	0.93	0.30	4.12	90%

State Potential Emissions **Add worst case coating to all solvents** **see below** **0.92**

METHODOLOGY

Primer (14 gallons) + White Topcoat (24 gallons) + Gray Topcoat (20 gallons) = 58 gallons to paint one unit (plane).
Units/hour = max of 36 planes painted per year = 36 units/yr / year/8760 hours = 0.0041 units/hour.
Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used
Transfer Efficiency = Air Pollution Engineering Manual (AWMA 1992) Chapter 10 Table 2, electrostatic painting and flat surfaces.

326 IAC 8-1-6 VOC Minor Limit:
IDEM, OAQ determined a VOC limit was required to ensure this operation does not exceed 25 tons per year. A limit was added under SPM 097-28213-00559.

Potential to Emit VOC **greater than** **25** TPY
VOC Limit **25** TPY

Appendix A to the Technical Support Document - Emission Calculations
HAP Emission Calculations
AAR Surface Coating Operation P-2

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	T097-35016-00156	2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive
Johnson Melloh Solutions (JMS)	T097-34078-00586	2745 South Hoffman Road, Suite 504
AAR Aircraft Services, Indianapolis (AAR)	T097-33261-00559	2825 West Perimeter Road
Shuttle America Corporation (SAC)	T097-35018-00668	2745 South Hoffman Road, Dock 67, Hng 7A-7B
ASIG Aircraft Services International Grou	T097-35006-00667	2050 South Hoffman Road

Permit Reviewer: David Matousek
Date: December 10, 2014

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (units/hour)	Weight % Xylene	Weight % MIBK	Weight % Formaldehyde	Weight % Benzene	Weight % Hexane	Weight % Glycol Ethers	Weight % Methanol	Xylene Emissions (ton/yr)	MIBK Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Benzene Emissions (ton/yr)	Hexane Emissions (ton/yr)	Glycol Ethers Emissions (ton/yr)	Methanol Emissions (ton/yr)	Combined HAP (ton/yr)
White Topcoat	11.12	24.00	0.0041	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.24
Gray Topcoat	11.02	20.00	0.0041	5.00%	10.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.20	0.40	0.00	0.00	0.00	0.00	0.00	0.60
METHODOLOGY											**0.44**	**0.40**						**0.84**

Potential HAP = Weight % HAP * Density of coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)

Appendix A to the Technical Support Document - Emission Calculations
Natural Gas Combustion Only
MM BTU/HR <100
AAR NG Make-Up Air Heating Unit B-1

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	T097-35016-00156	2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive
Johnson Melloh Solutions (JMS)	T097-34078-00586	2745 South Hoffman Road, Suite 504
AAR Aircraft Services, Indianapolis (AAR)	T097-33261-00559	2825 West Perimeter Road
Shuttle America Corporation (SAC)	T097-35018-00668	2745 South Hoffman Road, Dock 67, Hng 7A-7B
ASIG Aircraft Services International Group	T097-35006-00667	2050 South Hoffman Road
	Permit Reviewer:	David Matousek
	Date:	December 10, 2014

Combined Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
36.0	315.36

	Pollutant					
	PM*	PM10/2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.30	1.20	0.09	15.77	0.87	13.25

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMCF	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	3.3E-04	1.9E-04	1.2E-02	2.8E-01	5.4E-04

	HAPs - Metals					Combined
	Lead	Cadmium	Chromium	Manganese	Nickel	HAP
Emission Factor in lb/MMCF	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	NA
Potential Emission in tons/yr	7.9E-05	1.7E-04	2.2E-04	6.0E-05	3.3E-04	0.30

The five highest organic and metal HAPs emission factors are provided above. Hexane is highest single HAP.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A to the Technical Support Document - Emission Calculations

Emission Calculations - Surface Coating Operations EU-13, EU17 and EU-18

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	T097-35016-00156	2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive
Johnson Melloh Solutions (JMS)	T097-34078-00586	2745 South Hoffman Road, Suite 504
AAR Aircraft Services, Indianapolis (AAR)	T097-33261-00559	2825 West Perimeter Road
Shuttle America Corporation (SAC)	T097-35018-00668	2745 South Hoffman Road, Dock 67, Hng 7A-7B
ASIG Aircraft Services International Group	T097-35006-00667	2050 South Hoffman Road

Permit Reviewer: David Matousek

Date: December 10, 2014

Aircraft Equivalence

Aircraft	Bays per Fleet	Planes per Year (HMV)	Planes per Year (CCHK)	Planes per Year (Corrosion)	Planes per Year (Other)	HMV ISS Factor	HMV ISS Aircraft Equivalence	CCHK ISS Factor	CCHK ISS Aircraft Equivalence
757	3	35	96	0	1.5	1.786	62.51	1.80	172.80
767	2	24	48	0	0.5	2.700	64.80	2.70	129.60
737	12	96	265	41	3.5	1.000	96.00	1.00	265.00

HMV Aircraft Total per Year **223.31**

CCHK Aircraft Total per Year **567.40**

PM, PM_{10}, $PM_{2.5}$ Emissions

Hanger Floor Emissions

Aircraft	Particulate Emissions (lb/plane)	Planes per Year	PTE PM, PM_{10}, $PM_{2.5}$ (TPY)
757-HMV	94.40	35	1.65
767-HMV	141.60	24	1.70
737-HMV	52.40	96	2.52
757-CCHK	83.00	96	3.98
767-CCHK	92.40	48	2.22
737-CCHK	55.30	265	7.33
737-RCHK	14.80	41	0.30
		PTE (TPY)	**19.70**

Paint Room Emissions

Aircraft	Particulate Emissions (lb/plane)	Planes per Year	PTE PM, PM_{10}, $PM_{2.5}$ (TPY)
757-HMV	220.33	35	3.86
767-HMV	245.30	24	2.94
737-HMV	146.89	96	7.05
		PTE (TPY)	**13.85**

(Continued on Next Sheet)

Appendix A to the Technical Support Document (TSD)
Emission Calculations - Surface Coating Operations EU-13, EU17 and EU-18
(Continued from Previous Sheet)

Strip/Surface Emissions			
Aircraft	Particulate Emissions (lb/plane)	Planes per Year	PTE PM, PM_{10}, $PM_{2.5}$ (TPY)
757-HMV	156.10	35	2.73
767-HMV	156.10	24	1.87
737-HMV	154.13	96	7.40
		PTE (TPY)	**12.00**

Emissions from Other Operations			
Aircraft	Particulate Emissions (lb/plane)	Planes per Year	PTE PM, PM_{10}, $PM_{2.5}$ (TPY)
757-HMV	190.33	35	3.33
767-HMV	213.56	24	2.56
737-HMV	135.11	96	6.49
		PTE (TPY)	**12.38**

Emission Unit Total			
Operation	PTE (TPY)	Control %	Controlled PTE (TPY)
Hanger Floor	19.70	0%	19.70
Paint Room	13.85	95%	0.69
Strip/Surface	12.00	95%	0.60
Other	12.38	95%	0.62
Total PTE (TPY)	57.93		21.61

VOC and HAP Emissions

VOC Emissions			
Shop	Emissions (lb/plane)	Planes Per Year	PTE (TPY)
Interior Shop	64.33		18.54
All other Interior Shop	20.35		5.86
Machine Rework	2.15		0.62
Paint Shop Paint Booth	146.86		42.32
Other Shops in Paint Shop	8.48		2.44
Heat Exchanger	19.35		5.58
Metal Fabricator	38.47		11.09
All other indirect Shops	28.86	576.37	8.32
		PTE VOC (TPY)	**94.77**

HAP	Wt. % HAP in VOC Emissions	Total VOC (TPY)	HAP PTE (TPY)
Toluene	0.97%		0.92
Xylene	0.24%		0.23
Methyl Isobutyl Ketone	0.34%		0.32
Chromium	0.55%		0.52
Diisocyanate	0.01%		0.01
Methyl Chloroform	1.00%		0.95
Phenol	0.08%		0.08
Ethylbenzene	0.01%		0.01
Glycol	0.01%		0.01
Methylene Chloride	0.43%		0.41
Methanol	0.01%	94.77	0.01
		Total HAP (TPY)	**3.47**

Appendix A to the Technical Support Document - Emission Calculations
ASIG Large Reciprocating Internal Combustion Engines - Generator 017
Output Rating (>600 HP)

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	**T097-35016-00156**	**2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive**
Johnson Melloh Solutions (JMS)	**T097-34078-00586**	**2745 South Hoffman Road, Suite 504**
AAR Aircraft Services, Indianapolis (AAR)	**T097-33261-00559**	**2825 West Perimeter Road**
Shuttle America Corporation (SAC)	**T097-35018-00668**	**2745 South Hoffman Road, Dock 67, Hng 7A-7B**
ASIG Aircraft Services International Group	**T097-35006-00667**	**2050 South Hoffman Road**

Permit Reviewer: David Matousek

Date: December 10, 2014

Output Horsepower Rating (hp)	1207
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	603,500
Sulfur Content (S) of Fuel (% by weight)	0.300

	Pollutant						
	PM**	PM10*	PM2.5*	SO2	NOx**	VOC	CO**
Emission Factor in lb/hp-hr	3.29E-04	3.29E-04	3.29E-04	2.43E-03 *(.00809S)*	1.52E-02	7.05E-04	1.87E-02
Potential Emission in tons/yr	0.10	0.10	0.10	0.73	4.59	0.21	5.64

*PM10 and PM2.5 emission factors assumed the same as PM.

**PM, NOx and CO emission factors taken from 40 CFR 60, Subpart IIII

Hazardous Air Pollutants (HAPs)

	Pollutant						
	Benzene	Toluene	Xylene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	5.43E-06	1.97E-06	1.35E-06	5.52E-07	1.76E-07	5.52E-08	1.48E-06
Potential Emission in tons/yr	1.64E-03	5.94E-04	4.08E-04	1.67E-04	5.32E-05	1.66E-05	4.48E-04

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Potential Emission of Total HAPs (tons/yr)	**3.32E-03**

Methodology

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]

Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Appendix A to the Technical Support Document - Emission Calculations
ASIG Tank Storage VOC losses

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	**T097-35016-00156**	**2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive**
Johnson Melloh Solutions (JMS)	**T097-34078-00586**	**2745 South Hoffman Road, Suite 504**
AAR Aircraft Services, Indianapolis (AAR)	**T097-33261-00559**	**2825 West Perimeter Road**
Shuttle America Corporation (SAC)	**T097-35018-00668**	**2745 South Hoffman Road, Dock 67, Hng 7A-7B**
ASIG Aircraft Services International Group	**T097-35006-00667**	**2050 South Hoffman Road**
Permit Reviewer:	**David Matousek**	
Date:	**December 10, 2014**	

Three identical above ground Jet A fuel storage tanks

TANKS 4.09d
Emissions Report - Summary Format

Tank	
Tank Identification	TK1
User Identification:	Jet A fuel storage tank
Type of Tank:	Vertical Fixed Roof Tank
Description:	Jet A fuel storage tank
Tank Dimensions	
Shell Height (ft):	30
Diameter (ft):	52
Liquid Height (ft):	28
Avg. Liquid Height (ft):	28
Working Volume (gal):	465,000
Turnovers:	41.41
Net Throughput (gal/yr):	19,256,295
Heated tank (y/n?)	n
Paint Characteristics	
Shell Color/Shade:	White
Shell Condition:	Good
Roof Color/Shade	White
Roof Condition	Good
Roof Characteristics	
Type	Cone
Height (ft):	2
Slope (ft/ft) (Cone Roof)	0.09
Breather Vent Settings	
Vacuum Settings (psig):	-0.03
Pressure Settings (psig):	0.03
Daily Liquid Surface Temp (F)	
Avg.:	54.01
Min.:	48.91
Max.:	59.11
Liquid Bulk Temp (F):	52.28
Vapor Pressure (psia):	
Avg.:	0.007
Min.:	0.0058
Max.:	0.0083
Vapor Molecular Wt.:	130
Molecular Wt.:	162

	Losses (lbs/yr)		
Components	**Working Loss**	**Breathing Loss**	**Total**
Jet A Fuel	**359.26**	**12.17**	**371.44**

Combined Losses (tons/yr) for 3 identical storage tanks		
Working Loss	**Breathing Loss**	**Total**
0.54	**0.02**	**0.56**

Methodology
Emission calculations based on EPA program "TANKS" Version 4.09d
Parameters per application

Appendix A to the Technical Support Document (TSD)
Applicability Determinations for Engine Generators

Collocated Sources	Permit Numbers	Address - Indianapolis, Indiana 46241
Indianapolis Airport Authority (IAA)	T097-35016-00156	2825 West Perimeter Road and 7800 Col. H. Weir Cook Drive
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AAR Aircraft Services, Indianapolis (AAR)	T097-33261-00559	2825 West Perimeter Road
Shuttle America Corporation (SAC)	T097-35018-00668	2745 South Hoffman Road, Dock 67, Hng 7A-7B
ASIG Aircraft Services International Group	T097-35006-00667	2050 South Hoffman Road

Permit Reviewer: David Matousek

Date: December 10, 2014

Heat Content Diesel	140.00	MMBtu/kgallon	(AP-42 Default)
Brake Specific Fuel Consumption	7,000	Btu/Hp-hr	(AP-42 Default)
Diesel Fuel F-Factor	9,190	dscf/MMBtu	U.S. EPA, Method 19

Emission Unit	Engine Year	HP	NSPS Subpart IIII PM Limit (g/Hp-hr)	NSPS Allowable Emissions (lb/hr)	326 IAC 6.5 PM Limit (gr/dscf)	326 IAC 6.5 Allowable Emissions (lb/hr)	Most Restrictive Emission Limitation
EU013	2008	2,200	0.15	0.728	0.03	0.607	326 IAC 6.5
EU014	2008	2,200	0.15	0.728	0.03	0.607	326 IAC 6.5
EU015	2007	840	0.15	0.278	0.03	0.232	326 IAC 6.5
EU016	2006	1,495	0.40	1.318	0.03	0.412	326 IAC 6.5
EU018	2008	1,528	0.15	0.505	0.03	0.421	326 IAC 6.5
EU021	2008	133	0.22	0.065	0.03	0.037	326 IAC 6.5
Standby 500	2007	831	0.15	0.275	0.03	0.229	326 IAC 6.5
EU024	2008	755	0.15	0.250	0.03	0.208	326 IAC 6.5
EU025	1994	380	none	unlimited	0.03	0.105	326 IAC 6.5
EU026	2012	476	0.15	0.157	0.03	0.131	326 IAC 6.5
Eagle Hub	1992	2,025	none	unlimited	0.03	0.558	326 IAC 6.5
EG2	pre-2005	70	none	unlimited	0.03	0.019	326 IAC 6.5
EG3	pre-2005	70	none	unlimited	0.03	0.019	326 IAC 6.5
EG4	pre-2005	70	none	unlimited	0.03	0.019	326 IAC 6.5
Cummins 1010	pre-2005	750	none	unlimited	0.03	0.207	326 IAC 6.5
EG7	pre-2005	340	none	unlimited	0.03	0.094	326 IAC 6.5

Methodology:

1) 326 IAC 6.5 Allowable (lb/hr) = Power (HP) x BSFC (Btu/Hp-hr) x F-Factor (dscf/MMBtu) x Limit (gr/dscf) x 1 lb/7,000 gr x 1 MMBtu/1E6 Btu
2) NSPS Allowable Emissions (lb/hr) = Limit (g/Hp-hr) x Power (HP) x 1 lb/453.59 g

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

July 21, 2015

Mr. Todd Cavender
Indianapolis Airport Authority
7800 Col H Weir Cook Memorial Drive
Indianapolis, IN 46241

Re: Public Notice
Indianapolis Airport Authority
Permit Level: Title V - Renewal
Permit Number: 097 - 35016 - 00156

Dear Mr. Cavender:

Enclosed is a copy of your draft Title V - Renewal, Technical Support Document, emission calculations, and the Public Notice which will be printed in your local newspaper.

The Office of Air Quality (OAQ) has prepared two versions of the Public Notice Document. The abbreviated version will be published in the newspaper, and the more detailed version will be made available on the IDEM's website and provided to interested parties. Both versions are included for your reference. The OAQ has requested that the Indianapolis Star in Indianapolis, IN publish the abbreviated version of the public notice no later than July 25, 2015. You will not be responsible for collecting any comments, nor are you responsible for having the notice published in the newspaper.

OAQ has submitted the draft permit package to the Wayne Township Public Library, 198 South Girls School Rd., Indianapolis IN. As a reminder, you are obligated by 326 IAC 2-1.1-6(c) to place a copy of the complete permit application at this library no later than ten (10) days after submittal of the application or additional information to our department. We highly recommend that even if you have already placed these materials at the library, that you confirm with the library that these materials are available for review and request that the library keep the materials available for review during the entire permitting process.

Please review the enclosed documents carefully. This is your opportunity to comment on the draft permit and notify the OAQ of any corrections that are needed before the final decision. Questions or comments about the enclosed documents should be directed to David Matousek, Indiana Department of Environmental Management, Office of Air Quality, 100 N. Senate Avenue, Indianapolis, Indiana, 46204 or call (800) 451-6027, and ask for extension 2-8253 or dial (317) 232-8253.

Sincerely,
Len Pogost

Len Pogost
Permits Branch
Office of Air Quality

Enclosures
PN Applicant Cover lette-2014. Dot4/10/14

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

ATTENTION: PUBLIC NOTICES, LEGAL ADVERTISING

July 21, 2015

Indianapolis Star
Attn: Classifieds
130 S. Meridian St.
Indianapolis, Indiana 46225

Enclosed, please find one Indiana Department of Environmental Management Notice of Public Comment for Indianapolis Airport Authority, Marion County, Indiana.

Since our agency must comply with requirements which call for a Notice of Public Comment, we request that you print this notice one time, no later than July 25, 2015.

Please send a notarized form, clippings showing the date of publication, and the billing to the Indiana Department of Environmental Management, Accounting, Room N1345, 100 North Senate Avenue, Indianapolis, Indiana, 46204.

To ensure proper payment, please reference account # 100174737.

We are required by the Auditor's Office to request that you place the Federal ID Number on all claims. If you have any conflicts, questions, or problems with the publishing of this notice or if you do not receive complete public notice information for this notice, please call Len Pogost at 800-451-6027 and ask for extension 3-2803 or dial 317-233-2803.

Sincerely,

Len Pogost

Len Pogost
Permit Branch
Office of Air Quality

Permit Level: Title V - Renewal
Permit Number: 097 - 35016 - 00156

Enclosure
PN Newspaper.dot 6/13/2013

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

July 21, 2015

To: Wayne Township Public Library 198 South Girls School Rd. Indianapolis IN

From: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Subject: **Important Information to Display Regarding a Public Notice for an Air Permit**

Applicant Name: Indianapolis Airport Authority
Permit Number: 097 - 35016 - 00156

Enclosed is a copy of important information to make available to the public. This proposed project is regarding a source that may have the potential to significantly impact air quality. Librarians are encouraged to educate the public to make them aware of the availability of this information. The following information is enclosed for public reference at your library:

- Notice of a 30-day Period for Public Comment
- Request to publish the Notice of 30-day Period for Public Comment
- Draft Permit and Technical Support Document

You will not be responsible for collecting any comments from the citizens. Please refer all questions and request for the copies of any pertinent information to the person named below.

Members of your community could be very concerned in how these projects might affect them and their families. **Please make this information readily available until you receive a copy of the final package.**

If you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185. Questions pertaining to the permit itself should be directed to the contact listed on the notice.

Enclosures
PN Library.dot 6/13/2013

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

Notice of Public Comment

July 21, 2015
Indianapolis Airport Authority
097 - 35016 - 00156

Dear Concerned Citizen(s):

You have been identified as someone who could potentially be affected by this proposed air permit. The Indiana Department of Environmental Management, in our ongoing efforts to better communicate with concerned citizens, invites your comment on the draft permit.

Enclosed is a Notice of Public Comment, which has been placed in the Legal Advertising section of your local newspaper. The application and supporting documentation for this proposed permit have been placed at the library indicated in the Notice. These documents more fully describe the project, the applicable air pollution control requirements and how the applicant will comply with these requirements.

If you would like to comment on this draft permit, please contact the person named in the enclosed Public Notice. Thank you for your interest in the Indiana's Air Permitting Program.

Please Note: *If you feel you have received this Notice in error, or would like to be removed from the Air Permits mailing list, please contact Patricia Pear with the Air Permits Administration Section at 1-800-451-6027, ext. 3-6875 or via e-mail at PPEAR@IDEM.IN.GOV. If you have recently moved and this Notice has been forwarded to you, please notify us of your new address and if you wish to remain on the mailing list. Mail that is returned to IDEM by the Post Office with a forwarding address in a different county will be removed from our list unless otherwise requested.*

Enclosure
PN AAA Cover.dot 6/13/13

Mail Code 61-53

IDEM Staff	LPOGOST 7/21/2015 Indianapolis Airport Authority 097 - 35016 - 00156 draft/)		
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**

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1		Todd Cavender Indianapolis Airport Authority 7800 Col H Weir Cook Memorial Drive Indianapolis IN 46241 (Source CAATS)									
2		Mario Rodriguez Executive Director Indianapolis Airport Authority 7800 Col H Weir Cook Mem Drive Indianapolis IN 46241 *(RO CAATS)*									
3		Marion County Health Department 3838 N, Rural St Indianapolis IN 46205-2930 *(Health Department)*									
4		Indianapolis City Council 200 East Washington Street, Room E Indianapolis IN 46204 *(Local Official)*									
5		Lawrence City Council and Mayors Office 9001 East 59th Street #205 Lawrence IN 46216 *(Local Official)*									
6		Marion County Commissioners 200 E. Washington St. City County Bldg., Suite 801 Indianapolis IN 46204 *(Local Official)*									
7		Wayne Township Public Library 198 South Girls School Rd. Indianapolis IN 46231 *(Library)*									
8		Mrs. Kathy Moore KERAMIDA Environmental, Inc. 401 North College Indianapolis IN 46202 *(Consultant)*									
9		Matt Mosier Office of Sustainability City-County Bldg/200 E Washington St. Rm# 2460 Indianapolis IN 46204 *(Local Official)*									
10		John Terrell AAR Aircraft Services 2825 W Perimeter Dr Indianapolis IN 46241 *(Affected Party)*									
11		Johan & Susan Van Den Heuvel 4409 Blue Creek Drive Carmel IN 46033 *(Affected Party)*									
12		Indiana Members Credit Union 5103 Madison Avenue Indianapolis IN 46227 *(Affected Party)*									
13											
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