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

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Governor

Carol S. Comer
Commissioner

NOTICE OF 30-DAY PERIOD
FOR PUBLIC COMMENT

Preliminary Findings Regarding a
Significant Revision to a
Federally Enforceable State Operating Permit (FESOP)

for New NGC, Inc. dba National Gypsum Company in Martin County

Significant Permit Revision No.: 101-36933-00003

The Indiana Department of Environmental Management (IDEM) has received an application from New NGC, Inc. dba National Gypsum Company, located at 9720 US Highway 50 East, Shoals, Indiana 47581, for a significant revision of its FESOP issued on December 26, 2007. If approved by IDEM's Office of Air Quality (OAQ), this proposed revision would allow New NGC, Inc. dba National Gypsum Company to make certain changes at its existing source. New NGC, Inc. dba National Gypsum Company has applied to:

(1) Increase in drying silicone XP wallboard in the natural gas-fired dryer (Unit 2) from 75,000 tons per twelve consecutive month period to 345,000 tons per twelve consecutive month period. This increase in the throughput limit will subject the natural gas-fired dryer (Unit 2) to 326 IAC 8-1-6 (BACT).
(2) Removal of one (1) underground and totally enclosed mining, primary crushing, and conveying operation.
(3) Construction and operation of a recycled wallboard grinder, recycled wallboard screener, and recycled wallboard stacker.
(4) Construction and operation of one (1) stucco cooler.
(5) Removal of CO2e emission limitations, compliance determination, and Record Keeping and Reporting Requirements from the operating permit.

The applicant intends to construct and operate new equipment that will emit air pollutants; therefore, the permit contains new or different permit conditions. In addition, some conditions from previously issued permits/approvals have been corrected, changed, or removed. These corrections, changes, and removals may include Title I changes (e.g., changes that add or modify synthetic minor emission limits). The potential to emit of any regulated air pollutants will continue to be limited to less than the Title V and PSD major threshold levels. IDEM has reviewed this application and has developed preliminary findings, consisting of a draft permit and several supporting documents, which would allow the applicant to make this change.

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

Shoals Public Library
404 High St.
Shoals, IN 47581

and

IDEM Southwest Regional Office
1120 N. Vincennes Avenue
P.O. Box 128
Petersburg, IN 47567-0128

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 SPR 101-36933-00003 in all correspondence.

Comments should be sent to:

Heath Hartley
IDEM, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
(800) 451-6027, ask for extension 2-8217
Or dial directly: (317) 232-8217
Fax: (317) 232-6749 attn: Heath Hartley
E-mail: hhartley@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, at the IDEM Regional Office 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 Heath Hartley of my staff at the above address.

Jenny Acker, Section Chief
Permits Branch
Office of Air Quality

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James F. Phipps
New NGC, Inc. dba National Gypsum Company
9720 US Highway 50 East
Shoals, Indiana 47581

Re: 101-36933-00003
Significant Revision to
F101-22910-00003

Dear Mr. Phipps:

New NGC, Inc. dba National Gypsum Company was issued a Federally Enforceable State Operating Permit (FESOP) (Renewal) No. F101-22910-00003 on December 26, 2007 for a stationary gypsum wallboard manufacturing plant located at 9720 US Highway 50 East, Shoals, Indiana 47581. On March 10, 2016, the Office of Air Quality (OAQ) received an application from the source requesting the following:

(1) Increase in drying silicone XP wallboard in the natural gas-fired dryer (Unit 2) from 75,000 tons per twelve consecutive month period to 345,000 tons per twelve consecutive month period. This increase in the throughput limit will subject the natural gas-fired dryer (Unit 2) to 326 IAC 8-1-6 (BACT).
(2) Removal of one (1) underground and totally enclosed mining, primary crushing, and conveying operation.
(3) Construction and operation of a recycled wallboard grinder, recycled wallboard screener, and recycled wallboard stacker.
(4) Construction and operation of one (1) stucco cooler.
(5) Removal of CO2e emission limitations, compliance determination, and Record Keeping and Reporting Requirements from the operating permit.

Pursuant to the provisions of 326 IAC 2-8-11.1, these changes to the permit are required to be reviewed in accordance with the Significant Permit Revision (SPR) procedures of 326 IAC 2-8-11.1(f). Pursuant to the provisions of 326 IAC 2-8-11.1, a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document (TSD).

The following construction conditions are applicable to the proposed project:

1. General Construction Conditions
The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).

2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

3. Effective Date of the Permit

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Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the significant permit revision into the permit.

All other conditions of the permit shall remain unchanged and in effect. Please find attached the entire FESOP as revised, including the following revised attachments:

Attachment B: 40 CFR 60, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants
Attachment C: 40 CFR 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

The permit references the below listed attachment. Since this attachment has been provided in previously issued approvals for this source, IDEM OAQ has not included a copy of this attachment with this revision:

Attachment A: Fugitive Dust Control Plan

Previously issued approvals for this source containing these attachments are available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/.

Federal rules under Title 40 of United States Code of Federal Regulations may also be found on the U.S. Government Printing Office's Electronic Code of Federal Regulations (eCFR) website, located on the Internet at: http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40tab_02.tpl.

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

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Heath Hartley of my staff at 317-232-8217 or 1-800-451-6027, and ask for extension 2-8217.

Sincerely,

Jenny Acker, Section Chief
Permits Branch
Office of Air Quality

Attachments: Technical Support Document and revised permit

JA/to

cc: File - Martin County
Martin County Health Department
U.S. EPA, Region V
Compliance and Enforcement Branch

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Federally Enforceable State Operating Permit Renewal
OFFICE OF AIR QUALITY

New NGC, Inc. dba National Gypsum Company
9720 US Highway 50 East
Shoals, Indiana 47581

(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. 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 2-8 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.

Indiana statutes from IC 13 and rules from 326 IAC, quoted 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 FESOP under 326 IAC 2-8.

Operation Permit No.: F101-22910-00003	
Original signed by: Matthew Stuckey, Deputy Branch Chief Permits Branch Office of Air Quality	Issuance Date: December 26, 2007 Expiration Date: December 26, 2017

Administrative Amendment No.: 101-27342-00003, issued on February 26, 2009
Minor Permit Revision No.: 101-27980-00003, issued on July 30, 2009
Administrative Amendment No.: 101-28973-00003, issued on March 10, 2010
Administrative Amendment No.: 101-29486-00003, issued on September 2, 2010
Administrative Amendment No.: 101-31237-00003, issued on December 29, 2011
Temporary Operation No. 101-31367-00003, issued on January 27, 2012
Significant Permit Revision No. 101-31832-00003, issued on October 12, 2012

Operation Permit No.: F101-36933-00003	
Issued by: Jenny Acker, Section Chief Permits Branch Office of Air Quality	Issuance Date: Expiration Date: December 26, 2017

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

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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 2-8-3(b)]

The Permittee owns and operates a stationary gypsum wallboard manufacturing plant.

Source Address:	9720 US Highway 50 East, Shoals, Indiana 47581
General Source Phone Number:	(812) 247-2424
SIC Code:	3275 (Gypsum Products)
County Location:	Martin
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

This stationary source consists of the following emission units and pollution control devices:

(a) One (1) Raymond grinding mill operation, consisting of one (1) natural gas-fired Raymond mill burner, constructed in 2007, with a maximum capacity of ten (10) million British thermal units per hour, and two (2) Raymond gypsum mills, identified as Units 3A and 3B, both constructed in 1955, with a combined maximum capacity of fifty-six (56) tons of gypsum per hour, each with PM and PM10 emissions controlled by a baghouse, identified as EP-2 and EP-3, respectively. This operation was constructed in 1955 and the 10 million British thermal units per hour burner was replaced with an identical burner in 2007.

(b) One (1) IMP mill flash calcining system, consisting of one (1) natural gas-fired Raymond mill burner, with a maximum heat input capacity of forty (40) million British thermal units per hour, using ultra low sulfur No. 2 fuel oil as a back up fuel, and one (1) impact mill, identified as Unit 9, approved for construction in 2012, with a maximum capacity 40 tons of flue-gas-desulfurization (FGD, i.e. synthetic) gypsum per hour, with particulate matter emissions controlled by one (1) integral cyclone, identified as EP-40a and two (2) integral baghouses, identified as EP-40b, and exhausting to stack EP-40.

Under 40 CFR 60, Subpart OOO, this is considered an affected facility.

(c) One (1) calcining operation, consisting of the following units:

(1) Five (5) flash calcidyne units, identified as Units 4A, 4B, 4C, 4D, and 4E, all constructed in 1981, with a combined maximum capacity of fifty (50) tons of land plaster per hour, each with one (1) natural gas-fired heating unit with a maximum capacity of seven and a half (7.5) million British thermal units per hour; each with PM and PM10 emissions controlled by a baghouse, identified as EP-4, EP-5, EP-6, EP-7, and EP-8.

(d) One (1) stucco conveying operation consisting of seven (7) stucco conveyors, identified as Units 7A, 7B, 7C, 7D, 7F, 7G and 7R all constructed in 1955, with a combined maximum

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throughput of forty (40) tons of stucco per hour, each with PM and PM10 emissions controlled by a baghouse, identified as EP-9, EP-13 and EP-14, EP-10, EP-15 and EP-16, EP-17, EP-18, and EP-39, respectively.

(e) One (1) plaster manufacturing operation, consisting of the following units:

(1) Three (3) plaster conveyors, identified as Units 7J, 7K, and 7L, all constructed in 1955, with a combined maximum throughput of forty-two (42) tons of land plaster per hour, each with PM and PM10 emissions controlled by a baghouse, identified as EP-29, EP-31, and EP-32, respectively;

(2) Three (3) plaster storage bins, identified as Unit 7N, 7O, and 7P, all constructed in 1955, with a combined maximum throughput of thirteen (13) tons of plaster per hour, each with PM and PM10 emissions controlled by a baghouse, identified as EP-34, EP-35, and EP-36;

(3) One (1) perlite system, identified as Unit 5, approved for construction in 2010, with a maximum capacity of 0.9 tons of expanded perlite per hour, equipped with one (1) bulk bag unloader and one (1) pneumatic conveying operation, with particulate emissions controlled by an integral air/product separator, identified as filter receiver, and exhausting to the indoors; and

(4) One (1) plaster mixing and bagging system, identified as Unit 7M, constructed in 1955, with a maximum production rate of thirteen (13) tons of land plaster per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-33.

(f) One (1) wallboard manufacturing operation, consisting of the following units:

(1) Two (2) stucco storage silos, identified as Units 7H and 7I, both constructed in 1955, with a combined maximum throughput of forty (40) tons of stucco per hour, each with PM and PM10 emissions controlled by a baghouse, identified as EP-19 and EP-20, respectively;

(2) One (1) coaxial mixing/pulping system, identified as Unit 8D, constructed in 1955, with a maximum throughput of forty-five (45) tons of material per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-24;

(3) One (1) natural gas-fired kiln dryer, identified as Unit 2, constructed in 1990 and modified in 2002, with a maximum drying capacity of 433,000 tons/yr of wallboard, with a maximum capacity of ninety-five (95) million British thermal units per hour and venting through stack Z3;

(4) One (1) board sawing system, identified as Unit 1A, constructed in 1990, with a maximum production rate of 2,500 square feet of wallboard per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-25;

(5) One (1) board end trimming (BET) dunnage sawing process, identified as Unit 1B, constructed in 1955, with a maximum throughput of 2,500 square feet of wallboard per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-25;

(6) One (1) BET gridstone system, identified as Unit 1D, constructed in 1990, with a maximum production rate of 2,500 square feet of wallboard per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-38;

(7) One (1) BMA land plaster bin, identified as Unit 8A, constructed in 1955, with a

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maximum throughput of one (1) ton per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-21;

(8) One (1) starch bin, identified as Unit 8B, constructed in 1955, with a maximum throughput of one-tenth (0.1) ton per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-21;

(9) One (1) BMA ball mill, identified as Unit 8C, constructed in 1955, with a maximum throughput of one and one-tenth (1.1) tons of mix per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-23; and

(10) One (1) chopped dunnage storage bin with conveyor, identified as Unit 1C, constructed in 1955, with a maximum throughput of one (1) ton of dunnage per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-26.

(g) One (1) synthetic gypsum storage and conveying operation with fugitive emissions.

Under 40 CFR 60, Subpart OOO, this is considered an affected facility.

(h) One (1) wallboard grinder, approved for construction in 2012, with a maximum capacity of 20 tons of wallboard per hour, utilizing no control, with emissions exhausting outdoors.

Under 40 CFR 60, Subpart OOO, this is considered an affected facility.

(i) One (1) diesel fueled recycled wallboard grinder, approved in 2016 for construction, with a maximum capacity of 10.8 tons of wallboard per hour, powered by a 590 Horsepower nonroad engine, utilizing no control, with emissions exhausting outdoors.

Under 40 CFR 60, Subpart OOO, this is considered an affected facility.

(j) One (1) diesel fueled recycled wallboard screener, approved in 2016 for construction, with a maximum throughput capacity of 10.8 tons of wallboard per hour, powered by a 100 Horsepower nonroad engine, utilizing no control, with emissions exhausting outdoors.

Under 40 CFR 60, Subpart OOO, this is considered an affected facility.

(k) One (1) diesel fueled recycled wallboard stacker, approved in 2016 for construction, with a maximum throughput capacity of 10.8 tons of wallboard per hour, powered by a 21.6 Horsepower nonroad engine, utilizing no control, with emissions exhausting outdoors.

Under 40 CFR 60, Subpart OOO, this is considered an affected facility.

(l) One (1) stucco cooler, approved in 2016 for construction, with a maximum throughput capacity of 45 tons of stucco per hour, using a baghouse as control, and exhausting outdoors.

A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities:

(a) Degreasing operations that do not exceed 145 gallons per 12 months, and not subject to 326 IAC 20-6, including four (4) Safety Kleen parts cleaning operations.

(b) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons, including two (2) kerosene storage tanks.

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(c) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, including fifty (50) natural gas-fired space heaters.

(d) Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) British thermal units per hour, including twenty (20) fuel oil-fired combustion facilities, firing fuel oil containing less than five-tenths (0.5) percent sulfur by weight.

(e) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 British thermal units per hour, where total capacity of equipment operated by this stationary source does not exceed 2,000,000 British thermal units per hour. The engines were constructed in 1974.

(f) A petroleum fuel, other than gasoline, dispensing facility having a storage capacity less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.

(g) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.

(h) Machining where an aqueous cutting coolant continuously floods the machining interface.

(i) Closed loop heating and cooling systems, including five (5) closed loop heating and cooling systems with a combined capacity of 0.825 million British thermal units per hour;

(j) Replacement or repair of electrostatic precipitators, bags in baghouses, and filters in other air filtration equipment.

(k) Heat exchanger cleaning and repair.

(l) Paved and unpaved roads and parking lots with public access.

(m) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.

(n) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks and fluid handling equipment.

(o) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.

(p) Emergency generators, constructed in 1974, including:

(1) One (1) diesel fired emergency generator, with a maximum power output rate of 130 horsepower.

(2) One (1) diesel fired emergency flood pump, with a maximum power output rate of 375 horsepower.

Under 40 CFR 63, Subpart ZZZZ, these units are considered affected sources.

(q) Stationary fire pumps.

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(r) Emission units with PM and PM10 emissions less than five (5) tons per year, SO2, NOx, and VOC emissions less than ten (10) tons per year, CO emissions less than twenty-five (25) tons per year, and lead emissions less than two tenths (0.2) ton per year:

(1) One (1) storage building, a receiving hopper/feeder, and the associated belt conveyors for the FGD utilization process;

(2) One (1) covered FGD storage pile, with a maximum storage capacity of 5,000 tons per year; and

(3) One (1) FGD belt conveyor system, with a maximum conveying capacity of 250 tons per hour.

Under 40 CFR 60, Subpart OOO, these units are considered affected facilities.

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) to renew a Federally Enforceable State Operating Permit (FESOP).

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SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-8-1]

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 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

(a) This permit, F101-22910-00003, is issued for a fixed term of ten (10) 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, 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 2-8-6][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 2-8-4(4)]

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 2-8-4(5)(D)]

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

B.7 Duty to Provide Information [326 IAC 2-8-4(5)(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 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]

(a) A certification required by this permit meets the requirements of 326 IAC 2-8-5(a)(1) if:

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(1) it contains a certification by an "authorized individual", as defined by 326 IAC 2-1.1-1(1), 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) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

B.9 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

(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

(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 2-8-4(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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

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B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)]

(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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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(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.12 Emergency Provisions [326 IAC 2-8-12]

(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 except as provided in 326 IAC 2-8-12.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or 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 or Southwest Regional Office 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
Southwest Regional Office phone: (812) 380-2305; fax: (812) 380-2304**.**

(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 2-8-4(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

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

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(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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(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 2-8-3(c)(6) 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 2-8 and any other applicable rules.

(g) Operations may continue during an emergency only if the following conditions are met:

(1) 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.

(2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

(A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and

(B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

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

(a) All terms and conditions of permits established prior to F101-22910-00003 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised, or

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(3) deleted.

(b) All previous registrations and permits are superseded by this permit.

B.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]

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 2-8-3(h) and 326 IAC 2-8-9.

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State 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 2-8-4(5)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(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 2-8-8(a)]

(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 2-8-8(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-8-8(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 2-8-8(c)]

B.16 Permit Renewal [326 IAC 2-8-3(h)]

(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 2-8-3. 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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

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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 2-8 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 2-8-3(g), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) and (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 approval required by 326 IAC 2-8-11.1 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:

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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 2-8-15(b)(1) and (c). 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 2-8-15(b)(1) and (c).

(b) Emission Trades [326 IAC 2-8-15(b)]
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 2-8-15(b).

(c) Alternative Operating Scenarios [326 IAC 2-8-15(c)]
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 2-8-4(7). No prior notification of IDEM, OAQ or U.S. EPA is required.

(d) 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.19 Source Modification Requirement [326 IAC 2-8-11.1]

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

B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

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 FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

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(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, at reasonable times, 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, at reasonable times, 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, at reasonable times, 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.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

(a) The Permittee must comply with the requirements of 326 IAC 2-8-10 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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.22 Annual Fee Payment [326 IAC 2-7-19][326 IAC 2-8-4(6)][326 IAC 2-8-16][326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ no later than 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) 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.23 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][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

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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.

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SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-8-4(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 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

(1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.

(2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and

(3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period.

(c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

(d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.3 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 forty percent (40%) 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,

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Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.4 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.5 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.6 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).

C.7 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the attached plan as in Attachment A.

C.8 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.

C.9 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).

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(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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(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.

Testing Requirements [326 IAC 2-8-4(3)]

C.10 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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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(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.11 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 2-8-4(1)][326 IAC 2-8-5(a)(1)]

C.12 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

C.13 Instrument Specifications [326 IAC 2-1.1-11][326 IAC 2-8-4(3)][326 IAC 2-8-5(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.

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Corrective Actions and Response Steps [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

C.14 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.15 Risk Management Plan [326 IAC 2-8-4][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.16 Response to Excursions or Exceedances [326 IAC 2-8-4][326 IAC 2-8-5]

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.

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C.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

(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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.18 General Record Keeping Requirements [326 IAC 2-8-4(3)][326 IAC 2-8-5]

(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 FESOP.

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.19 General Reporting Requirements [326 IAC 2-8-4(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

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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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). 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.20 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.

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SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) One (1) Raymond grinding mill operation, consisting of one (1) natural gas-fired Raymond mill burner, constructed in 2007, with a maximum capacity of ten (10) million British thermal units per hour, and two (2) Raymond gypsum mills, identified as Units 3A and 3B, both constructed in 1955, with a combined maximum capacity of fifty-six (56) tons of gypsum per hour, each with PM and PM10 emissions controlled by a baghouse, identified as EP-2 and EP-3, respectively. This operation was constructed in 1955 and the 10 million British thermal units per hour burner was replaced with an identical burner in 2007.

(b) One (1) IMP mill flash calcining system, consisting of one (1) natural gas-fired Raymond mill burner, with a maximum heat input capacity of forty (40) million British thermal units per hour, using ultra low sulfur No. 2 fuel oil as a back up fuel, and one (1) impact mill, identified as Unit 9, approved for construction in 2012, with a maximum capacity 40 tons of flue-gas-desulfurization (FGD, i.e. synthetic) gypsum per hour, with particulate matter emissions controlled by one (1) integral cyclone, identified as EP-40a and two (2) integral baghouses, identified as EP-40b, and exhausting to stack EP-40.

Under 40 CFR 60, Subpart OOO, this is considered an affected facility.

(c) One (1) calcining operation, consisting of the following units:

(1) Five (5) flash calcidyne units, identified as Units 4A, 4B, 4C, 4D, and 4E, all constructed in 1981, with a combined maximum capacity of fifty (50) tons of land plaster per hour, each with one (1) natural gas-fired heating unit with a maximum capacity of seven and a half (7.5) million British thermal units per hour; each with PM and PM10 emissions controlled by a baghouse, identified as EP-4, EP-5, EP-6, EP-7, and EP-8.

(d) One (1) stucco conveying operation consisting of seven (7) stucco conveyors, identified as Units 7A, 7B, 7C, 7D, 7F, 7G and 7R all constructed in 1955, with a combined maximum throughput of forty (40) tons of stucco per hour, each with PM and PM10 emissions controlled by a baghouse, identified as EP-9, EP-13 and EP-14, EP-10, EP-15 and EP-16, EP-17, EP-18, and EP-39, respectively.

(e) One (1) plaster manufacturing operation, consisting of the following units:

(1) Three (3) plaster conveyors, identified as Units 7J, 7K, and 7L, all constructed in 1955, with a combined maximum throughput of forty-two (42) tons of land plaster per hour, each with PM and PM10 emissions controlled by a baghouse, identified as EP-29, EP-31, and EP-32, respectively;

(2) Three (3) plaster storage bins, identified as Unit 7N, 7O, and 7P, all constructed in 1955, with a combined maximum throughput of thirteen (13) tons of plaster per hour, each with PM and PM10 emissions controlled by a baghouse, identified as EP-34, EP-35, and EP-36;

(3) One (1) perlite system, identified as Unit 5, approved for construction in 2010, with a maximum capacity of 0.9 tons of expanded perlite per hour, equipped with one (1) bulk bag unloader and one (1) pneumatic conveying operation,

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with particulate emissions controlled by an integral air/product separator, identified as filter receiver, and exhausting to the indoors; and

(4) One (1) plaster mixing and bagging system, identified as Unit 7M, constructed in 1955, with a maximum production rate of thirteen (13) tons of land plaster per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-33.

(f) One (1) wallboard manufacturing operation, consisting of the following units:

(1) Two (2) stucco storage silos, identified as Units 7H and 7I, both constructed in 1955, with a combined maximum throughput of forty (40) tons of stucco per hour, each with PM and PM10 emissions controlled by a baghouse, identified as EP-19 and EP-20, respectively;

(2) One (1) coaxial mixing/pulping system, identified as Unit 8D, constructed in 1955, with a maximum throughput of forty-five (45) tons of material per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-24;

(3) One (1) natural gas-fired kiln dryer, identified as Unit 2, constructed in 1990 and modified in 2002, with a maximum drying capacity of 433,000 tons/yr of wallboard, with a maximum capacity of ninety-five (95) million British thermal units per hour and venting through stack Z3;

(4) One (1) board sawing system, identified as Unit 1A, constructed in 1990, with a maximum production rate of 2,500 square feet of wallboard per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-25;

(5) One (1) board end trimming (BET) dunnage sawing process, identified as Unit 1B, constructed in 1955, with a maximum throughput of 2,500 square feet of wallboard per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-25;

(6) One (1) BET gridstone system, identified as Unit 1D, constructed in 1990, with a maximum production rate of 2,500 square feet of wallboard per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-38;

(7) One (1) BMA land plaster bin, identified as Unit 8A, constructed in 1955, with a maximum throughput of one (1) ton per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-21;

(8) One (1) starch bin, identified as Unit 8B, constructed in 1955, with a maximum throughput of one-tenth (0.1) ton per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-21;

(9) One (1) BMA ball mill, identified as Unit 8C, constructed in 1955, with a maximum throughput of one and one-tenth (1.1) tons of mix per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-23; and

(10) One (1) chopped dunnage storage bin with conveyor, identified as Unit 1C, constructed in 1955, with a maximum throughput of one (1) ton of dunnage per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-26.

(j) One (1) diesel fueled recycled wallboard screener, approved in 2016 for construction,

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with a maximum throughput capacity of 10.8 tons of wallboard per hour, powered by a 100 Horsepower nonroad engine, utilizing no control, with emissions exhausting outdoors.

Under 40 CFR 60, Subpart OOO, this is considered an affected facility.

(l) One (1) stucco cooler, approved in 2016 for construction, with a maximum throughput capacity of 45 tons of stucco per hour, using a baghouse as control, and exhausting outdoors.

(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 2-8-4(1)]

D.1.1 Prevention of Significant Deterioration (PSD) Minor Limits [326 IAC 2-2]

In order to render 326 IAC 2-2 (PSD) not applicable, the PM emissions from the gypsum wallboard manufacturing operations shall not exceed the emission limits listed in the table below:

Emission Unit	PM Emission Limit (lbs/hr)
Raymond gypsum mill (Unit 3A, Baghouse EP-2)	0.14
Raymond gypsum mill (Unit 3B, Baghouse EP-3)	0.14
IMP Mill Flash Calcining System (Unit 9, Cyclone EP-40a and Baghouse EP-40b)*	0.40
Flash calcidyne unit (Unit 4A, Baghouse EP-4)	6.97
Flash calcidyne unit (Unit 4B, Baghouse EP-5)	6.97
Flash calcidyne unit (Unit 4C, Baghouse EP-6)	6.97
Flash calcidyne unit (Unit 4D, Baghouse EP-7)	6.97
Flash calcidyne unit (Unit 4E, Baghouse EP-8)	6.97
Stucco conveyor (Unit 7A, Baghouse EP-9)	0.02
Stucco conveyor (Unit 7B, Baghouses EP-13 and EP-14)	0.02, combined
Stucco conveyor (Unit 7C, Baghouse EP-10)	0.02
Stucco conveyor (Unit 7D, Baghouses EP-15 and EP-16)	0.02, combined
Stucco conveyor (Unit 7F, Baghouse EP-17)	0.02
Stucco conveyor (Unit 7G, Baghouse EP-18)	0.02
Stucco conveyor (Unit 7R, Baghouse EP-39)	0.02
Plaster conveyors (Units 7J, 7K, and 7L; Baghouses EP-29, EP-31, and EP-32)	0.12, combined
Plaster storage bin (Unit 7N, Baghouse EP-34)	0.11
Plaster storage bin (Unit 7O, Baghouse EP-35)	0.11
Plaster storage bin (Unit 7P, Baghouse EP-36)	0.11
Plaster mixing and bagging system (Unit 7M, Baghouse EP-33)	0.54
Stucco storage silo (Unit 7H, Baghouse EP-19)	0.53
Stucco storage silo (Unit 7I, Baghouse EP-20)	0.53
Coaxial mixing/pulping system (Unit 8D, Baghouse EP-24)	1.87
Board sawing system and BET dunnage sawing (Unit 1A and Unit 1B, Baghouse EP-25)	0.75
BET grindstone system	0.38

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Emission Unit	PM Emission Limit (lbs/hr)
(Unit 1D, Baghouse EP-38)	
BMA land plaster bin and Starch bin (Unit 8A and 8B, Baghouse EP-21)	0.05
BMA ball mill (Unit 8C, Baghouse EP-23)	0.05
Dunnage Storage Bin (Unit 1C, Baghouse EP-26)	0.04
Stucco cooler (Baghouse)	0.39

* Exhausting through a common stack EP-40.

Compliance with these limits, combined with the potential to emit PM from all other emission units at this source, shall limit the source-wide potential to emit of PM to less than two hundred fifty (250) tons per twelve (12) consecutive month period and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.1.2 FESOP Limits [326 IAC 2-8-4][326 IAC 2-2]

Pursuant to 326 IAC 2-8-4, the Permittee shall comply with the following:

(a) The PM10 and PM2.5 emissions from the gypsum wallboard manufacturing operations shall not exceed the emission limits listed in the table below:

Emission Unit	PM10 Emission Limit (lbs/hr)	PM2.5 Emission Limit (lbs/hr)
Raymond gypsum mill (Unit 3A, Baghouse EP-2)	0.09	0.09
Raymond gypsum mill (Unit 3B, Baghouse EP-3)	0.09	0.09
IMP Mill Flash Calcining System (Unit 9, Cyclone EP-40a and Baghouse EP-40b)*	0.34	0.34
Flash calcidyne unit (Unit 4A, Baghouse EP-4)	1.82	1.82
Flash calcidyne unit (Unit 4B, Baghouse EP-5)	1.82	1.82
Flash calcidyne unit (Unit 4C, Baghouse EP-6)	1.82	1.82
Flash calcidyne unit (Unit 4D, Baghouse EP-7)	1.82	1.82
Flash calcidyne unit (Unit 4E, Baghouse EP-8)	1.82	1.82
Stucco conveyor (Unit 7A, Baghouse EP-9)	0.01	0.01
Stucco conveyor (Unit 7B, Baghouses EP-13 and EP-14)	0.01, combined	0.01, combined
Stucco conveyor (Unit 7C, Baghouse EP-10)	0.01	0.01
Stucco conveyor (Unit 7D, Baghouses EP-15 and EP-16)	0.01, combined	0.01, combined
Stucco conveyor (Unit 7F, Baghouse EP-17)	0.01	0.01
Stucco conveyor (Unit 7G, Baghouse EP-18)	0.01	0.01
Stucco conveyor (Unit 7R, Baghouse EP-39)	0.01	0.01
Plaster conveyors (Units 7J, 7K, and 7L; Baghouses EP-29, EP-31, and EP-32)	0.08, combined	0.08, combined
Plaster storage bin (Unit 7N, Baghouse EP-34)	0.08	0.08
Plaster storage bin (Unit 7O, Baghouse EP-35)	0.08	0.08
Plaster storage bin (Unit 7P, Baghouse EP-36)	0.08	0.08
Plaster mixing and bagging system (Unit 7M, Baghouse EP-33)	0.37	0.37
Stucco storage silo (Unit 7H, Baghouse EP-19)	0.36	0.36
Stucco storage silo (Unit 7I, Baghouse EP-20)	0.36	0.36
Coaxial mixing/pulping system (Unit 8D, Baghouse EP-24)	1.29	1.29

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Emission Unit	PM10 Emission Limit (lbs/hr)	PM2.5 Emission Limit (lbs/hr)
Board sawing system and BET dunnage sawing (Unit 1A and Unit 1B, Baghouse EP-25)	0.44	0.44
BET grindstone system (Unit 1D, Baghouse EP-38)	0.22	0.22
BMA land plaster bin and Starch bin (Unit 8A and 8B, Baghouse EP-21)	0.03	0.03
BMA ball mill (Unit 8C, Baghouse EP-23)	0.03	0.03
Dunnage Storage Bin (Unit 1C, Baghouse EP-26)	0.03	0.03
Stucco cooler (Baghouse)	0.27	0.27

* Exhausting through a common stack EP-40.

(b) The Raymond grinding mill operation, which is equipped with a Raymond mill burner heating unit shall burn only natural gas.

Compliance with these limits, combined with the potential to emit PM10 and PM2.5 from all other emission units at this source, shall limit the source-wide total potential to emit of PM10 and PM2.5 to less than one hundred (100) tons per twelve (12) consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.1.3 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 the PM from the gypsum wallboard manufacturing operations shall not exceed the pound per hour emission rate established as E in the following formulas:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

The emission units shall be limited as follows:

Emission Unit	Max. Throughput Rate (tons/hr)	Particulate Emission Limit (lbs/hr)
Raymond gypsum mill (Unit 3A, Stack EP-2)	28.0	38.2
Raymond gypsum mill (Unit 3B, Stack EP-3)	28.0	38.2
Flash calcidyne unit (Unit 4A, Stack EP-4)	10.0	19.2
Flash calcidyne unit (Unit 4B, Stack EP-5)	10.0	19.2
Flash calcidyne unit (Unit 4C, Stack EP-6)	10.0	19.2
Flash calcidyne unit (Unit 4D, Stack EP-7)	10.0	19.2
Flash calcidyne unit (Unit 4E, Stack EP-8)	10.0	19.2
Stucco conveyor (Unit 7A, Stack EP-9)	4.44	11.1
Stucco conveyor (Unit 7B, Stack EP-13)	4.44	11.1
Stucco conveyor (Unit 7B, Stack EP-14)	4.44	11.1

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Emission Unit	Max. Throughput Rate (tons/hr)	Particulate Emission Limit (lbs/hr)
Stucco conveyor (Unit 7C, Stack EP-10)	4.44	11.1
Stucco conveyor (Unit 7D, Stack EP-15)	4.44	11.1
Stucco conveyor (Unit 7D, Stack EP-16)	4.44	11.1
Stucco conveyor (Unit 7F, Stack EP-17)	4.44	11.1
Stucco conveyor (Unit 7G, Stack EP-18)	4.44	11.1
Stucco conveyor (Unit 7R, Stack EP-39)	4.44	11.1
Plaster conveyor (Unit 7J, Stack EP-29)	14	24.0
Plaster conveyor (Unit 7K, Stack EP-31)	14	24.0
Plaster conveyor (Unit 7L, Stack EP-32)	14	24.0
Plaster storage bin (Unit 7N, Stack EP-34)	4.33	11.0
Plaster storage bin (Unit 7O, Stack EP-35)	4.33	11.0
Plaster storage bin (Unit 7P, Stack EP-36)	4.33	11.0
Plaster mixing and bagging system (Unit 7M, Stack EP-33)	13.0	22.9
Stucco storage silo (Unit 7H, Stack EP-19)	20.0	30.5
Stucco storage silo (Unit 7I, Stack EP-20)	20.0	30.5
Coaxial mixing/pulping system (Unit 8D, Stack EP-24)	45.0	43.6
BET board sawing process (Unit 1A, Stack EP-25)*	2	6.5
BET dunnage sawing process (Unit 1B, Stack EP-25)*	2	6.5
BET grindstone system (Unit 1D, Stack EP-38)	2	6.5
BMA land plaster bin (Unit 8A, Stack EP-21)	1.00	4.1
BMA ball mill (Unit 8C, Stack EP-23)	1.10	4.4
Chopped dunnage storage bin with conveyor (Unit 1C, Stack EP-26)	1.00	4.1
Recycled wallboard screener	10.8	20.2
Stucco cooler	45	43.6

Pursuant to 326 IAC 6-3-2(e)(3), when the process weight exceeds 200 tons per hour, the maximum allowable emissions may exceed the emission limits shown in the table above, provided the concentration of particulate matter in the gas discharged to the atmosphere is less than 0.10 pounds per 1,000 pounds of gases.

D.1.4 Sulfur Dioxide (SO2) [326 IAC 7-1.1-2]

In order to render the requirements of 326 IAC 7-1.1-2 not applicable, the Permittee shall comply with the following:

(a) The No. 2 fuel oil usage in the IMP mill flash calcining system burner shall not exceed 2,502,860.0 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) The sulfur content of No. 2 fuel oil combusted in the IMP mill flash calcining system burner shall not exceed 0.05 percent by weight. Compliance with this limit shall be demonstrated on a calendar month average.

Compliance with these limits shall limit the SO2 emissions from the IMP mill flash calcining system burner to less than twenty-five (25) tons per twelve (12) consecutive month period and shall render 326 IAC 7-1.1-2 (Sulfur Dioxide (SO_2) Emission Limitations) not applicable.

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D.1.5 Volatile Organic Compounds (VOC) BACT [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6 (VOC BACT), SPR 101-36933-00003, the Permittee shall comply with the following:

(a) The Permittee shall comply with the following when drying regular wallboard in the natural gas-fired dryer (Unit 2):

(1) VOC emissions shall not exceed 0.0686 pounds per ton of regular wallboard dried.

(2) The regular wallboard drying rate shall not exceed 400,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The Permittee shall comply with the following when drying silicone XP wallboard in the natural gas-fired dryer (Unit 2):

(1) VOC emissions shall not exceed 0.331 pounds per ton of silicone XP wallboard dried.

(2) The silicone XP wallboard drying rate shall not exceed 345,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

D.1.6 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventative Maintenance Plan is required for these facilities 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 [326 IAC 2-8-4(1)]

D.1.7 Particulate Control [326 IAC 2-8-5]

(a) In order to comply with Conditions D.1.1, D.1.2, and D.1.3, the control devices listed in the table below for particulate control shall be in operation and control emissions from the emission units listed in the table below at all times these facilities are in operation.

Emission Unit	Control Device
Raymond gypsum mill (Unit 3A)	Baghouse EP-2
Raymond gypsum mill (Unit 3B)	Baghouse EP-3
IMP Mill Flash Calcining System (Unit 9)	Cyclone EP-40a and Baghouses EP-40b
Flash calcidyne unit (Unit 4A)	Baghouse EP-4
Flash calcidyne unit (Unit 4B)	Baghouse EP-5
Flash calcidyne unit (Unit 4C)	Baghouse EP-6
Flash calcidyne unit (Unit 4D)	Baghouse EP-7
Flash calcidyne unit (Unit 4E)	Baghouse EP-8
Stucco conveyor (Unit 7A)	Baghouse EP-9
Stucco conveyor (Unit 7B)	Baghouses EP-13 and EP-14
Stucco conveyor (Unit 7C)	Baghouse EP-10
Stucco conveyor (Unit 7D)	Baghouses EP-15 and EP-16
Stucco conveyor (Unit 7F)	Baghouse EP-17
Stucco conveyor (Unit 7G)	Baghouse EP-18
Stucco conveyor (Unit 7R)	Baghouse EP-39
Plaster conveyors (Units 7J, 7K, and 7L)	Baghouses EP-29, EP-31, and EP-32

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Plaster storage bin (Unit 7N)	Baghouse EP-34
Plaster storage bin (Unit 7O)	Baghouse EP-35
Plaster storage bin (Unit 7P)	Baghouse EP-36
Perlite System (Unit 5)	Integral air/perlite separator
Plaster mixing and bagging system (Unit 7M)	Baghouse EP-33
Stucco storage silo (Unit 7H)	Baghouse EP-19
Stucco storage silo (Unit 7I)	Baghouse EP-20
Coaxial mixing/pulping system (Unit 8D)	Baghouse EP-24
Board sawing system and BET dunnage sawing process (Unit 1A and Unit 1B)	Baghouse EP-25
BET grindstone system (Unit 1D)	Baghouse EP-38
BMA land plaster bin and Starch bin (Unit 8A and 8B)	Baghouse EP-21
BMA ball mill (Unit 8C)	Baghouse EP-23
Dunnage Storage Bin (Unit 1C)	Baghouse EP-26
Stucco cooler	Baghouse

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected dated the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.1.8 Testing Requirements [326 IAC 2-8-5(a)(1), (4)][326 IAC 2-1.1-11]

(a) Not later than 180 days after the issuance date of this permit, Permit No 101-36933-00003, the Permittee shall perform VOC testing when drying regular wallboard in the natural gas-fired dryer (Unit 2), utilizing methods approved by the commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

(b) In order to demonstrate compliance with Condition D.1.5(b), the Permittee shall perform VOC testing when drying silicone XP wallboard in the natural gas-fired dryer (Unit 2) utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

(c) In order to demonstrate compliance with Conditions D.1.1(a) and D.1.2(a), the Permittee shall perform PM, PM10, and PM2.5 testing of the IMP mill flash calcining system integral baghouses no later than sixty (60) days after achieving maximum capacity, but not later than one hundred and eighty (180) days after initial startup. This testing shall be conducted utilizing methods approved by the Commissioner and shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM10 and PM2.5 includes filterable and condensable PM.

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D.1.9 Sulfur Dioxide Emissions and Sulfur Content

(a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate compliance with Condition D.1.4(b) utilizing one of the following options

(1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or

(2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.

(A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and

(B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.

(b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the dryer/mixer, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to any of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

Compliance Monitoring Requirements [326 IAC 2-8-4(1)][326 IAC 2-8-5(a)(1)]

D.1.10 Visible Emissions Notations

(a) Daily visible emission notations of the stack exhausts listed in this section of this permit shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.1.11 Broken or Failed Bag Detection

(a) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed

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to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse=s pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

D.1.12 Cyclone Failure Detection

In the event that cyclone failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.1.13 Record Keeping Requirements

(a) To document the compliance status with Condition D.1.4, the Permittee shall maintain records in accordance with (1) through (7) below. Records maintained for (1) through (7) shall be taken monthly and shall be complete and sufficient to establish compliance with the fuel usage sulfur content limit established in Condition D.1.4.

(1) Calendar dates covered in the compliance determination period;

(2) Actual fuel oil usage each month;

(3) Average sulfur content of fuel oil used;

(4) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and

If the fuel supplier certification is used to demonstrate compliance, the following, as a minimum, shall be maintained:

(5) Fuel supplier certifications;

(6) The name of the fuel supplier; and

(7) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.

(b) To document the compliance status with Condition D.1.5, the Permittee shall keep records of the amount of regular and silicone XP wallboard dried in the natural gas-fired kiln dryer (Unit 2). Records necessary to demonstrate compliance shall be available no later than thirty (30) days of the end of each compliance period.

(c) To document the compliance status with Conditions D.1.10, the Permittee shall maintain records of daily visible emission notations of the stack exhaust listed in this section of this permit. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

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(d) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

D.1.14 Reporting Requirements

A quarterly summary of the information to document compliance status with Conditions D.1.4(a) and D.1.5 shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meet the requirements of 326 IAC 2-8-5(a)(1) by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

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SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Insignificant Activity:

(a) Degreasing operations that do not exceed 145 gallons per 12 months, and not subject to 326 IAC 20-6, including four (4) Safety Kleen parts cleaning operations.

(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 2-8-4(1)]

D.2.1 Cold Cleaner Degreaser Control Equipment and Operating Requirements [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Degreaser Control Equipment and Operating Requirements), the Permittee shall:

(a) 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 operating 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) 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.

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(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.2.2 Material Requirements for Cold Cleaner Degreasers [326 IAC 8-3-8]

Pursuant to 326 IAC 8-3-8 (Material Requirements for Cold Cleaner Degreasers), the Permittee shall not operate a cold cleaning 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.2.3 Preventive Maintenance Plan[326 IAC 2-8-4(9)]

A Preventive Maintenance Plan is required for these facilities and their associated control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)]

D.2.4 Record Keeping Requirements

(a) To document the compliance status with Condition D.2.2, the Permittee shall maintain the following records for each purchase of solvent used in the cold cleaner degreasing operations. These records shall be retained on-site or accessible electronically for the most recent three (3) year period and shall be reasonably accessible for an additional two (2) year period.

(1) The name and address of the solvent supplier.

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

(3) The type of solvent purchased.

(4) The total volume of the 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).

(b) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

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SECTION E.1 NSPS

Emissions Unit Description:

(b) One (1) IMP mill flash calcining system, consisting of one (1) natural gas-fired Raymond mill burner, with a maximum heat input capacity of forty (40) million British thermal units per hour, using ultra low sulfur No. 2 fuel oil as a back up fuel, and one (1) impact mill, identified as Unit 9, approved for construction in 2012, with a maximum capacity 40 tons of flue-gas-desulfurization (FGD, i.e. synthetic) gypsum per hour, with particulate matter emissions controlled by one (1) integral cyclone, identified as EP-40a and two (2) integral baghouses, identified as EP-40b, and exhausting to stack EP-40.

Under 40 CFR 60, Subpart OOO, this is considered an affected facility.

(g) One (1) synthetic gypsum storage and conveying operation with fugitive emissions.

Under 40 CFR 60, Subpart OOO, this is considered an affected facility.

(h) One (1) wallboard grinder, approved for construction in 2012, with a maximum capacity of 20 tons of wallboard per hour, utilizing no control, with emissions exhausting outdoors.

Under 40 CFR 60, Subpart OOO, this is considered an affected facility.

(i) One (1) diesel fueled recycled wallboard grinder, approved in 2016 for construction, with a maximum capacity of 10.8 tons of wallboard per hour, powered by a 590 Horsepower nonroad engine, utilizing no control, with emissions exhausting outdoors.

Under 40 CFR 60, Subpart OOO, this is considered an affected facility.

(j) One (1) diesel fueled recycled wallboard screener, approved in 2016 for construction, with a maximum throughput capacity of 10.8 tons of wallboard per hour, powered by a 100 Horsepower nonroad engine, utilizing no control, with emissions exhausting outdoors.

Under 40 CFR 60, Subpart OOO, this is considered an affected facility.

(k) One (1) diesel fueled recycled wallboard stacker, approved in 2016 for construction, with a maximum throughput capacity of 10.8 tons of wallboard per hour, powered by a 21.6 Horsepower nonroad engine, utilizing no control, with emissions exhausting outdoors.

Under 40 CFR 60, Subpart OOO, this is considered an affected facility.

Insignificant Activities:

(r) Emission units with PM and PM10 emissions less than five (5) tons per year, SO2, NOx, and VOC emissions less than ten (10) tons per year, CO emissions less than twenty-five (25) tons per year, and lead emissions less than two tenths (0.2) ton per year:

(1) One (1) storage building, a receiving hopper/feeder, and the associated belt conveyors for the FGD utilization process;

(2) One (1) covered FGD storage pile, with a maximum storage capacity of 5,000 tons per year; and

(3) One (1) FGD belt conveyor system, with a maximum conveying capacity of 250

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tons per hour.

Under 40 CFR 60, Subpart OOO, these units are considered affected facilities.

(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 (NSPS) Requirements [326 IAC 2-8-4(1)]

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

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

(b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports 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

E.1.2 Standards of Performance for Nonmetallic Mineral Processing Plants NSPS [326 IAC 12][40 CFR Part 60, Subpart OOO]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart OOO (included as Attachment B to the operating permit), which are incorporated by reference as 326 IAC 12.

(a) The recycled wallboard stacker, one (1) synthetic gypsum storage and conveying operation, one (1) storage building, one (1) covered FGD storage pile, and one (1) FGD belt conveyor system:
(1) 40 CFR 60.670(a)(1), (e), (f)
(2) 40 CFR 60.671
(3) 40 CFR 60.672(b), (d), (e)
(4) 40 CFR 60.673
(5) 40 CFR 60.675(c)(1), (c)(3), (d), (e), (i)
(6) 40 CFR 60.676(f), (h), (i), (j), (k)
(7) Table 1 to Subpart OOO of Part 60
(8) Table 3 to Subpart OOO of Part 60

(b) The wallboard grinder, recycled wallboard grinder, and recycled wallboard screener:
(1) 40 CFR 60.670(a)(1), (e), (f)
(2) 40 CFR 60.671
(3) 40 CFR 60.672(b), (d)
(4) 40 CFR 60.673
(5) 40 CFR 60.675(c)(1), (c)(3), (e), (i)
(6) 40 CFR 60.676(f), (h), (i), (j), (k)
(7) Table 1 to Subpart OOO of Part 60
(8) Table 3 to Subpart OOO of Part 60

(c) The one (1) IMP mill flash calcining system:
(1) 40 CFR 60.670(a)(1), (e), (f)

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(2) 40 CFR 60.671
(3) 40 CFR 60.672(a), (b)
(4) 40 CFR 60.673
(5) 40 CFR 60.674(c), (d)
(6) 40 CFR 60.675(a), (b), (c)(1), (c)(3), (e), (g), (i)
(7) 40 CFR 60.676(b)(1), (b)(2), (f), (h), (i), (j), (k)
(8) Table 1 to Subpart OOO of Part 60
(9) Table 2 to Subpart OOO of Part 60
(10) Table 3 to Subpart OOO of Part 60

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SECTION E.2 NESHAP

Emissions Unit Description:

Insignificant Activities:

(p) Emergency generators, constructed in 1974, including:

(1) One (1) diesel fired emergency generator, with a maximum power output rate of 130 horsepower.

(2) One (1) diesel fired emergency flood pump, with a maximum power output rate of 375 horsepower.

Under 40 CFR 63, Subpart ZZZZ, these units are considered affected sources.

(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 (NESHAP) Requirements [326 IAC 2-8-4(1)]

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

(a) Pursuant to 40 CFR 63.1 the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 63, Subpart ZZZ.

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

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

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ (included as Attachment C to the operating permit), which are incorporated by reference as 326 IAC 20-82, for the emission unit(s) listed above:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(a)(1)(iii)
(4) 40 CFR 63.6595(a)(1), (b), 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), and (f)
(10) 40 CFR 63.6645(a)(5)
(11) 40 CFR 63.6650

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(12) 40 CFR 63.6655
(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)
(19) Table 8

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INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: New NGC, Inc. dba National Gypsum Company
Source Address: 9720 US Highway 50 East, Shoals, Indiana 47581
FESOP Permit No.: F101-22910-00003

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:

Date:

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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

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT

Source Name: New NGC, Inc. dba National Gypsum Company
Source Address: 9720 US Highway 50 East, Shoals, Indiana 47581
FESOP Permit No.: F101-22910-00003

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 2-8-12

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:

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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 Describe:
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: _____

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INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

FESOP Quarterly Report

Source Name: New NGC, Inc. dba National Gypsum Company
Source Address: 9720 US Highway 50 East, Shoals, Indiana 47581
FESOP No.: F101-22910-00003
Facility: IMP mill flash calcining system burner
Parameter: No. 2 Fuel Usage
Limit: The No. 2 fuel oil usage in the IMP mill flash calcining system burner shall not exceed 2,502,860.0 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

QUARTER: _____ YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	No. 2 Fuel Oil Usage This Month (Gallons)	No. 2 Fuel Oil Usage Previous 11 Months (Gallons)	No. 2 Fuel Oil Usage 12 Month Total (Gallons)

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:_____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

DRAFT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

FESOP Quarterly Report

Source Name: New NGC, Inc. dba National Gypsum Company
Source Address: 9720 U.S. Highway 50 East, Shoals, Indiana 47581
FESOP Permit No.: F101-22910-00003
Facility: Natural Gas-Fired Kiln Dryer (Unit 2)
Parameter: Regular and silicone XP Wallboard Drying Rate
Limit: The regular wallboard drying rate shall not exceed 400,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month and the silicone XP wallboard drying rate shall not exceed 345,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER: _____ YEAR: _____

Month	Wallboard Type	Column 1	Column 2	Column 1 + Column 2
		This Month	Previous 11 Months	12 Month Total
	Regular			
	XP			
	Regular			
	XP			
	Regular			
	XP			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:_____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

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INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: New NGC, Inc. dba National Gypsum Company
Source Address: 9720 US Highway 50 East, Shoals, Indiana 47581
FESOP Permit No.: F101-22910-00003

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

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:	

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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 B

Federally Enforceable State Operating Permit (FESOP) No: 101-22910-00003

[Downloaded from the eCFR on May 13, 2013]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart OOO—Standards of Performance for Nonmetallic Mineral Processing Plants

Source: 74 FR 19309, Apr. 28, 2009, unless otherwise noted.

§ 60.670 Applicability and designation of affected facility.

(a)(1) Except as provided in paragraphs (a)(2), (b), (c), and (d) of this section, the provisions of this subpart are applicable to the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station. Also, crushers and grinding mills at hot mix asphalt facilities that reduce the size of nonmetallic minerals embedded in recycled asphalt pavement and subsequent affected facilities up to, but not including, the first storage silo or bin are subject to the provisions of this subpart.

(2) The provisions of this subpart do not apply to the following operations: All facilities located in underground mines; plants without crushers or grinding mills above ground; and wet material processing operations (as defined in § 60.671).

(b) An affected facility that is subject to the provisions of subparts F or I of this part or that follows in the plant process any facility subject to the provisions of subparts F or I of this part is not subject to the provisions of this subpart.

(c) Facilities at the following plants are not subject to the provisions of this subpart:

(1) Fixed sand and gravel plants and crushed stone plants with capacities, as defined in § 60.671, of 23 megagrams per hour (25 tons per hour) or less;

(2) Portable sand and gravel plants and crushed stone plants with capacities, as defined in § 60.671, of 136 megagrams per hour (150 tons per hour) or less; and

(3) Common clay plants and pumice plants with capacities, as defined in § 60.671, of 9 megagrams per hour (10 tons per hour) or less.

(d)(1) When an existing facility is replaced by a piece of equipment of equal or smaller size, as defined in § 60.671, having the same function as the existing facility, and there is no increase in the amount of emissions, the new facility is exempt from the provisions of §§ 60.672, 60.674, and 60.675 except as provided for in paragraph (d)(3) of this section.

(2) An owner or operator complying with paragraph (d)(1) of this section shall submit the information required in § 60.676(a).

(3) An owner or operator replacing all existing facilities in a production line with new facilities does not qualify for the exemption described in paragraph (d)(1) of this section and must comply with the provisions of §§ 60.672, 60.674 and 60.675.

(e) An affected facility under paragraph (a) of this section that commences construction, modification, or reconstruction after August 31, 1983, is subject to the requirements of this part.

(f) Table 1 of this subpart specifies the provisions of subpart A of this part 60 that do not apply to owners and operators of affected facilities subject to this subpart or that apply with certain exceptions.

§ 60.671 Definitions.

All terms used in this subpart, but not specifically defined in this section, shall have the meaning given them in the Act and in subpart A of this part.

Bagging operation means the mechanical process by which bags are filled with nonmetallic minerals.

Belt conveyor means a conveying device that transports material from one location to another by means of an endless belt that is carried on a series of idlers and routed around a pulley at each end.

Bucket elevator means a conveying device of nonmetallic minerals consisting of a head and foot assembly which supports and drives an endless single or double strand chain or belt to which buckets are attached.

Building means any frame structure with a roof.

Capacity means the cumulative rated capacity of all initial crushers that are part of the plant.

Capture system means the equipment (including enclosures, hoods, ducts, fans, dampers, etc.) used to capture and transport particulate matter generated by one or more affected facilities to a control device.

Control device means the air pollution control equipment used to reduce particulate matter emissions released to the atmosphere from one or more affected facilities at a nonmetallic mineral processing plant.

Conveying system means a device for transporting materials from one piece of equipment or location to another location within a plant. Conveying systems include but are not limited to the following: Feeders, belt conveyors, bucket elevators and pneumatic systems.

Crush or *Crushing* means to reduce the size of nonmetallic mineral material by means of physical impaction of the crusher or grinding mill upon the material.

Crusher means a machine used to crush any nonmetallic minerals, and includes, but is not limited to, the following types: Jaw, gyratory, cone, roll, rod mill, hammermill, and impactor.

Enclosed truck or railcar loading station means that portion of a nonmetallic mineral processing plant where nonmetallic minerals are loaded by an enclosed conveying system into enclosed trucks or railcars.

Fixed plant means any nonmetallic mineral processing plant at which the processing equipment specified in § 60.670(a) is attached by a cable, chain, turnbuckle, bolt or other means (except electrical connections) to any anchor, slab, or structure including bedrock.

Fugitive emission means particulate matter that is not collected by a capture system and is released to the atmosphere at the point of generation.

Grinding mill means a machine used for the wet or dry fine crushing of any nonmetallic mineral. Grinding mills include, but are not limited to, the following types: Hammer, roller, rod, pebble and ball, and fluid energy. The grinding mill includes the air conveying system, air separator, or air classifier, where such systems are used.

Initial crusher means any crusher into which nonmetallic minerals can be fed without prior crushing in the plant.

Nonmetallic mineral means any of the following minerals or any mixture of which the majority is any of the following minerals:

(1) Crushed and Broken Stone, including Limestone, Dolomite, Granite, Traprock, Sandstone, Quartz, Quartzite, Marl, Marble, Slate, Shale, Oil Shale, and Shell.

(2) Sand and Gravel.

(3) Clay including Kaolin, Fireclay, Bentonite, Fuller's Earth, Ball Clay, and Common Clay.

(4) Rock Salt.

(5) Gypsum (natural or synthetic).

(6) Sodium Compounds, including Sodium Carbonate, Sodium Chloride, and Sodium Sulfate.

(7) Pumice.

(8) Gilsonite.

(9) Talc and Pyrophyllite.

(10) Boron, including Borax, Kernite, and Colemanite.

(11) Barite.

(12) Fluorospar.

(13) Feldspar.

(14) Diatomite.

(15) Perlite.

(16) Vermiculite.

(17) Mica.

(18) Kyanite, including Andalusite, Sillimanite, Topaz, and Dumortierite.

Nonmetallic mineral processing plant means any combination of equipment that is used to crush or grind any nonmetallic mineral wherever located, including lime plants, power plants, steel mills, asphalt concrete plants, portland cement plants, or any other facility processing nonmetallic minerals except as provided in § 60.670 (b) and (c).

Portable plant means any nonmetallic mineral processing plant that is mounted on any chassis or skids and may be moved by the application of a lifting or pulling force. In addition, there shall be no cable, chain, turnbuckle, bolt or other means (except electrical connections) by which any piece of equipment is attached or clamped to any anchor, slab, or structure, including bedrock that must be removed prior to the application of a lifting or pulling force for the purpose of transporting the unit.

Production line means all affected facilities (crushers, grinding mills, screening operations, bucket elevators, belt conveyors, bagging operations, storage bins, and enclosed truck and railcar loading stations) which are directly connected or are connected together by a conveying system.

Saturated material means, for purposes of this subpart, mineral material with sufficient surface moisture such that particulate matter emissions are not generated from processing of the material through screening operations, bucket elevators and belt conveyors. Material that is wetted solely by wet suppression systems is not considered to be "saturated" for purposes of this definition.

Screening operation means a device for separating material according to size by passing undersize material through one or more mesh surfaces (screens) in series, and retaining oversize material on the mesh surfaces (screens). Grizzly feeders associated with truck dumping and static (non-moving) grizzlies used anywhere in the nonmetallic mineral processing plant are not considered to be screening operations.

Seasonal shut down means shut down of an affected facility for a period of at least 45 consecutive days due to weather or seasonal market conditions.

Size means the rated capacity in tons per hour of a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station; the total surface area of the top screen of a screening operation; the width of a conveyor belt; and the rated capacity in tons of a storage bin.

Stack emission means the particulate matter that is released to the atmosphere from a capture system.

Storage bin means a facility for storage (including surge bins) of nonmetallic minerals prior to further processing or loading.

Transfer point means a point in a conveying operation where the nonmetallic mineral is transferred to or from a belt conveyor except where the nonmetallic mineral is being transferred to a stockpile.

Truck dumping means the unloading of nonmetallic minerals from movable vehicles designed to transport nonmetallic minerals from one location to another. Movable vehicles include but are not limited to: Trucks, front end loaders, skip hoists, and railcars.

Vent means an opening through which there is mechanically induced air flow for the purpose of exhausting from a building air carrying particulate matter emissions from one or more affected facilities.

Wet material processing operation(s) means any of the following:

(1) Wet screening operations (as defined in this section) and subsequent screening operations, bucket elevators and belt conveyors in the production line that process saturated materials (as defined in this section) up to the first crusher, grinding mill or storage bin in the production line; or

(2) Screening operations, bucket elevators and belt conveyors in the production line downstream of wet mining operations (as defined in this section) that process saturated materials (as defined in this section) up to the first crusher, grinding mill or storage bin in the production line.

Wet mining operation means a mining or dredging operation designed and operated to extract any nonmetallic mineral regulated under this subpart from deposits existing at or below the water table, where the nonmetallic mineral is saturated with water.

Wet screening operation means a screening operation at a nonmetallic mineral processing plant which removes unwanted material or which separates marketable fines from the product by a washing process which is designed and operated at all times such that the product is saturated with water.

§ 60.672 Standard for particulate matter (PM).

(a) Affected facilities must meet the stack emission limits and compliance requirements in Table 2 of this subpart within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under § 60.8. The requirements in Table 2 of this subpart apply for affected facilities with capture systems used to capture and transport particulate matter to a control device.

(b) Affected facilities must meet the fugitive emission limits and compliance requirements in Table 3 of this subpart within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under § 60.11. The requirements in Table 3 of this subpart apply for fugitive emissions from affected facilities without capture systems and for fugitive emissions escaping capture systems.

(c) [Reserved]

(d) Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the requirements of this section.

(e) If any transfer point on a conveyor belt or any other affected facility is enclosed in a building, then each enclosed affected facility must comply with the emission limits in paragraphs (a) and (b) of this section, or the building enclosing the affected facility or facilities must comply with the following emission limits:

(1) Fugitive emissions from the building openings (except for vents as defined in § 60.671) must not exceed 7 percent opacity; and

(2) Vents (as defined in § 60.671) in the building must meet the applicable stack emission limits and compliance requirements in Table 2 of this subpart.

(f) Any baghouse that controls emissions from only an individual, enclosed storage bin is exempt from the applicable stack PM concentration limit (and associated performance testing) in Table 2 of this subpart but must meet the applicable stack opacity limit and compliance requirements in Table 2 of this subpart. This exemption from the stack PM concentration limit does not apply for multiple storage bins with combined stack emissions.

§ 60.673 Reconstruction.

(a) The cost of replacement of ore-contact surfaces on processing equipment shall not be considered in calculating either the “fixed capital cost of the new components” or the “fixed capital cost that would be required to construct a comparable new facility” under § 60.15. Ore-contact surfaces are crushing surfaces; screen meshes, bars, and plates; conveyor belts; and elevator buckets.

(b) Under § 60.15, the “fixed capital cost of the new components” includes the fixed capital cost of all depreciable components (except components specified in paragraph (a) of this section) which are or will be replaced pursuant to all continuous programs of component replacement commenced within any 2-year period following August 31, 1983.

§ 60.674 Monitoring of operations.

(a) The owner or operator of any affected facility subject to the provisions of this subpart which uses a wet scrubber to control emissions shall install, calibrate, maintain and operate the following monitoring devices:

(1) A device for the continuous measurement of the pressure loss of the gas stream through the scrubber. The monitoring device must be certified by the manufacturer to be accurate within ±250 pascals ±1 inch water gauge pressure and must be calibrated on an annual basis in accordance with manufacturer's instructions.

(2) A device for the continuous measurement of the scrubbing liquid flow rate to the wet scrubber. The monitoring device must be certified by the manufacturer to be accurate within ±5 percent of design scrubbing liquid flow rate and must be calibrated on an annual basis in accordance with manufacturer's instructions.

(b) The owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses wet suppression to control emissions from the affected facility must perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The owner or operator must initiate corrective action within 24 hours and complete corrective action as expediently as practical if the owner or operator finds that water is not flowing properly during an inspection of the water spray nozzles. The owner or operator must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in the logbook required under § 60.676(b).

(1) If an affected facility relies on water carryover from upstream water sprays to control fugitive emissions, then that affected facility is exempt from the 5-year repeat testing requirement specified in Table 3 of this subpart provided that the affected facility meets the criteria in paragraphs (b)(1)(i) and (ii) of this section:

(i) The owner or operator of the affected facility conducts periodic inspections of the upstream water spray(s) that are responsible for controlling fugitive emissions from the affected facility. These inspections are conducted according to paragraph (b) of this section and § 60.676(b), and

(ii) The owner or operator of the affected facility designates which upstream water spray(s) will be periodically inspected at the time of the initial performance test required under § 60.11 of this part and § 60.675 of this subpart.

(2) If an affected facility that routinely uses wet suppression water sprays ceases operation of the water sprays or is using a control mechanism to reduce fugitive emissions other than water sprays during the monthly inspection (for example, water from recent rainfall), the logbook entry required under § 60.676(b) must specify the control mechanism being used instead of the water sprays.

(c) Except as specified in paragraph (d) or (e) of this section, the owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses a baghouse to control emissions must conduct quarterly 30-minute visible emissions inspections using EPA Method 22 (40 CFR part 60, Appendix A-7). The Method 22 (40 CFR part 60, Appendix A-7) test shall be conducted while the baghouse is operating. The test is successful if no visible emissions are observed. If any visible emissions are observed, the owner or operator of the affected facility must initiate corrective action within 24 hours to return the baghouse to normal operation. The owner or operator must record each Method 22 (40 CFR part 60, Appendix A-7) test, including the date and any corrective actions taken, in the logbook required under § 60.676(b). The owner or operator of the affected facility may establish a different baghouse-specific success level for the visible emissions test (other than no visible emissions) by conducting a PM performance test according to § 60.675(b) simultaneously with a Method 22 (40 CFR part 60, Appendix A-7) to determine what constitutes normal visible emissions from that affected facility's baghouse when it is in compliance with the applicable PM concentration limit in Table 2 of this subpart. The revised visible emissions success level must be incorporated into the permit for the affected facility.

(d) As an alternative to the periodic Method 22 (40 CFR part 60, Appendix A-7) visible emissions inspections specified in paragraph (c) of this section, the owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses a baghouse to control emissions may use a bag leak detection system. The owner or operator must install, operate, and maintain the bag leak detection system according to paragraphs (d)(1) through (3) of this section.

(1) Each bag leak detection system must meet the specifications and requirements in paragraphs (d)(1)(i) through (viii) of this section.

(i) The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 1 milligram per dry standard cubic meter (0.00044 grains per actual cubic foot) or less.

(ii) The bag leak detection system sensor must provide output of relative PM loadings. The owner or operator shall continuously record the output from the bag leak detection system using electronic or other means (*e.g.* , using a strip chart recorder or a data logger).

(iii) The bag leak detection system must be equipped with an alarm system that will sound when the system detects an increase in relative particulate loading over the alarm set point established according to paragraph (d)(1)(iv) of this section, and the alarm must be located such that it can be heard by the appropriate plant personnel.

(iv) In the initial adjustment of the bag leak detection system, the owner or operator must establish, at a minimum, the baseline output by adjusting the sensitivity (range) and the averaging period of the device, the alarm set points, and the alarm delay time.

(v) Following initial adjustment, the owner or operator shall not adjust the averaging period, alarm set point, or alarm delay time without approval from the Administrator or delegated authority except as provided in paragraph (d)(1)(vi) of this section.

(vi) Once per quarter, the owner or operator may adjust the sensitivity of the bag leak detection system to account for seasonal effects, including temperature and humidity, according to the procedures identified in the site-specific monitoring plan required by paragraph (d)(2) of this section.

(vii) The owner or operator must install the bag leak detection sensor downstream of the fabric filter.

(viii) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(2) The owner or operator of the affected facility must develop and submit to the Administrator or delegated authority for approval of a site-specific monitoring plan for each bag leak detection system. The owner or operator must operate and maintain the bag leak detection system according to the site-specific monitoring plan at all times. Each monitoring plan must describe the items in paragraphs (d)(2)(i) through (vi) of this section.

(i) Installation of the bag leak detection system;

(ii) Initial and periodic adjustment of the bag leak detection system, including how the alarm set-point will be established;

(iii) Operation of the bag leak detection system, including quality assurance procedures;

(iv) How the bag leak detection system will be maintained, including a routine maintenance schedule and spare parts inventory list;

(v) How the bag leak detection system output will be recorded and stored; and

(vi) Corrective action procedures as specified in paragraph (d)(3) of this section. In approving the site-specific monitoring plan, the Administrator or delegated authority may allow owners and operators more than 3 hours to alleviate a specific condition that causes an alarm if the owner or operator identifies in the monitoring plan this specific condition as one that could lead to an alarm, adequately explains why it is not feasible to alleviate this condition within 3 hours of the time the alarm occurs, and demonstrates that the requested time will ensure alleviation of this condition as expeditiously as practicable.

(3) For each bag leak detection system, the owner or operator must initiate procedures to determine the cause of every alarm within 1 hour of the alarm. Except as provided in paragraph (d)(2)(vi) of this section, the owner or operator must alleviate the cause of the alarm within 3 hours of the alarm by taking whatever corrective action(s) are necessary. Corrective actions may include, but are not limited to the following:

(i) Inspecting the fabric filter for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in PM emissions;

(ii) Sealing off defective bags or filter media;

(iii) Replacing defective bags or filter media or otherwise repairing the control device;

(iv) Sealing off a defective fabric filter compartment;

(v) Cleaning the bag leak detection system probe or otherwise repairing the bag leak detection system; or

(vi) Shutting down the process producing the PM emissions.

(e) As an alternative to the periodic Method 22 (40 CFR part 60, Appendix A-7) visible emissions inspections specified in paragraph (c) of this section, the owner or operator of any affected facility that is subject to the requirements for processed stone handling operations in the Lime Manufacturing NESHAP (40 CFR part 63, subpart AAAAA) may follow the continuous compliance requirements in row 1 items (i) through (iii) of Table 6 to Subpart AAAAA of 40 CFR part 63.

§ 60.675 Test methods and procedures.

(a) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendices A-1 through A-7 of this part or other methods and procedures as specified in this section, except as provided in § 60.8(b). Acceptable alternative methods and procedures are given in paragraph (e) of this section.

(b) The owner or operator shall determine compliance with the PM standards in § 60.672(a) as follows:

(1) Except as specified in paragraphs (e)(3) and (4) of this section, Method 5 of Appendix A-3 of this part or Method 17 of Appendix A-6 of this part shall be used to determine the particulate matter concentration. The sample volume shall be at least 1.70 dscm (60 dscf). For Method 5 (40 CFR part 60, Appendix A-3), if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters. If the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121 °C (250 °F), to prevent water condensation on the filter.

(2) Method 9 of Appendix A-4 of this part and the procedures in § 60.11 shall be used to determine opacity.

(c)(1) In determining compliance with the particulate matter standards in § 60.672(b) or § 60.672(e)(1), the owner or operator shall use Method 9 of Appendix A-4 of this part and the procedures in § 60.11, with the following additions:

(i) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

(ii) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (*e.g.,* road dust). The required observer position relative to the sun (Method 9 of Appendix A-4 of this part, Section 2.1) must be followed.

(iii) For affected facilities using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.

(2)(i) In determining compliance with the opacity of stack emissions from any baghouse that controls emissions only from an individual enclosed storage bin under § 60.672(f) of this subpart, using Method 9 (40 CFR part 60, Appendix A-4), the duration of the Method 9 (40 CFR part 60, Appendix A-4) observations shall be 1 hour (ten 6-minute averages).

(ii) The duration of the Method 9 (40 CFR part 60, Appendix A-4) observations may be reduced to the duration the affected facility operates (but not less than 30 minutes) for baghouses that control storage bins or enclosed truck or railcar loading stations that operate for less than 1 hour at a time.

(3) When determining compliance with the fugitive emissions standard for any affected facility described under § 60.672(b) or § 60.672(e)(1) of this subpart, the duration of the Method 9 (40 CFR part 60, Appendix A-4) observations must be 30 minutes (five 6-minute averages). Compliance with the applicable fugitive emission limits in Table 3 of this subpart must be based on the average of the five 6-minute averages.

(d) To demonstrate compliance with the fugitive emission limits for buildings specified in § 60.672(e)(1), the owner or operator must complete the testing specified in paragraph (d)(1) and (2) of this section. Performance tests must be conducted while all affected facilities inside the building are operating.

(1) If the building encloses any affected facility that commences construction, modification, or reconstruction on or after April 22, 2008, the owner or operator of the affected facility must conduct an initial Method 9 (40 CFR part 60, Appendix A-4) performance test according to this section and § 60.11.

(2) If the building encloses only affected facilities that commenced construction, modification, or reconstruction before April 22, 2008, and the owner or operator has previously conducted an initial Method 22 (40 CFR part 60, Appendix A-7) performance test showing zero visible emissions, then the owner or operator has demonstrated compliance with

the opacity limit in § 60.672(e)(1). If the owner or operator has not conducted an initial performance test for the building before April 22, 2008, then the owner or operator must conduct an initial Method 9 (40 CFR part 60, Appendix A-4) performance test according to this section and § 60.11 to show compliance with the opacity limit in § 60.672(e)(1).

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

(1) For the method and procedure of paragraph (c) of this section, if emissions from two or more facilities continuously interfere so that the opacity of fugitive emissions from an individual affected facility cannot be read, either of the following procedures may be used:

(i) Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected facilities contributing to the emissions stream.

(ii) Separate the emissions so that the opacity of emissions from each affected facility can be read.

(2) A single visible emission observer may conduct visible emission observations for up to three fugitive, stack, or vent emission points within a 15-second interval if the following conditions are met:

(i) No more than three emission points may be read concurrently.

(ii) All three emission points must be within a 70 degree viewing sector or angle in front of the observer such that the proper sun position can be maintained for all three points.

(iii) If an opacity reading for any one of the three emission points equals or exceeds the applicable standard, then the observer must stop taking readings for the other two points and continue reading just that single point.

(3) Method 5I of Appendix A-3 of this part may be used to determine the PM concentration as an alternative to the methods specified in paragraph (b)(1) of this section. Method 5I (40 CFR part 60, Appendix A-3) may be useful for affected facilities that operate for less than 1 hour at a time such as (but not limited to) storage bins or enclosed truck or railcar loading stations.

(4) In some cases, velocities of exhaust gases from building vents may be too low to measure accurately with the type S pitot tube specified in EPA Method 2 of Appendix A-1 of this part [*i.e.,* velocity head <1.3 mm H_2O (0.05 in. H_2O)] and referred to in EPA Method 5 of Appendix A-3 of this part. For these conditions, the owner or operator may determine the average gas flow rate produced by the power fans (*e.g.,* from vendor-supplied fan curves) to the building vent. The owner or operator may calculate the average gas velocity at the building vent measurement site using Equation 1 of this section and use this average velocity in determining and maintaining isokinetic sampling rates.

$$v_e = \frac{Q_f}{A_e} \qquad \text{(Eq. 1)}$$

Where:

V_e = average building vent velocity (feet per minute);

Q_f = average fan flow rate (cubic feet per minute); and

A_e = area of building vent and measurement location (square feet).

(f) To comply with § 60.676(d), the owner or operator shall record the measurements as required in § 60.676(c) using the monitoring devices in § 60.674 (a)(1) and (2) during each particulate matter run and shall determine the averages.

(g) For performance tests involving only Method 9 (40 CFR part 60 Appendix A-4) testing, the owner or operator may reduce the 30-day advance notification of performance test in § 60.7(a)(6) and 60.8(d) to a 7-day advance notification.

(h) [Reserved]

(i) If the initial performance test date for an affected facility falls during a seasonal shut down (as defined in § 60.671 of this subpart) of the affected facility, then with approval from the permitting authority, the owner or operator may postpone the initial performance test until no later than 60 calendar days after resuming operation of the affected facility.

§ 60.676 Reporting and recordkeeping.

(a) Each owner or operator seeking to comply with § 60.670(d) shall submit to the Administrator the following information about the existing facility being replaced and the replacement piece of equipment.

(1) For a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station:

(i) The rated capacity in megagrams or tons per hour of the existing facility being replaced and

(ii) The rated capacity in tons per hour of the replacement equipment.

(2) For a screening operation:

(i) The total surface area of the top screen of the existing screening operation being replaced and

(ii) The total surface area of the top screen of the replacement screening operation.

(3) For a conveyor belt:

(i) The width of the existing belt being replaced and

(ii) The width of the replacement conveyor belt.

(4) For a storage bin:

(i) The rated capacity in megagrams or tons of the existing storage bin being replaced and

(ii) The rated capacity in megagrams or tons of replacement storage bins.

(b)(1) Owners or operators of affected facilities (as defined in §§ 60.670 and 60.671) for which construction, modification, or reconstruction commenced on or after April 22, 2008, must record each periodic inspection required under § 60.674(b) or (c), including dates and any corrective actions taken, in a logbook (in written or electronic format). The owner or operator must keep the logbook onsite and make hard or electronic copies (whichever is requested) of the logbook available to the Administrator upon request.

(2) For each bag leak detection system installed and operated according to § 60.674(d), the owner or operator must keep the records specified in paragraphs (b)(2)(i) through (iii) of this section.

(i) Records of the bag leak detection system output;

(ii) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and

(iii) The date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, the cause of the alarm, an explanation of the actions taken, the date and time the cause of the alarm was alleviated, and whether the cause of the alarm was alleviated within 3 hours of the alarm.

(3) The owner or operator of each affected facility demonstrating compliance according to § 60.674(e) by following the requirements for processed stone handling operations in the Lime Manufacturing NESHAP (40 CFR part 63, subpart AAAAA) must maintain records of visible emissions observations required by § 63.7132(a)(3) and (b) of 40 CFR part 63, subpart AAAAA.

(c) During the initial performance test of a wet scrubber, and daily thereafter, the owner or operator shall record the measurements of both the change in pressure of the gas stream across the scrubber and the scrubbing liquid flow rate.

(d) After the initial performance test of a wet scrubber, the owner or operator shall submit semiannual reports to the Administrator of occurrences when the measurements of the scrubber pressure loss and liquid flow rate decrease by more than 30 percent from the average determined during the most recent performance test.

(e) The reports required under paragraph (d) of this section shall be postmarked within 30 days following end of the second and fourth calendar quarters.

(f) The owner or operator of any affected facility shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in § 60.672 of this subpart, including reports of opacity observations made using Method 9 (40 CFR part 60, Appendix A-4) to demonstrate compliance with § 60.672(b), (e) and (f).

(g) The owner or operator of any wet material processing operation that processes saturated and subsequently processes unsaturated materials, shall submit a report of this change within 30 days following such change. At the time of such change, this screening operation, bucket elevator, or belt conveyor becomes subject to the applicable opacity limit in § 60.672(b) and the emission test requirements of § 60.11.

(h) The subpart A requirement under § 60.7(a)(1) for notification of the date construction or reconstruction commenced is waived for affected facilities under this subpart.

(i) A notification of the actual date of initial startup of each affected facility shall be submitted to the Administrator.

(1) For a combination of affected facilities in a production line that begin actual initial startup on the same day, a single notification of startup may be submitted by the owner or operator to the Administrator. The notification shall be postmarked within 15 days after such date and shall include a description of each affected facility, equipment manufacturer, and serial number of the equipment, if available.

(2) For portable aggregate processing plants, the notification of the actual date of initial startup shall include both the home office and the current address or location of the portable plant.

(j) The requirements of this section remain in force until and unless the Agency, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such States. In that event, affected facilities within the State will be relieved of the obligation to comply with the reporting requirements of this section, provided that they comply with requirements established by the State.

(k) Notifications and reports required under this subpart and under subpart A of this part to demonstrate compliance with this subpart need only to be sent to the EPA Region or the State which has been delegated authority according to § 60.4(b).

Table 1 to Subpart OOO of Part 60—Exceptions to Applicability of Subpart A to Subpart OOO

Subpart A reference	Applies to subpart OOO	Explanation
60.4, Address	Yes	Except in § 60.4(a) and (b) submittals need not be submitted to both the EPA Region and delegated State authority (§ 60.676(k)).
60.7, Notification and recordkeeping	Yes	Except in (a)(1) notification of the date construction or reconstruction commenced (§ 60.676(h)).
		Also, except in (a)(6) performance tests involving only Method 9 (40 CFR part 60, Appendix A-4) require a 7-day advance notification instead of 30 days (§ 60.675(g)).
60.8, Performance tests	Yes	Except in (d) performance tests involving only Method 9 (40 CFR part 60, Appendix A-4) require a 7-day advance notification instead of 30 days (§ 60.675(g)).
60.11, Compliance with standards and maintenance requirements	Yes	Except in (b) under certain conditions (§§ 60.675(c)), Method 9 (40 CFR part 60, Appendix A-4) observation is reduced from 3 hours to 30 minutes for fugitive emissions.
60.18, General control device	No	Flares will not be used to comply with the emission limits.

Table 2 to Subpart OOO of Part 60—Stack Emission Limits for Affected Facilities With Capture Systems

For * * *	The owner or operator must meet a PM limit of * * *	And the owner or operator must meet an opacity limit of * * *	The owner or operator must demonstrate compliance with these limits by conducting * * *
Affected facilities (as defined in §§ 60.670 and 60.671) that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008	0.05 g/dscm (0.022 gr/dscf) [a]	7 percent for dry control devices [b]	An initial performance test according to § 60.8 of this part and § 60.675 of this subpart; and Monitoring of wet scrubber parameters according to § 60.674(a) and § 60.676(c), (d), and (e).
Affected facilities (as defined in §§ 60.670 and 60.671) that commence construction, modification, or reconstruction on or after April 22, 2008	0.032 g/dscm (0.014 gr/dscf) [a]	Not applicable (except for individual enclosed storage bins) 7 percent for dry control devices on individual enclosed storage bins	An initial performance test according to § 60.8 of this part and § 60.675 of this subpart; and Monitoring of wet scrubber parameters according to § 60.674(a) and § 60.676(c), (d), and (e); and
			Monitoring of baghouses according to § 60.674(c), (d), or (e) and § 60.676(b).

[a] Exceptions to the PM limit apply for individual enclosed storage bins and other equipment. See § 60.672(d) through (f).

[b] The stack opacity limit and associated opacity testing requirements do not apply for affected facilities using wet scrubbers.

Table 3 to Subpart OOO of Part 60—Fugitive Emission Limits

For * * *	The owner or operator must meet the following fugitive emissions limit for grinding mills, screening operations, bucket elevators, transfer points on belt conveyors, bagging operations, storage bins, enclosed truck or railcar loading stations or from any other affected facility (as defined in §§ 60.670 and 60.671) * * *	The owner or operator must meet the following fugitive emissions limit for crushers at which a capture system is not used * * *	The owner or operator must demonstrate compliance with these limits by conducting * * *
Affected facilities (as defined in §§ 60.670 and 60.671) that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008	10 percent opacity	15 percent opacity	An initial performance test according to § 60.11 of this part and § 60.675 of this subpart.
Affected facilities (as defined in §§ 60.670 and 60.671) that commence construction, modification, or reconstruction on or after April 22, 2008	7 percent opacity	12 percent opacity	An initial performance test according to § 60.11 of this part and § 60.675 of this subpart; and Periodic inspections of water sprays according to § 60.674(b) and § 60.676(b); and
			A repeat performance test according to § 60.11 of this part and § 60.675 of this subpart within 5 years from the previous performance test for fugitive emissions from affected facilities without water sprays. Affected facilities controlled by water carryover from upstream water sprays that are inspected according to the requirements in § 60.674(b) and § 60.676(b) are exempt from this 5-year repeat testing requirement.

Attachment C

Federally Enforceable State Operating Permit (FESOP) No: 101-22910-00003

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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											
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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 Significant Permit Revision to a Federally Enforceable State Operating Permit (FESOP) Renewal

Source Description and Location

Source Name:	**New NGC, Inc. dba National Gypsum Company**
Source Location:	**9720 US Highway 50 East, Shoals, Indiana 47581**
County:	**Martin**
SIC Code:	**3275 (Gypsum Products)**
Operation Permit No.:	**F 101-22910-00003**
Operation Permit Issuance Date:	**December 26, 2007**
Significant Permit Revision No.:	**101-36933-00003**
Permit Reviewer:	**Thomas Olmstead/Heath Hartley**

On March 10, 2016, the Office of Air Quality (OAQ) received an application from New NGC, Inc. dba National Gypsum Company related to a modification to an existing stationary gypsum wallboard manufacturing plant.

Existing Approvals

The source was issued FESOP Renewal No. 101-22910-00003 on December 26, 2007. The source has since received the following approvals:

(a) Administrative Amendment No. 101-27342-00003, issued on February 26, 2009;

(b) Minor Permit Revision No. 101-27980-00003, issued on July 30, 2009;

(c) Administrative Amendment No. 101-28973-00003, issued on March 10, 2010;

(d) Administrative Amendment No. 101-29486-00003, issued on September 2, 2010;

(e) Review Request No. 101-30641-00003, issued on July 1, 2011;

(f) Administrative Amendment No. 101-31237-00003, issued on December 29, 2011;

(g) Temporary Operation No. 101-31367-00003, issued on January 27, 2012; and

(h) Significant Permit Revision No. 101-31832-00003, issued on October 12, 2012.

County Attainment Status

The source is located in Martin County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard.[1]
$PM_{2.5}$	Unclassifiable or attainment effective April 5, 2005, for the annual $PM_{2.5}$ standard.
$PM_{2.5}$	Unclassifiable or attainment effective December 13, 2009, for the

Pollutant	Designation
	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]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which 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. Martin 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) $PM_{2.5}$
Martin 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) Other Criteria Pollutants
Martin County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this type of operation is 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 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.

Status of the Existing Source

The table below summarizes the potential to emit of the entire source, prior to the proposed revision, after consideration of all enforceable limits established in the effective permits:

This PTE table is from the TSD or Appendix A of 101-31832-00003, issued on October 12, 2012.

Process/ Emission Unit	Potential To Emit of the Entire Source Prior to Revision (tons/year)								
	PM	PM10*	PM2.5**	SO_2	NOx	VOC	CO	Total HAPs	Worst Single HAP
Mining and Primary Crushing	1.33	0.34	0.34	-	-	-	-	-	-
Secondary Crushing and Screening	32.7	22.5	22.52	-	-	-	-	-	-
Raymond Grinding Mill Operation	1.20	0.83	0.83	-	-	-	-	-	-
IMP Mill Flash Calcining System - Process	1.75	1.49	1.49	-	-	-	-	-	-
Calcining Operation	154.5	41.35	41.35	-	-	-	-	-	-
Stucco Conveying Operation	0.50	0.34	0.34	-	-	-	-	-	-
Plaster Operations	5.17	3.81	3.81	-	-	-	-	-	-

Process/ Emission Unit	Potential To Emit of the Entire Source Prior to Revision (tons/year)								
	PM	PM10*	PM2.5**	SO_2	NOx	VOC	CO	Total HAPs	Worst Single HAP
Wallboard Manufacturing Operation	18.3	12.1	12.13	-	-	18.57	-	1.23	1.23 Formaldehyde
Wallboard Grinder	0.47	0.21	0.21	-	-	-	-	-	-
Natural Gas Combustion Only[2]	1.24	4.96	4.96	0.39	65.26	3.59	54.82	1.23	1.17 Hexane
Fuel Oil Combustion Only[2]	0.13	0.15	0.13	4.44	1.25	0.02	0.31	negl.	negl.
IMP Mill Flash Calcining System - Combustion (Worst Case Fuel)[2,3]	negl.	negl.	negl.	8.89	25.03	0.96	14.72	0.33	0.32 Hexane
Diesel Fired Emergency Generators[2]	0.28	0.28	0.28	0.26	3.91	0.32	0.84	0.003	0.001 Formaldehyde
Total PTE of Entire Source	**215.80**	**86.91**	**86.90**	**13.98**	**95.46**	**23.46**	**70.69**	**2.80**	**1.49 Hexane**
Title V Major Source Thresholds	-	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	-	-

negl. = negligible
* Under the Part 70 Permit program (40 CFR 70), PM10 and PM2.5, not particulate matter (PM), are each considered as a "regulated air pollutant".
**$PM_{2.5}$ listed is direct $PM_{2.5}$.

(a) This existing source is not a major stationary source under PSD (326 IAC 2-2), because no PSD regulated pollutant is emitted at a rate of 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) This existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because the unlimited potential to emit HAPs is 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).

Description of Proposed Revision

The Office of Air Quality (OAQ) has reviewed an application, submitted by New NGC, Inc. dba National Gypsum Company on March 10, 2016, relating to the following:

(1) Increase in drying silicone XP wallboard in the natural gas-fired dryer (Unit 2) from 75,000 tons per twelve consecutive month period to 345,000 tons per twelve consecutive month period. This increase in the throughput limit will subject the natural gas-fired dryer (Unit 2) to 326 IAC 8-1-6 (BACT).
(2) Removal of one (1) underground and totally enclosed mining, primary crushing, and conveying operation.
(3) Construction and operation of a recycled wallboard grinder, recycled wallboard screener, and recycled wallboard stacker.
(4) Construction and operation of one (1) stucco cooler.
(5) Removal of CO2e emission limitations, compliance determination, and Record Keeping and Reporting Requirements from the operating permit.

The following is a list of the new emission unit(s) and pollution control device(s):

(a) One (1) diesel fueled recycled wallboard grinder, approved in 2016 for construction, with a maximum capacity of 10.8 tons of wallboard per hour, powered by a 590 Horsepower nonroad engine, utilizing no control, with emissions exhausting outdoors.

Under 40 CFR 60, Subpart OOO, this is considered an affected facility.

(b) One (1) diesel fueled recycled wallboard screener, approved in 2016 for construction, with a maximum throughput capacity of 10.8 tons of wallboard per hour, powered by a 100 Horsepower nonroad engine, utilizing no control, with emissions exhausting outdoors.

Under 40 CFR 60, Subpart OOO, this is considered an affected facility.

(c) One (1) diesel fueled recycled wallboard stacker, approved in 2016 for construction, with a maximum throughput capacity of 10.8 tons of wallboard per hour, powered by a 21.6 Horsepower nonroad engine, utilizing no control, with emissions exhausting outdoors.

Under 40 CFR 60, Subpart OOO, this is considered an affected facility.

(d) One (1) stucco cooler, approved in 2016 for construction, with a maximum throughput capacity of 45 tons of stucco per hour, using a baghouse as control, and exhausting outdoors.

The following is a list of modified emission unit(s) and pollution control device(s):

(e) One (1) synthetic gypsum storage and conveying operation with fugitive emissions.

Under 40 CFR 60, Subpart OOO, this is considered an affected facility.

Emission Units and Pollution Control Equipment Removed From the Source

The source has removed the following emission units:

(a) One (1) secondary crushing and screening operation, identified as Unit 6, constructed in 1955, with a maximum capacity of three hundred fifty (350) tons of rock per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-1.

(b) One (1) underground and totally enclosed mining, primary crushing, and conveying operation with a maximum throughput of 350 tons per hour.

(c) Underground conveyors.

"Integral Part of the Process" Determination

New NGC, Inc. dba National Gypsum Company has submitted the following information to justify why the baghouse that controls emissions from the one (1) stucco cooler, should be considered an integral part of the stucco operation:

(a) The control equipment currently vents to inside the building, the baghouse is necessary to maintain good housekeeping, and to minimize dust emissions within the facility. The emissions from the stucco cooler would cause additional labor and time for housekeeping of the area and the personnel would need to wear particulate filter masks to meet the OSHA requirements. The stucco would not be able to be reused because the stucco will mix with other contaminants in the area and would need to be disposed.

(b) Housekeeping costs without a baghouse are estimated at $175,638 and are based on $20.05 per hour labor cost multiplied by 8,760 hours per year. Waste disposal costs are $41,061 and are based on the stucco cooler PTE of 1,368.7 tons per year, multiplied by the disposal cost of $30

per ton. By operating a baghouse that controls emissions from the stucco cooler, housekeeping costs are $5,132.63, with no associated waste disposal.

(c) The baghouse is capable of capturing 1,368.7 tons of Stucco every year. The cost savings for the recycled stucco is $20 per ton, which will save the company $27,374 per year in recycled material. The overall cost savings including the costs for additional housekeeping and disposal is over $200,000 (attached as Appendix C).

IDEM, OAQ has evaluated the information submitted and disagrees that the baghouse that controls emissions from the one (1) stucco cooler should be considered an integral part of the stucco operation based on the following reasons:

(a) The stucco operation can continue to operate without the baghouse in place.

(b) The source cites safety as a purpose for operating the baghouse. IDEM, OAQ considers control devices that are used for workplace safety as a type of pollution control. Additionally, the source can vent outside the building instead of inside the building and thus maintain compliance with OSHA requirements and eliminate housekeeping and waste disposal costs. Therefore, waste disposal and housekeeping costs have been removed from the cost analysis.

(c) The value stated by the source for reclaimed material cost savings should be $23,803.37 based on the Stucco Cooler operating at 40 tons per hour, 1190.17 tons/year captured, multiplied by the cost of stucco of $20 per ton. Based on IDEM's review of the information submitted by the applicant, the calculations for the PTE of the stucco cooler should have used the bottlenecked capacity of 40 tons/hr (attached as Appendix C). The baghouse annual operating costs are $37,818 and are based on EPA guidance (Air Pollution Control Technology Fact Sheet EPA-452/F-03-025). The annual cost achieved by operating the baghouse calculated by IDEM, OAQ when taking the cost saved from the reclaimed material into account is $11,039.21. Therefore, when taking the cost of operating the baghouse into account, there is no cost savings. IDEM OAQ has determined that the baghouse does not have an overwhelming positive net economic effect.

Therefore, IDEM, OAQ has determined that the baghouse is not integral to the stucco operation and the potential to emit before control by the baghouse will be used in determining operating permit level and for determining the applicability of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) and Prevention of Significant Deterioration (PSD).

Enforcement Issues

There are no pending enforcement actions related to this revision.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – FESOP Revision

The following table is used to determine the appropriate permit level under 326 IAC 2-8-11.1 Permit Revisions. This table reflects the PTE before controls of the proposed revision. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

	PTE Before Controls of the New Emission Units (ton/year)								
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**NO_X**	**VOC**	**CO**	**Combined HAPs**	**Single HAP**
Recycled Wallboard Grinder	1.84	0.71	0.71	--	--	--	--	--	--
Stacker	0.14	0.05	0.05	--	--	--	--	--	--
Screener	14.19	3.41	3.41	--	--	--	--	--	--
Stucco Cooler	1191.36	1191.36	1191.36	--	--	--	--	--	--
Total:	**1207.54**	**1195.53**	**1195.53**	--	--	--	--	--	--

	PTE Change of the Modified Emission Unit(s)/Process (ton/year)								
Natural gas-fired kiln dryer (Unit 2)	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**NO_X**	**VOC**	**CO**	**Combined HAPs**	**Single HAP**
PTE Before Modification	0.78	3.10	3.10	0.24	40.79	43.45	34.27	3.46	2.70
PTE After Modification	0.78	3.10	3.10	0.24	40.79	73.91	34.27	3.46	2.70
PTE Increase From Modification	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**30.46**	**0.00E+00**	**0.00E+00**	**0.00E+00**

	PTE of Proposed Revision (tons/year)								
	PM	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**NO_X**	**VOC**	**CO**	**Combined HAPs**	**Single HAP**
PTE Increase of Modified Emission Unit	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	30.46	0.00E+00	0.00E+00	0.00E+00
PTE of New Emission units	1207.54	1195.53	1195.53	0.00	0.00	0.00	0.00	0.00	0.00
Total PTE of Proposed Revision	**1207.54**	**1195.53**	**1195.53**	**0.00E+00**	**0.00E+00**	**30.46**	**0.00E+00**	**0.00E+00**	**0.00E+00**

Appendix A of this TSD reflects the potential emissions of the revision in detail.

Pursuant to 326 IAC 2-8-11.1(f)(1)(C), this FESOP is being revised through a FESOP Significant Permit Revision because the proposed revision is not an Administrative Amendment or Minor Permit revision and the proposed revision is subject to 326 IAC 8-1-6.

PTE of the Entire Source After Issuance of the FESOP Revision

The table below summarizes the potential to emit of the entire source reflecting adjustment of existing limits, with updated emissions shown as **bold** values and previous emissions shown as ~~strikethrough~~ values.

Process/ Emission Unit		Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year)							
		PM	PM10*	PM2.5**	SO_2	NOx	VOC	CO	Total HAPs
~~Mining and Primary Crushing~~		~~1.33~~	~~0.34~~	~~0.34~~	~~-~~	~~-~~	~~-~~	~~-~~	~~-~~
~~Secondary Crushing and Screening~~		~~32.7~~	~~22.5~~	~~22.52~~	~~-~~	~~-~~	~~-~~	~~-~~	~~-~~
Raymond Grinding Mill Operation[2]		1.20	0.83	0.83	0.03	4.38	0.24	3.68	0.08
IMP Mill Flash Calcining System - Process[1]		1.75	1.49	1.49	8.89	25.03	0.96	14.72	0.33
Calcining Operation[2]		152.74	39.86	39.86	0.10	16.43	0.90	13.80	0.31
Stucco Conveying Operation		0.50	0.34	0.34	--	--	--	--	--
Plaster manufacturing operation[3]	Plaster Conveyor (identified as Units 7J, 7K, and 7L)	0.52	0.36	0.36	--	--	--	--	--
	Plaster Storage Bins (identified as Unit 7N, 7O, and 7P)	1.50	1.04	1.04	--	--	--	--	--
	New Perlite System (identified as Unit 5)***	0.79	0.79	0.79	--	--	--	--	--
	Plaster Mixing and Bagging (identified as Unit 7M)	2.36	1.63	1.63	--	--	--	--	--
Wallboard Manufacturing Operation[4]	Stucco Storage Silos (identified as Units 7H and 7I)	4.62	3.19	3.19	--	--	--	--	--
	Coaxial Mixing and Pulping (identified as Unit 8D)	8.17	5.64	5.64	--	--	--	--	--
	Kiln Drying (Unit 2)[2]	0.78	3.10	3.10	0.24	40.79	~~18.57~~ **62.36**	34.27	0.77
	BET Board Sawing (identified as Unit 1A)	1.65	0.97	0.97	--	--	--	--	--
	BET Dunnage Sawing (identified as Unit 1B)	1.65	0.97	0.97	--	--	--	--	--

Process/ Emission Unit		Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year)							
		PM	PM10*	PM2.5**	SO_2	NOx	VOC	CO	Total HAPs
	BET Grindstone System (identified as Unit 1D)	1.65	0.97	0.97	--	--	--	--	--
	BMA Land Plaster Bin (identified as Unit 8A) & Starch Bin (identified as Unit 8B)	0.20	0.14	0.14	--	--	--	--	--
	BMA Ball Mill (identified as Unit 8C)	0.20	0.14	0.14	--	--	--	--	--
	Dunnage Storage Bin (identified as Unit 1C)	0.18	0.13	0.13	--	--	--	--	--
Wallboard Grinder		0.47	0.21	0.21	--	--	--	--	--
Degreasing		**--**	**--**	**--**	**--**	**--**	**0.49**	**--**	**9.72E-04**
Natural Gas Combustion Units[2]		**0.09**	**0.36**	**0.36**	**0.03**	**4.68**	**0.26**	**3.93**	**0.09**
Insignificant Activity-Fuel oil-fired combustion sources		0.13	0.15	0.13	4.44	1.25	0.02	0.31	4.29E-04
Diesel Fired Emergency Generators		0.28	0.28	0.28	0.26	3.91	0.32	0.84	3.42E-03
Recycled Wallboard Grinder		**1.84**	**0.71**	**0.71**	**--**	**--**	**--**	**--**	**--**
Stacker		**0.14**	**0.05**	**0.05**	**--**	**--**	**--**	**--**	**--**
Screener		**14.19**	**3.41**	**3.41**	**--**	**--**	**--**	**--**	**--**
Stucco Cooler		**1.73**	**1.19**	**1.19**	**--**	**--**	**--**	**--**	**--**
Total PTE of Entire Source		~~215.80~~ **199.34**	~~86.91~~ **67.91**	~~86.90~~ **67.90**	~~13.98~~ **13.98**	~~95.46~~ **96.06**	~~23.46~~ **65.51**	~~70.69~~ **70.91**	~~2.80~~ **1.57**
Title V Major Source Thresholds		-	100	100	100	100	100	100	25
PSD Major Source Thresholds		250	250	250	250	250	250	250	-

negl. = negligible
*Under the Part 70 Permit program (40 CFR 70), PM10 and PM2.5, not particulate matter (PM), are each considered as a "regulated air pollutant".
** $PM_{2.5}$ listed is direct $PM_{2.5}$.
1. IMP Mill Flash Calcining System - Process combustion emissions are now specified with that unit. No changes to PTE.
2. Existing natural gas units were not specified in the calculations. The new calculations for natural gas combustion emissions are split up for the emission units and specified with that unit for the Raymond Grinding Mill Operation, Calcining Operation, and Kiln Drying (Unit 2). The source provided the insignificant natural gas-fired combustion sources and these are now included in the calculations.
3. No change to the Plaster manufacturing operation calculations.
4. No change to the Wallboard Manufacturing Operation calculations except for the Kiln Drying (Unit 2).

The table below summarizes the potential to emit of the entire source after issuance of this revision, reflecting all limits, of the emission units. (Note: the table below was generated from the above table, with bold text un-bolded and strikethrough text deleted).

Process/ Emission Unit		Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year)							
		PM	PM10*	PM2.5**	SO_2	NOx	VOC	CO	Total HAPs
Raymond Grinding Mill Operation[2]		1.20	0.83	0.83	0.03	4.38	0.24	3.68	0.08
IMP Mill Flash Calcining System - Process[1]		1.75	1.49	1.49	8.89	25.03	0.96	14.72	0.33
Calcining Operation[2]		152.74	39.86	39.86	0.10	16.43	0.90	13.80	0.31
Stucco Conveying Operation		0.50	0.34	0.34	--	--	--	--	--
Plaster manufacturing operation[3]	Plaster Conveyor (identified as Units 7J, 7K, and 7L)	0.52	0.36	0.36	--	--	--	--	--
	Plaster Storage Bins (identified as Unit 7N, 7O, and 7P)	1.50	1.04	1.04	--	--	--	--	--
	New Perlite System (identified as Unit 5)***	0.79	0.79	0.79	--	--	--	--	--
	Plaster Mixing and Bagging (identified as Unit 7M)	2.36	1.63	1.63	--	--	--	--	--
Wallboard Manufacturing Operation[4]	Stucco Storage Silos (identified as Units 7H and 7I)	4.62	3.19	3.19	--	--	--	--	--
	Coaxial Mixing and Pulping (identified as Unit 8D)	8.17	5.64	5.64	--	--	--	--	--
	Kiln Drying (Unit 2)[2]	0.78	3.10	3.10	0.24	40.79	62.36	34.27	0.77
	BET Board Sawing (identified as Unit 1A)	1.65	0.97	0.97	--	--	--	--	--
	BET Dunnage Sawing (identified as Unit 1B)	1.65	0.97	0.97	--	--	--	--	--
	BET Grindstone System (identified as Unit 1D)	1.65	0.97	0.97	--	--	--	--	--
	BMA Land Plaster Bin (identified as Unit 8A) & Starch Bin (identified as Unit 8B)	0.20	0.14	0.14	--	--	--	--	--

Process/ Emission Unit		Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year)							
		PM	PM10*	PM2.5**	SO_2	NOx	VOC	CO	Total HAPs
	BMA Ball Mill (identified as Unit 8C)	0.20	0.14	0.14	--	--	--	--	--
	Dunnage Storage Bin (identified as Unit 1C)	0.18	0.13	0.13	--	--	--	--	--
Wallboard Grinder		0.47	0.21	0.21	--	--	--	--	--
Degreasing		--	--	--	--	--	0.49	--	9.72E-04
Natural Gas Combustion Units[2]		0.09	0.36	0.36	0.03	4.68	0.26	3.93	0.09
Insignificant Activity-Fuel oil-fired combustion sources		0.13	0.15	0.13	4.44	1.25	0.02	0.31	4.29E-04
Diesel Fired Emergency Generators		0.28	0.28	0.28	0.26	3.91	0.32	0.84	3.42E-03
Recycled Wallboard Grinder		1.84	0.71	0.71	--	--	--	--	--
Stacker		0.14	0.05	0.05	--	--	--	--	--
Screener		14.19	3.41	3.41	--	--	--	--	--
Stucco Cooler		1.73	1.19	1.19	--	--	--	--	--
Total PTE of Entire Source		**199.34**	**67.91**	**67.90**	**13.98**	**96.06**	**65.51**	**70.91**	**1.57**
Title V Major Source Thresholds		-	100	100	100	100	100	100	25
PSD Major Source Thresholds		250	250	250	250	250	250	250	-

negl. = negligible
*Under the Part 70 Permit program (40 CFR 70), PM10 and PM2.5, not particulate matter (PM), are each considered as a "regulated air pollutant".
** $PM_{2.5}$ listed is direct $PM_{2.5}$.
1. IMP Mill Flash Calcining System - Process combustion emissions are now specified with that unit. No changes to PTE.
2. Existing natural gas units were not specified in the calculations. The new calculations for natural gas combustion emissions are split up for the emission units and specified with that unit for the Raymond Grinding Mill Operation, Calcining Operation, and Kiln Drying (Unit 2). The source provided the insignificant natural gas-fired combustion sources and these are now included in the calculations.
3. No change to the Plaster manufacturing operation calculations.
4. No change to the Wallboard Manufacturing Operation calculations except for the Kiln Drying (Unit 2).

(a) FESOP Status
This revision to an existing Title V minor stationary source will not change the minor status, because the potential to emit criteria pollutants, HAPs and CO2e from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP).

(b) Prevention of Significant Deterioration (PSD) Minor Limits [326 IAC 2-2]
In order to render 326 IAC 2-2 (PSD) not applicable, the PM emissions from the gypsum wallboard manufacturing operations shall not exceed the emission limits listed in the table below:

Emission Unit	PM Emission Limit (lbs/hr)
Raymond gypsum mill (Unit 3A, Baghouse EP-2)	0.14
Raymond gypsum mill (Unit 3B, Baghouse EP-3)	0.14
IMP Mill Flash Calcining System (Unit 9, Cyclone EP-40a and Baghouse EP-40b)*	0.40

Emission Unit	PM Emission Limit (lbs/hr)
Flash calcidyne unit (Unit 4A, Baghouse EP-4)	6.97
Flash calcidyne unit (Unit 4B, Baghouse EP-5)	6.97
Flash calcidyne unit (Unit 4C, Baghouse EP-6)	6.97
Flash calcidyne unit (Unit 4D, Baghouse EP-7)	6.97
Flash calcidyne unit (Unit 4E, Baghouse EP-8)	6.97
Stucco conveyor (Unit 7A, Baghouse EP-9)	0.02
Stucco conveyor (Unit 7B, Baghouses EP-13 and EP-14)	0.02, combined
Stucco conveyor (Unit 7C, Baghouse EP-10)	0.02
Stucco conveyor (Unit 7D, Baghouses EP-15 and EP-16)	0.02, combined
Stucco conveyor (Unit 7F, Baghouse EP-17)	0.02
Stucco conveyor (Unit 7G, Baghouse EP-18)	0.02
Stucco conveyor (Unit 7R, Baghouse EP-39)	0.02
Plaster conveyors (Units 7J, 7K, and 7L; Baghouses EP-29, EP-31, and EP-32)	0.12, combined
Plaster storage bin (Unit 7N, Baghouse EP-34)	0.11
Plaster storage bin (Unit 7O, Baghouse EP-35)	0.11
Plaster storage bin (Unit 7P, Baghouse EP-36)	0.11
Plaster mixing and bagging system (Unit 7M, Baghouse EP-33)	0.54
Stucco storage silo (Unit 7H, Baghouse EP-19)	0.53
Stucco storage silo (Unit 7I, Baghouse EP-20)	0.53
Coaxial mixing/pulping system (Unit 8D, Baghouse EP-24)	1.87
Board sawing system and BET dunnage sawing (Unit 1A and Unit 1B, Baghouse EP-25)	0.75
BET grindstone system (Unit 1D, Baghouse EP-38)	0.38
BMA land plaster bin and Starch bin (Unit 8A and 8B, Baghouse EP-21)	0.05
BMA ball mill (Unit 8C, Baghouse EP-23)	0.05
Dunnage Storage Bin (Unit 1C, Baghouse EP-26)	0.04
Stucco cooler (Baghouse)	0.39

* Exhausting through a common stack EP-40.

Compliance with these limits, combined with the potential to emit PM from all other emission units at this source, shall limit the source-wide potential to emit of PM to less than two hundred fifty (250) tons per twelve (12) consecutive month period and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

(c) FESOP Limits [326 IAC 2-8-4][326 IAC 2-2]
Pursuant to 326 IAC 2-8-4, the Permittee shall comply with the following:

(1) The PM10 and PM2.5 emissions from the gypsum wallboard manufacturing operations shall not exceed the emission limits listed in the table below:

Emission Unit	PM10 Emission Limit (lbs/hr)	PM2.5 Emission Limit (lbs/hr)
Raymond gypsum mill (Unit 3A, Baghouse EP-2)	0.09	0.09
Raymond gypsum mill (Unit 3B, Baghouse EP-3)	0.09	0.09

Emission Unit	PM10 Emission Limit (lbs/hr)	PM2.5 Emission Limit (lbs/hr)
IMP Mill Flash Calcining System (Unit 9, Cyclone EP-40a and Baghouse EP-40b)*	0.34	0.34
Flash calcidyne unit (Unit 4A, Baghouse EP-4)	1.82	1.82
Flash calcidyne unit (Unit 4B, Baghouse EP-5)	1.82	1.82
Flash calcidyne unit (Unit 4C, Baghouse EP-6)	1.82	1.82
Flash calcidyne unit (Unit 4D, Baghouse EP-7)	1.82	1.82
Flash calcidyne unit (Unit 4E, Baghouse EP-8)	1.82	1.82
Stucco conveyor (Unit 7A, Baghouse EP-9)	0.01	0.01
Stucco conveyor (Unit 7B, Baghouses EP-13 and EP-14)	0.01, combined	0.01, combined
Stucco conveyor (Unit 7C, Baghouse EP-10)	0.01	0.01
Stucco conveyor (Unit 7D, Baghouses EP-15 and EP-16)	0.01, combined	0.01, combined
Stucco conveyor (Unit 7F, Baghouse EP-17)	0.01	0.01
Stucco conveyor (Unit 7G, Baghouse EP-18)	0.01	0.01
Stucco conveyor (Unit 7R, Baghouse EP-39)	0.01	0.01
Plaster conveyors (Units 7J, 7K, and 7L; Baghouses EP-29, EP-31, and EP-32)	0.08, combined	0.08, combined
Plaster storage bin (Unit 7N, Baghouse EP-34)	0.08	0.08
Plaster storage bin (Unit 7O, Baghouse EP-35)	0.08	0.08
Plaster storage bin (Unit 7P, Baghouse EP-36)	0.08	0.08
Plaster mixing and bagging system (Unit 7M, Baghouse EP-33)	0.37	0.37
Stucco storage silo (Unit 7H, Baghouse EP-19)	0.36	0.36
Stucco storage silo (Unit 7I, Baghouse EP-20)	0.36	0.36
Coaxial mixing/pulping system (Unit 8D, Baghouse EP-24)	1.29	1.29
Board sawing system and BET dunnage sawing (Unit 1A and Unit 1B, Baghouse EP-25)	0.44	0.44
BET grindstone system (Unit 1D, Baghouse EP-38)	0.22	0.22
BMA land plaster bin and Starch bin (Unit 8A and 8B, Baghouse EP-21)	0.03	0.03
BMA ball mill (Unit 8C, Baghouse EP-23)	0.03	0.03
Dunnage Storage Bin (Unit 1C, Baghouse EP-26)	0.03	0.03
Stucco cooler (Baghouse)	0.27	0.27

* Exhausting through a common stack EP-40.

(b) The Raymond grinding mill operation, which is equipped with a Raymond mill burner heating unit shall burn only natural gas.

Compliance with these limits, combined with the potential to emit PM10 and PM2.5 from all other emission units at this source, shall limit the source-wide total potential to emit of PM10 and PM2.5 to less than one hundred (100) tons per twelve (12) consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

Federal Rule Applicability Determination

New Source Performance Standard for Metallic Mineral Processing Plants, 40 CFR 60, Subpart LL

(a) The requirements of the New Source Performance Standard for Metallic Mineral Processing Plants, 40 CFR 60, Subpart LL and 326 IAC 12, are not included for this proposed revision, because this source does not produce any metallic minerals.

New Source Performance Standard for Nonmetallic Mineral Processing Plants (40 CFR 60, Subpart OOO))

(b) The recycled wallboard stacker and one (1) synthetic gypsum storage and conveying operation are subject to the New Source Performance Standards for Nonmetallic Mineral Processing Plants (40 CFR 60, Subpart OOO) and 326 IAC 12. These units were constructed after the applicability date of August 31, 1983 and are located at a nonmetallic mineral processing plant processing gypsum (natural or synthetic).

The one (1) storage building, one (1) covered FGD storage pile, and one (1) FGD belt conveyor system feed the one (1) IMP mill flash calcining system and are subject to the New Source Performance Standard for Nonmetallic Mineral Processing Plants (40 CFR 60, Subpart OOO)) and 326 IAC 12. These units were constructed after the applicability date of August 31, 1983 and are located at a nonmetallic mineral processing plant processing gypsum (natural or synthetic).

The units subject to this rule include the following:

(1) One (1) diesel fueled recycled wallboard stacker, approved in 2016 for construction, with a maximum throughput capacity of 10.8 tons of wallboard per hour, powered by a 21.6 Horsepower nonroad engine, utilizing no control, with emissions exhausting outdoors.

(2) One (1) synthetic gypsum storage and conveying operation with fugitive emissions.

(3) One (1) storage building, a receiving hopper/feeder, and the associated belt conveyors for the FGD utilization process;

(4) One (1) covered FGD storage pile, with a maximum storage capacity of 5,000 tons per year; and

(5) One (1) FGD belt conveyor system, with a maximum conveying capacity of 250 tons per hour.

Applicable portions of the NSPS are the following:

(1) 40 CFR 60.670(a)(1), (e), (f)
(2) 40 CFR 60.671
(3) 40 CFR 60.672(b), (d), (e)
(4) 40 CFR 60.673
(5) 40 CFR 60.675(c)(1), (c)(3), (d), (e), (i)
(6) 40 CFR 60.676(f), (h), (i), (j), (k)
(7) Table 1 to Subpart OOO of Part 60
(8) Table 3 to Subpart OOO of Part 60

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to these units except as otherwise specified in 40 CFR 60, Subpart OOO.

(c) The wallboard grinder, recycled wallboard grinder, and recycled wallboard screener are subject to the New Source Performance Standard for Nonmetallic Mineral Processing Plants (40 CFR 60, Subpart OOO)) and 326 IAC 12. These units were constructed after the applicability date of August 31, 1983 and are located at a nonmetallic mineral processing plant processing gypsum (natural or synthetic).

The existing wallboard grinder did not replace an existing facility. This unit was constructed prior to the removal of the one (1) wallboard crusher, constructed in 2000, used to break wallboard into small 2 x 2 inch squares, with a 330 horsepower diesel engine and a maximum capacity of 34 tons of wallboard per hour. Therefore, the wallboard grinder is not exempt from the provisions of §§60.672, 60.674, and 60.675 if applicable.

The units subject to this rule include the following:

(1) One (1) wallboard grinder, approved for construction in 2012, with a maximum capacity of 20 tons of wallboard per hour, utilizing no control, with emissions exhausting outdoors.

(2) One (1) diesel fueled recycled wallboard grinder, approved in 2016 for construction, with a maximum capacity of 10.8 tons of wallboard per hour, powered by a 590 Horsepower nonroad engine, utilizing no control, with emissions exhausting outdoors.

(3) One (1) diesel fueled recycled wallboard screener, approved in 2016 for construction, with a maximum throughput capacity of 10.8 tons of wallboard per hour, powered by a 100 Horsepower nonroad engine, utilizing no control, with emissions exhausting outdoors.

Applicable portions of the NSPS are the following:

(1) 40 CFR 60.670(a)(1), (e), (f)
(2) 40 CFR 60.671
(3) 40 CFR 60.672(b), (d)
(4) 40 CFR 60.673
(5) 40 CFR 60.675(c)(1), (c)(3), (e), (i)
(6) 40 CFR 60.676(f), (h), (i), (j), (k)
(7) Table 1 to Subpart OOO of Part 60
(8) Table 3 to Subpart OOO of Part 60

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to these units except as otherwise specified in 40 CFR 60, Subpart OOO.

(d) The one (1) IMP mill flash calcining system is subject to the New Source Performance Standard for Nonmetallic Mineral Processing Plants (40 CFR 60, Subpart OOO)) and 326 IAC 12, because this system consists of a grinding mill that will process gypsum, which is a nonmetallic mineral as defined in 40 CFR 60.671, and was constructed after the applicability date of August 31, 1983.

The unit subject to this rule includes the following:

(1) One (1) IMP mill flash calcining system, consisting of one (1) natural gas-fired Raymond mill burner, with a maximum heat input capacity of forty (40) million British thermal units per hour, using ultra low sulfur No. 2 fuel oil as a back up fuel, and one (1) impact mill, identified as Unit 9, approved for construction in 2012, with a maximum capacity 40 tons of flue-gas-desulfurization (FGD, i.e. synthetic) gypsum per hour, with particulate matter emissions controlled by one (1) integral cyclone, identified as EP-40a and two (2) integral baghouses, identified as EP-40b, and exhausting to stack EP-40.

Applicable portions of the NSPS are the following:

(1) 40 CFR 60.670(a)(1), (e), (f)
(2) 40 CFR 60.671
(3) 40 CFR 60.672(a), (b)
(4) 40 CFR 60.673
(5) 40 CFR 60.674(c), (d)
(6) 40 CFR 60.675(a), (b), (c)(1), (c)(3), (e), (g), (i)

(7) 40 CFR 60.676(b)(1), (b)(2), (f), (h), (i), (j), (k)
(8) Table 1 to Subpart OOO of Part 60
(9) Table 2 to Subpart OOO of Part 60
(10) Table 3 to Subpart OOO of Part 60

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the units except as otherwise specified in 40 CFR 60, Subpart OOO.

(e) The provisions of 40 CFR Part 60, Subpart OOO are not included in this permit for the five (5) flash calcidyne units (constructed in 1981), one (1) stucco conveying operation consisting of seven (7) stucco conveyors (constructed in 1955), three (3) plaster conveyors (constructed in 1955), three (3) plaster storage bins (constructed in 1955), one (1) plaster mixing and bagging system (constructed in 1955), two (2) stucco storage silos (constructed in 1955), one (1) coaxial mixing/pulping system (constructed in 1955), one (1) BMA land plaster bin (constructed in 1955), one (1) starch bin (constructed in 1955), one (1) BMA ball mill (constructed in 1955), and the one (1) chopped dunnage storage bin with conveyor (constructed in 1955) because these units were constructed prior to the applicable date of August 31, 1983 and have not been modified. The one (1) Raymond grinding mill operation was constructed in 1955 and the replacement of the burner is not considered a modification pursuant to 60.14.

(f) The provisions of 40 CFR Part 60, Subpart OOO are not included in this permit for the stucco cooler because this unit is not an affected facility in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station.

(g) The provisions of 40 CFR Part 60, Subpart OOO are not included in this permit for the perlite system because this process does not crush or grind perlite, which is a nonmetallic mineral. Therefore, this system is not an affected facility in fixed or portable nonmetallic mineral processing plants.

Standards of Performance for Calciners and Dryers in Mineral Industries 40 CFR 60, Subpart UUU

(h) The requirements of the Standards of Performance for Calciners and Dryers in Mineral Industries 40 CFR 60, Subpart UUU are not included in this permit because the kiln dryer is a tunnel type which is exempt from the provisions of 40 CFR Part 60, Subpart UUU as stated in 40 CFR 60.730(b).

Nonroad Engines

(i) The recycled wallboard grinder, recycled wallboard screener, and recycled wallboard stacker are not subject to the requirements of New Source Performance Standard for Stationary Compression Ignition Internal Combustion Engines, (40 CFR 60, Subpart IIII); New Source Performance Standard for Stationary Spark Ignition Internal Combustion Engines, (40 CFR 60, Subpart JJJJ); or National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ) because the one (1) diesel fueled recycled wallboard grinder, one (1) diesel fueled recycled wallboard screener, and the one (1) diesel fueled recycled wallboard stacker, each meet the definition of nonroad engine as defined at 40 CFR 1068.30.

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

(j) The diesel fired emergency generator (130 HP) and diesel fired emergency flood pump (375 HP) are subject to the requirements of 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (326 IAC 20-82), because they are considered existing stationary reciprocating internal combustion engines (RICE) (construction commenced before June 12, 2006) at an area source of hazardous air pollutants (HAP). Construction of the diesel fired emergency generator and diesel fired emergency flood pump commenced in 1974.

The diesel fired emergency generator and diesel fired emergency flood pump are subject to the following applicable portions of the NESHAP for existing emergency stationary RICE (construction commenced before June 12, 2006) at an area source of HAP:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(a)(1)(iii)
(4) 40 CFR 63.6595(a)(1), (b), 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), and (f)
(10) 40 CFR 63.6645(a)(5)
(11) 40 CFR 63.6650
(12) 40 CFR 63.6655
(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)
(19) Table 8

Note: Existing emergency compression ignition (CI) stationary RICE located at an area source of HAP are not subject to numerical CO or formaldehyde emission limitations, but are only subject to work and management practices under Table 2d and Table 6.

The requirements of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1, apply to the souce except as otherwise specified in 40 CFR 63, Subpart ZZZZ.

Compliance Assurance Monitoring (CAM)

(k) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the potential to emit of the source is limited to less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability Determination

Pursuant to 326 IAC 1-2-73 "Source" defined, IDEM does not regulate nonroad engines. Therefore, only processing emissions have been included in the PTE.

(a) 326 IAC 2-8-4 (FESOP)
This revision to an existing Title V minor stationary source will not change the minor status, because the potential to emit criteria pollutants from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP). See PTE of the Entire Source After Issuance of the FESOP Revision Section above.

(b) 326 IAC 2-2 (Prevention of Significant Deterioration (PSD))
This modification to an existing PSD minor stationary source will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply. See PTE of the Entire Source After Issuance of the FESOP Revision Section above.

(c) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The proposed revision is not subject to the requirements of 326 IAC 2-4.1, since the unlimited potential to emit of HAPs from the new and modified units is 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.

(d) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.

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

(1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(2) 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.

(f) 326 IAC 6.5 PM Limitations Except Lake County
This source is not subject to 326 IAC 6.5 because it is not located in one of the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo or Wayne.

(g) 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.

(h) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
The potential to emit from the recycled wallboard grinder and recycled wallboard stacker is less than 0.551 pound per hour. Therefore, pursuant to 326 IAC 6-3-1(b)(14), the requirements of 326 IAC 6-3-2 do not apply.

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the emission units listed in the table below shall not exceed E pounds per hour when operating at a process weight rate of P tons per hour.

Emission Unit	Max. Throughput Rate (tons/hr) P	Particulate Emission Limit (lbs/hr) E	Uncontrolled PTE (lb/hr)	Controlled PTE (lb/hr)
Recycled wallboard screener	10.8	20.2	3.24	--
Stucco cooler	45	43.6	306.00	0.31

The pound per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

The baghouse shall be in operation at all times the the stucco cooler is in operation, in order to comply with this limit.

(i) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source 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.

(j) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
The source is subject to the requirements of 326 IAC 6-5, because the source has potential fugitive particulate emissions greater than 25 tons per year. Pursuant to 326 IAC 6-5, fugitive particulate matter emissions shall be controlled according to the Fugitive Dust Control Plan, which is included as Attachment A to the permit. The recycled wallboard grinder, recycled wallboard screener, and recycled wallboard stacker will be incorporated into the Fugitive Dust Control Plan.

(k) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
The unlimited VOC potential emissions from the natural gas-fired dryer (Unit 2) is greater than twenty-five (25) tons per year. Therefore, the natural gas-fired dryer (Unit 2) is subject to the requirements of 326 IAC 8-1-6. Appendix B to this technical support document describes the Best Available Control Technology (BACT) Determination.

Pursuant to 326 IAC 8-1-6 (VOC BACT), the Permittee shall comply with the following:

(a) The Permittee shall comply with the following when drying regular wallboard in the natural gas-fired dryer (Unit 2):

(1) VOC emissions shall not exceed 0.0686 pounds per ton of regular wallboard dried.

(2) The regular wallboard drying rate shall not exceed 400,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The Permittee shall comply with the following when drying silicone XP wallboard in the natural gas-fired dryer (Unit 2):

(1) VOC emissions shall not exceed 0.331 pounds per ton of silicone XP wallboard dried.

(2) The silicone XP wallboard drying rate shall not exceed 345,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(l) 326 IAC 12 (New Source Performance Standards)
See Federal Rule Applicability Section of this TSD.

(m) 326 IAC 20 (Hazardous Air Pollutants)
See Federal Rule Applicability Section of this TSD.

Compliance Determination, Monitoring and Testing Requirements

(a) The compliance determination requirements applicable to this proposed revision are as follows:

(1) In order to assure compliance with 326 IAC 2-2 (PSD), 326 IAC 2-8-4 (FESOP), and 326 IAC 6-3-2 (Particulate), the baghouse for particulate control shall be in operation and control emissions from the stucco cooler at all times this facility is in operation.

(b) The compliance monitoring requirements applicable to this proposed revision are as follows:

(1) The compliance monitoring requirements applicable to the stucco cooler are as follows:

Emission Unit	Control Device	Parameter	Frequency	Range	Excursions and Exceedances
Stucco Cooler	Baghouse	Visible Emissions	Daily	Normal-Abnormal	Response Steps

These monitoring conditions are necessary because the baghouse for the stucco cooler must operate properly to ensure compliance with 326 IAC 2-2 (PSD), 326 IAC 2-8-4 (FESOP), and 326 IAC 6-3-2 (Particulate).

(2) To document the compliance status with the Regular and silicone XP Wallboard Drying Rate, the Permittee shall keep records of the amount of regular and silicone XP wallboard dried in the natural gas-fired kiln dryer (Unit 2). Records necessary to demonstrate compliance shall be available no later than thirty (30) days of the end of each compliance period.

(c) The testing requirements applicable to this proposed revision are as follows:

Summary of Testing Requirements						
Emission Unit	Control Device	Wallboard Type	Timeframe for Testing	Pollutant	Frequency of Testing	Authority
Natural gas-fired dryer (Unit 2)	none	Regular	Within 180 days	VOC	every five (5) years	326 IAC 2-8-5
		XP	--	VOC	every five (5) years	326 IAC 2-8-5

(1) In order to demonstrate compliance with 326 IAC 8-1-6 (VOC BACT), the Permittee shall perform VOC testing when drying silicone XP wallboard in the natural gas-fired dryer (Unit 2) utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Stack testing on April 28, 2015 was performed by Pace Analytical Services, Inc. at National Gypsum Company verifying the emission factor of 0.2758 lbs VOC per ton of silicone XP wallboard dried. However, the natural gas-fired dryer (Unit 2) is subject to 326 IAC 8-1-6 (VOC BACT) and must demonstrate compliance with BACT on a repeat basis. Therefore, repeat testing at least once every five (5) years is required for drying silicone XP wallboard.

(2) The Permittee has not performed testing in the past to comply with the existing VOC limit when drying regular wallboard. Therefore, not later than 180 days after the issuance date of this permit, Permit No 101-36933-00003, the Permittee shall perform VOC testing when drying regular wallboard in the natural gas-fired dryer (Unit 2), utilizing methods approved by the commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration.

Summary of Testing Requirements					
Emission Unit	**Control Device**	**Timeframe for Testing**	**Pollutant**	**Frequency of Testing**	**Authority**
Wallboard Grinders	none	Within 180 days of startup	12 percent opacity	every five (5) years	40 CFR 60, Subpart OOO
IMP Mill Flash Calcining System, recycled wallboard stacker, synthetic gypsum storage and conveying operation, covered FGD storage pile, FGD belt conveyor system, recycled wallboard screener	none	Within 180 days of startup	7 percent opacity	every five (5) years	40 CFR 60, Subpart OOO
storage building, a receiving hopper/feeder, and the associated belt conveyors	none	Within 180 days of startup	10 percent opacity	every five (5) years	40 CFR 60, Subpart OOO
IMP Mill Flash Calcining System	Baghouses EP-40b	Within 180 days of startup	PM 0.032 g/dscm	every five (5) years	40 CFR 60, Subpart OOO

Based on discussions with IDEM's Compliance Data Section, it has been determined that it is not necessary for the source to perform controlled testing for PM, PM10, or PM2.5 for the stucco cooler baghouse. The controlled emissions are based on a control efficiency of 99.9%. The limited emissions are 45% higher than the controlled.

The existing compliance requirements will not change as a result of this revision. The source shall continue to comply with the applicable requirements and permit conditions as contained in Significant Permit Revision FESOP No. 101-31832-00003, issued on October 12, 2012.

Proposed Changes

The following changes listed below are due to the proposed revision. Deleted language appears as ~~strikethrough~~ text and new language appears as **bold** text:

Proposed Changes

(a) Condition A.2 - Emission Units and Pollution Control Equipment Summary and Section D.1 have been revised to:

(1) Remove the secondary crushing and screening operation, underground and totally enclosed mining, primary crushing, and conveying operation, and mined rock storage and conveying operation. The secondary crushing and screening operation has been decommissioned. The mining operation has been filled in with concrete, which was completed in October 2014. The mined rock storage and conveying operation has been converted to synthetic gypsum storage and conveying and is subject to 40 CFR 60, Subpart OOO.

(2) Specify the maximum drying capacity of the kiln dryer, Unit 2, as 433,000 tons/yr of wallboard

(b) Condition A.2 - Emission Units and Pollution Control Equipment Summary and Section E.1 have been revised to add the recycled wallboard grinder, recycled wallboard screener, and recycled wallboard stacker that are associated with this permit revision and that are subject to 40 CFR 60, Subpart OOO.

(c) Condition A.2 - Emission Units and Pollution Control Equipment Summary and Section D.1 Emission Unit Description box have been revised to add the stucco cooler that is associated with this permit revision and to incorporate the limits in Conditions D.1.1 Prevention of Significant Deterioration (PSD) Minor Limits and D.1.2 FESOP Limits to render the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable. Condition D.1.3 Particulate has been revised to add the stucco cooler to the permit because the stucco cooler is subject to 326 IAC 6-3-2 (Particulate).

(d) Condition A.3 Insignificant Activities and Section E.1 have been revised to remove the underground conveyors and to specify that the storage building, a receiving hopper/feeder, and the associated belt conveyors for the FGD utilization process, covered FGD storage pile, and FGD belt conveyor system are all subject to 40 CFR 60, Subpart OOO because they were constructed after the applicability date of August 31, 1983 and are located at a nonmetallic mineral processing plant processing gypsum (natural or synthetic).

(e) Section C.2(a)(4) Overall Source Limit, Condition D.1.2(c) FESOP Limits, Condition D.1.9 CO2e Emissions, Condition D.1.13(a) Record Keeping Requirements, Condition D.1.14 Reporting Requirements and FESOP Quarterly Report for CO2e emissions have been removed to remove CO2e limits, compliance, and record keeping and reporting requirements for the limits because this source is not an anyway source. Therefore GHG emissions are not reviewed and have been removed from the permit.

(f) Section D.1 Emission Unit Description box has been revised to remove the natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour; fuel oil-fired combustion sources; equipment, powered by internal combustion engines; and emergency generators because these units have no applicable requirements in Section D.1.

(g) Section D.1 Emission Unit Description box and Section D.1.3 have been revised to add the recycled wallboard screener that is subject to 326 IAC 6-3-2 (Particulate).

(h) Sections D.1.1 and D.1.2 have been revised to combine the limits for the board sawing system and BET dunnage sawing (Unit 1A and Unit 1B) that are both controlled by baghouse EP-25. The limit is on the baghouse emission point and is 0.75 lbs/hr for PM and 0.44 lbs/hr for PM10/PM2.5. These limits render the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

(i) Section D.1.3 Particulate has been revised as follows:

(1) Revised to change the maximum throughput rate and particulate emission limit for the three (3) plaster conveyors, identified as Units 7J, 7K, and 7L. The combined maximum throughput of forty-two (42) tons of land plaster per hour is for the maximum for all three (3) plaster conveyors combined. Therefore, the maximum throughput rate for each conveyor is forty-two tons divided by three

conveyors. The particulate emission limits have been updated to reflect this new maximum throughput rate.

(2) Revised to remove the perlite system and starch bin from the requirements of 326 IAC 6-3-2. The potential to emit from the perlite system after the integral control and potential to emit from the starch bin are less than 0.551 pound per hour. Therefore, pursuant to 326 IAC 6-3-1(b)(14), the requirements of 326 IAC 6-3-2 do not apply.

(3) Revised to change the maximum throughput rate and particulate emission limit for the BET board sawing process, BET dunnage sawing process, and BET grindstone system. The wallboard board sawing system capacity (tons/yr) assumes a 1/2-in. wallboard thickness and weight of 1.6 lb/ft^2. Therefore, the maximum throughput rate and particulate emission limits have been updated to reflect each individual manufacturing process.

(4) Revised to change the maximum throughput rate and particulate emission limit for the BMA ball mill. The maximum throughput rate is 1.1 tons/hr. Therefore, the maximum throughput rate and particulate emission limits have been updated.

(j) Condition D.1.5 Volatile Organic Compounds (VOC) BACT has been revised to remove the 326 IAC 8-1-6 VOC limit less than twenty-five (25) tons per 12 consecutive month period. The BACT requirements associated with this Significant Permit Revision have been added to the permit as well as updated the FESOP Quarterly Report for wallboard throughputs. The BACT determination is attached to this TSD in Appendix B.

(k) IDEM, OAQ has added testing requirements in Condition D.1.8 for the natural gas-fired dryer (Unit 2). Stack testing on April 28, 2015 was performed by Pace Analytical Services, Inc. at National Gypsum Company verifying the emission factor of 0.2758 lbs VOC per ton of silicone XP wallboard dried. However, the natural gas-fired dryer (Unit 2) is subject to 326 IAC 8-1-6 (VOC BACT) and must demonstrate compliance with BACT. Therefore, repeat testing is required for drying silicone XP wallboard and initial and repeat testing is reguired for regular wallboard.

(l) Original Section D.2 has been removed from the permit. The potential to emit from the wallboard grinder is less than 0.551 pound per hour. Therefore, pursuant to 326 IAC 6-3-1(b)(14), the requirements of 326 IAC 6-3-2 do not apply.

(m) Section E.1 has been revised. The recycled wallboard stacker, one (1) synthetic gypsum storage and conveying operation, one (1) storage building, one (1) covered FGD storage pile, and one (1) FGD belt conveyor system are affected units under 40 CFR 60, Subpart OOO. If any transfer point on a conveyor belt or any other affected facility is enclosed in a building, then these units have specific requirements in 40 CFR 60, Subpart OOO compared to the other affected units in the permit. Therefore, these units were broken out into their own section.

Additional Changes

IDEM, OAQ made additional revisions to the permit as described below in order to update the language to match the most current version of the applicable rule, to eliminate redundancy within the permit, and to provide clarification regarding the requirements of these conditions.

(a) Typographical errors have been corrected throughout.

(b) Conditions have been renumbered throughout.

(c) On October 27, 2010, the Indiana Air Pollution Control Board issued revisions to 326 IAC 2. These revisions resulted in changes to the rule sites listed in the permit. These changes are not changes to the underlining provisions. The change is only to site of these rules in Section B - Permit Renewal and Section B - Operational Flexibility.

(d) IDEM is changing the Section C Compliance Monitoring Condition to clearly describe when new monitoring for new and existing units must begin.

(e) IDEM has revised Section C - Instrument Specifications to indicate that the analog instrument must be capable of measuring the parameters outside the normal range.

(f) Section C - General Record Keeping Requirements
IDEM has added "where applicable" to the lists in Section C - General Record Keeping Requirements to more closely match the underlining rule.

(g) After discussions with EPA, OAQ decided to add a rule cite for the Compliance Determination Requirements subsection title in the D Sections. The addition of this rule cite is to satisfy EPA's concerns. IDEM has added a citation to 326 IAC 2-8-4(1) to the Compliance Determination subheading in the D Sections. The FESOP Compliance Monitoring Requirements cite have been changed from 326 IAC 2-8-4 and 326 IAC 2-8-5(a)(1) to 326 IAC 2-8-4(1) and 326 IAC 2-8-5(a)(1) to match the other rule cites.

(h) Section D.1.7 Particulate Control has been revised to specify the units that must be controlled by their associated control devices in order to comply with the limits to render the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable and compliance with 326 IAC 6-3-2.

(i) IDEM, OAQ's current policy is to only include one compliance monitoring requirement for baghouse control. Therefore, IDEM has removed Condition D.1.12 Parametric Monitoring since the permit also contains a Visible Emissions Notations requirement for the baghouse exhaust stack. The associated Record Keeping Requirements for Condition D.1.12 Parametric Monitoring have also been removed.

(j) Section D.3 has been updated to current IDEM model language and revised to only include the four (4) Safety Kleen parts cleaning operations, which are subject to 326 IAC 8-3-2 and 326 IAC 8-3-8 because the four (4) Safety Kleen parts cleaning operations were constructed after July 1, 1990, and located anywhere in the state. 326 IAC 8-3-5 Cold cleaner degreaser operation and control has been repealed and therefore removed from the permit.

(k) IDEM, OAQ has updated Sections E.1 and E.2 for clarity. Section E.1.2(c) has been updated for rule applicability for the one (1) IMP mill flash calcining system. IDEM does not specify the testing conditions in the E sections of the permit that are provided in the federal rules. Therefore, the testing requirements in E.1.3 have been removed.

(l) IDEM, OAQ has updated the FESOP Quarterly Report forms for clarity.

The permit has been revised as follows:

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a stationary gypsum wallboard manufacturing plant.

Source Address:	9720 ~~U.S.~~**US** Highway 50 East, Shoals, Indiana 47581
General Source Phone Number:	(812) 247-2424
SIC Code:	3275 (Gypsum Products)

County Location:	Martin
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

This stationary source consists of the following emission units and pollution control devices:

~~(a) One (1) secondary crushing and screening operation, identified as Unit 6, constructed in 1955, with a maximum capacity of three hundred fifty (350) tons of rock per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-1.~~

~~(b~~**(a)** One (1) Raymond grinding mill operation, consisting of one (1) natural gas-fired Raymond mill burner, constructed in 2007, with a maximum capacity of ten (10) million British thermal units per hour, and two (2) Raymond gypsum mills, identified as Units 3A and 3B, both constructed in 1955, with a combined maximum capacity of fifty-six (56) tons of gypsum per hour, each with PM and PM10 emissions controlled by a baghouse, identified as EP-2 and EP-3, respectively. This operation was constructed in 1955 and the 10 million British thermal units per hour burner was replaced with an identical burner in 2007.

(~~c~~**b**) One (1) IMP mill flash calcining system, consisting of one (1) natural gas-fired Raymond mill burner, with a maximum heat input capacity of forty (40) million British thermal units per hour, using ultra low sulfur No. 2 fuel oil as a back up fuel, and one (1) impact mill, identified as Unit 9, approved for construction in 2012, with a maximum capacity 40 tons of flue-gas-desulfurization (FGD, i.e. synthetic) gypsum per hour, with particulate matter emissions controlled by one (1) integral cyclone, identified as EP-40a and two (2) integral baghouses, identified as EP-40b, and exhausting to stack EP-40.

Under 40 CFR 60, Subpart OOO, this is considered an affected facility.

(~~d~~**c**) One (1) calcining operation, consisting of the following units:

(1) Five (5) flash calcidyne units, identified as Units 4A, 4B, 4C, 4D, and 4E, all constructed in 1981, with a combined maximum capacity of fifty (50) tons of land plaster per hour, each with one (1) natural gas-fired heating unit with a maximum capacity of seven and a half (7.5) million British thermal units per hour; each with PM and PM10 emissions controlled by a baghouse, identified as EP-4, EP-5, EP-6, EP-7, and EP-8~~; and~~**.**

(~~e~~**d**) One (1) stucco conveying operation consisting of seven (7) stucco conveyors, identified as Units 7A, 7B, 7C, 7D, 7F, 7G and 7R all constructed in 1955, with a combined maximum throughput of forty (40) tons of stucco per hour, each with PM and PM10 emissions controlled by a baghouse, identified as EP-9, EP-13 and EP-14, EP-10, EP-15 and EP-16, EP-17, EP-18, and EP-39, respectively.

(~~f~~**e**) One (1) plaster manufacturing operation, consisting of the following units:

(1) Three (3) plaster conveyors, identified as Units 7J, 7K, and 7L, all constructed in 1955, with a **combined** maximum throughput of forty-two (42) tons of land plaster per hour, each with PM and PM10 emissions controlled by a baghouse, identified as EP-29, EP-31, and EP-32, respectively;

(2) Three (3) plaster storage bins, identified as Unit 7N, 7O, and 7P, all constructed in 1955, with a combined maximum throughput of thirteen (13) tons of plaster per

hour, each with PM and PM10 emissions controlled by a baghouse, identified as EP-34, EP-35, and EP-36;

(3) One (1) perlite system, identified as Unit 5, approved for construction in 2010, with a maximum capacity of 0.9 tons of expanded perlite per hour, equipped with one (1) bulk bag unloader and one (1) pneumatic conveying operation, with particulate emissions controlled by an integral air/product separator, identified as filter receiver, and exhausting to the indoors; and

(4) One (1) plaster mixing and bagging system, identified as Unit 7M, constructed in 1955, with a maximum production rate of thirteen (13) tons of land plaster per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-33.

(~~g~~**f**) One (1) wallboard manufacturing operation, consisting of the following units:

(1) Two (2) stucco storage silos, identified as Units 7H and 7I, both constructed in 1955, with a combined maximum throughput of forty (40) tons of stucco per hour, each with PM and PM10 emissions controlled by a baghouse, identified as EP-19 and EP-20, respectively;

(2) One (1) coaxial mixing/pulping system, identified as Unit 8D, constructed in 1955, with a maximum throughput of forty-five (45) tons of material per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-24;

(3) One (1) natural gas-fired kiln dryer, identified as Unit 2, constructed in 1990 and modified in 2002, with a maximum **drying capacity of 433,000 tons/yr of wallboard, with a maximum** capacity of ninety-five (95) million British thermal units per hour and venting through stack Z3;

(4) One (1) board sawing system, identified as Unit 1A, constructed in 1990, with a maximum production rate of 2,500 square feet of wallboard per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-25;

(5) One (1) board end trimming (BET) dunnage sawing process, identified as Unit 1B, constructed in 1955, with a maximum throughput of 2,500 square feet of wallboard per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-25;

(6) One (1) BET gridstone system, identified as Unit 1D, constructed in 1990, with a maximum production rate of 2,500 square feet of wallboard per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-38;

(7) One (1) BMA land plaster bin, identified as Unit 8A, constructed in 1955, with a maximum throughput of one (1) ton per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-21;

(8) One (1) starch bin, identified as Unit 8B, constructed in 1955, with a maximum throughput of one-tenth (0.1) ton per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-21;

(9) One (1) BMA ball mill, identified as Unit 8C, constructed in 1955, with a maximum throughput of one and one-tenth (1.1) tons of mix per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-23; and

(10) One (1) chopped dunnage storage bin with conveyor, identified as Unit 1C, constructed in 1955, with a maximum throughput of one (1) ton of dunnage per

hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-26.

(~~h~~**g**) One (1) ~~underground and totally enclosed mining, primary crushing, and conveying operation with a maximum throughput of 350 tons per hour.~~

~~(i) One (1) mined rock~~**synthetic gypsum** storage and conveying operation with fugitive emissions.

~~(j~~**Under 40 CFR 60, Subpart OOO, this is considered an affected facility.**

(h) One (1) wallboard grinder, approved for construction in 2012, with a maximum capacity of 20 tons of wallboard per hour, utilizing no control, with emissions exhausting outdoors.

Under 40 CFR 60, Subpart OOO, ~~the wallboard grinder~~**this** is considered an affected facility.

(i) One (1) diesel fueled recycled wallboard grinder, approved in 2016 for construction, with a maximum capacity of 10.8 tons of wallboard per hour, powered by a 590 Horsepower nonroad engine, utilizing no control, with emissions exhausting outdoors.

Under 40 CFR 60, Subpart OOO, this is considered an affected facility.

(j) One (1) diesel fueled recycled wallboard screener, approved in 2016 for construction, with a maximum throughput capacity of 10.8 tons of wallboard per hour, powered by a 100 Horsepower nonroad engine, utilizing no control, with emissions exhausting outdoors.

Under 40 CFR 60, Subpart OOO, this is considered an affected facility.

(k) One (1) diesel fueled recycled wallboard stacker, approved in 2016 for construction, with a maximum throughput capacity of 10.8 tons of wallboard per hour, powered by a 21.6 Horsepower nonroad engine, utilizing no control, with emissions exhausting outdoors.

Under 40 CFR 60, Subpart OOO, this is considered an affected facility.

(l) One (1) stucco cooler, approved in 2016 for construction, with a maximum throughput capacity of 45 tons of stucco per hour, using a baghouse as control, and exhausting outdoors.

A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities:

***

~~(m) Underground conveyors.~~

(~~n~~**m**) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.

(~~o~~**n**) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks and fluid handling equipment.

(~~p~~**o**) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.

(~~q~~**p**) Emergency generators, constructed in 1974, including:

(1) One (1) diesel fired emergency generator, with a maximum power output rate of 130 horsepower.

(2) One (1) diesel fired emergency flood pump, with a maximum power output rate of 375 horsepower.

Under 40 CFR 63, Subpart ZZZZ, these units are considered affected sources.

(~~r~~**q**) Stationary fire pumps.

(~~s~~**r**) Emission units with PM and PM10 emissions less than five (5) tons per year, SO2, NOx, and VOC emissions less than ten (10) tons per year, CO emissions less than twenty-five (25) tons per year, and lead emissions less than two tenths (0.2) ton per year:

(1) One (1) storage building, a receiving hopper/feeder, and the associated belt conveyors for the FGD utilization process;

(2) One (1) covered FGD storage pile, with a maximum storage capacity of 5,000 tons per year; and

(3) One (1) FGD belt conveyor system, with a maximum conveying capacity of 250 tons per hour.

Under 40 CFR 60, Subpart OOO, ~~this is~~**these units are** considered ~~an~~ affected ~~facility~~**facilities**.

B.16 Permit Renewal [326 IAC 2-8-3(h)]

(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 2-8-3. 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(~~40~~**42**). The renewal application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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B.17 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

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B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) and (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 approval required by 326 IAC 2-8-11.1 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 2-8-15(b)(1) and (c). 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 2-8-15(b)(~~2), (c)(1),~~**)** and (~~d~~**c**).

***

C.2 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

(1) The potential to emit any regulated pollutant, except particulate matter (PM~~) and greenhouse gases (GHGs~~), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.

(2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and

(3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

~~(4) The potential to emit greenhouse gases (GHGs) from the entire source shall be limited to less than one hundred thousand (100,000) tons of CO2 equivalent emissions (CO2e) per twelve (12) consecutive month period.~~

***

C.3 Opacity [326 IAC 5-1]

***

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

***

C.5 Incineration [326 IAC 4-2][326 IAC 9-1-2]

***

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

***

C.7 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

***

C.8 Stack Height [326 IAC 1-7]

***

C.9 Asbestos Abatement Projects [326 IAC 14-10][326 IAC 18][40 CFR 61, Subpart M]

***

Testing Requirements [326 IAC 2-8-4(3)]

C.10 Performance Testing [326 IAC 3-6]

***

Compliance Requirements [326 IAC 2-1.1-11]

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

***

Compliance Monitoring Requirements [326 IAC 2-8-4~~][~~**(1)**][326 IAC 2-8-5(a)(1)]

C.12 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(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 ~~or of initial start-up, whichever is later,~~ 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 ~~or the date of initial startup, whichever is later~~, 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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

~~Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a permit revision shall be implemented when operation begins.~~

C.13 Instrument Specifications [326 IAC 2-1.1-11][326 IAC 2-8-4(3)][326 IAC 2-8-5(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.**

***

Corrective Actions and Response Steps [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

C.14 Emergency Reduction Plans [326 IAC 1-5-2][326 IAC 1-5-3]

***

C.15 Risk Management Plan [326 IAC 2-8-4][40 CFR 68]

***

C.16 Response to Excursions or Exceedances [326 IAC 2-8-4][326 IAC 2-8-5]

***

C.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

***

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.18 General Record Keeping Requirements [326 IAC 2-8-4(3)][326 IAC 2-8-5]

(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 FESOP ~~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.

***

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

~~(a) One (1) secondary crushing and screening operation, identified as Unit 6, constructed in 1955, with a maximum capacity of three hundred fifty (350) tons of rock per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-1.~~

~~(b~~**(a**) One (1) Raymond grinding mill operation, consisting of one (1) natural gas-fired Raymond mill burner, constructed in 2007, with a maximum capacity of ten (10) million British thermal units per hour, and two (2) Raymond gypsum mills, identified as Units 3A and 3B, both constructed in 1955, with a combined maximum capacity of fifty-six (56) tons of gypsum per hour, each with PM and PM10 emissions controlled by a baghouse, identified as EP-2 and EP-3, respectively. This operation was constructed in 1955 and the 10 million British thermal units per hour burner was replaced with an identical burner in 2007.

(~~c~~**b**) One (1) IMP mill flash calcining system, consisting of one (1) natural gas-fired Raymond mill burner, with a maximum heat input capacity of forty (40) million British thermal units per hour, using ultra low sulfur No. 2 fuel oil as a back up fuel, and one (1) impact mill, identified as Unit 9, approved for construction in 2012, with a maximum capacity 40 tons of flue-gas-desulfurization (FGD, i.e. synthetic) gypsum per hour, with particulate matter emissions controlled by one (1) integral cyclone, identified as EP-40a and two (2) integral baghouses, identified as EP-40b, and exhausting to stack EP-40.

Under 40 CFR 60, Subpart OOO, this is considered an affected facility.

(~~d~~**c**) One (1) calcining operation, consisting of the following units:

(1) Five (5) flash calcidyne units, identified as Units 4A, 4B, 4C, 4D, and 4E, all constructed in 1981, with a combined maximum capacity of fifty (50) tons of land plaster per hour, each with one (1) natural gas-fired heating unit with a maximum capacity of seven and a half (7.5) million British thermal units per hour; each with PM and PM10 emissions controlled by a baghouse, identified as EP-4, EP-5, EP-6, EP-7, and EP-8~~; and~~**.**

(~~e~~**d**) One (1) stucco conveying operation consisting of seven (7) stucco conveyors, identified as Units 7A, 7B, 7C, 7D, 7F, 7G and 7R all constructed in 1955, with a combined maximum throughput of forty (40) tons of stucco per hour, each with PM and PM10 emissions controlled by a baghouse, identified as EP-9, EP-13 and EP-14, EP-10, EP-15 and EP-16, EP-17, EP-18, and EP-39, respectively.

(~~f~~**e**) One (1) plaster manufacturing operation, consisting of the following units:

(1) Three (3) plaster conveyors, identified as Units 7J, 7K, and 7L, all constructed in 1955, with a **combined** maximum throughput of forty-two (42) tons of land plaster per hour, each with PM and PM10 emissions controlled by a baghouse, identified as EP-29, EP-31, and EP-32, respectively;

(2) Three (3) plaster storage bins, identified as Unit 7N, 7O, and 7P, all constructed in 1955, with a combined maximum throughput of thirteen (13) tons of plaster per hour, each with PM and PM10 emissions controlled by a baghouse,

identified as EP-34, EP-35, and EP-36;

(3) One (1) perlite system, identified as Unit 5, approved for construction in 2010, with a maximum capacity of 0.9 tons of expanded perlite per hour, equipped with one (1) bulk bag unloader and one (1) pneumatic conveying operation, with particulate emissions controlled by an integral air/product separator, identified as filter receiver, and exhausting to the indoors; and

~~**Emissions Unit Description:**~~

(4) One (1) plaster mixing and bagging system, identified as Unit 7M, constructed in 1955, with a maximum production rate of thirteen (13) tons of land plaster per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-33.

(~~g~~**f**) One (1) wallboard manufacturing operation, consisting of the following units:

(1) Two (2) stucco storage silos, identified as Units 7H and 7I, both constructed in 1955, with a combined maximum throughput of forty (40) tons of stucco per hour, each with PM and PM10 emissions controlled by a baghouse, identified as EP-19 and EP-20, respectively;

(2) One (1) coaxial mixing/pulping system, identified as Unit 8D, constructed in 1955, with a maximum throughput of forty-five (45) tons of material per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-24;

(3) One (1) natural gas-fired kiln dryer, identified as Unit 2, constructed in 1990 and modified in 2002, with a maximum **drying capacity of 433,000 tons/yr of wallboard, with a maximum** capacity of ninety-five (95) million British thermal units per hour and venting through stack Z3;

(4) One (1) board sawing system, identified as Unit 1A, constructed in 1990, with a maximum production rate of 2,500 square feet of wallboard per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-25;

(5) One (1) board end trimming (BET) dunnage sawing process, identified as Unit 1B, constructed in 1955, with a maximum throughput of 2,500 square feet of wallboard per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-25;

(6) One (1) BET gridstone system, identified as Unit 1D, constructed in 1990, with a maximum production rate of 2,500 square feet of wallboard per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-38;

(7) One (1) BMA land plaster bin, identified as Unit 8A, constructed in 1955, with a maximum throughput of one (1) ton per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-21;

(8) One (1) starch bin, identified as Unit 8B, constructed in 1955, with a maximum throughput of one-tenth (0.1) ton per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-21;

(9) One (1) BMA ball mill, identified as Unit 8C, constructed in 1955, with a maximum throughput of one and one-tenth (1.1) tons of mix per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-23; and

(10) One (1) chopped dunnage storage bin with conveyor, identified as Unit 1C, constructed in 1955, with a maximum throughput of one (1) ton of dunnage per hour, with PM and PM10 emissions controlled by a baghouse, identified as EP-26.

~~(h) One (1) underground and totally enclosed mining, primary crushing, and conveying operation~~**j) One (1) diesel fueled recycled wallboard screener, approved in 2016 for construction,** with a maximum throughput **capacity** of ~~350~~**10.8** tons **of wallboard** per hour~~.~~

~~(i) One (1) mined rock storage and conveying operation with fugitive emissions.~~

~~Insignificant activities consisting of the following:~~

~~(c) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, including fifty (50) natural gas-fired space heaters.~~

~~**Emissions Unit Description:**~~

~~(d) Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) British thermal units per hour, including twenty (20) fuel oil-fired combustion facilities, firing fuel oil containing less than five-tenths (0.5) percent sulfur by weight.~~

~~(e) Equipment~~**,** powered by ~~internal combustion engines of capacity equal to or less than 500,000 British thermal units per hour, where total capacity of equipment operated by this stationary source does not exceed 2,000,000 British thermal units per hour. The engines were constructed in 1974~~**a 100 Horsepower nonroad engine, utilizing no control, with emissions exhausting outdoors**.

~~(q) Emergency generators, constructed in 1974, including:~~

~~(1) One (1) diesel fired emergency generator, with a maximum power output rate of 130 horsepower.~~

~~(2) One (1) diesel fired emergency flood pump, with a maximum power output rate of 375 horsepower.~~

Under 40 CFR ~~63~~**60**, Subpart ~~ZZZZ, these units are~~**OOO, this is** considered **an** affected ~~sources~~**facility**.

(l) One (1) stucco cooler, approved in 2016 for construction, with a maximum throughput capacity of 45 tons of stucco per hour, using a baghouse as control, and exhausting outdoors.

(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 2-8-4(1)]

D.1.1 Prevention of Significant Deterioration (PSD) Minor Limits [326 IAC 2-2]

In order to render 326 IAC 2-2 (PSD) not applicable, the PM emissions from the gypsum wallboard manufacturing operations shall not exceed the emission limits listed in the table below:

Emission Unit	PM Emission Limit (lbs/hr)
~~Secondary crushing and screening (Unit 6, Baghouse EP-1)~~	~~7.46~~

Emission Unit	PM Emission Limit (lbs/hr)
Raymond gypsum mill (Unit 3A, Baghouse EP-2)	0.14
Raymond gypsum mill (Unit 3B, Baghouse EP-3)	0.14
IMP Mill Flash Calcining System (Unit 9, Cyclone EP-40a and Baghouse EP-40b~~)**~~**)***	0.40
Flash calcidyne unit (Unit 4A, Baghouse EP-4)	6.97
Flash calcidyne unit (Unit 4B, Baghouse EP-5)	6.97
Flash calcidyne unit (Unit 4C, Baghouse EP-6)	6.97
Flash calcidyne unit (Unit 4D, Baghouse EP-7)	6.97
Flash calcidyne unit (Unit 4E, Baghouse EP-8)	6.97
Stucco conveyor (Unit 7A, Baghouse EP-9)	0.02
Stucco conveyor (Unit 7B, Baghouses EP-13 and EP-14)	0.02, combined
Stucco conveyor (Unit 7C, Baghouse EP-10)	0.02
Stucco conveyor (Unit 7D, Baghouses EP-15 and EP-16)	0.02, combined
Stucco conveyor (Unit 7F, Baghouse EP-17)	0.02
Stucco conveyor (Unit 7G, Baghouse EP-18)	0.02
Stucco conveyor (Unit 7R, Baghouse EP-39)	0.02
Plaster conveyors (Units 7J, 7K, and 7L; Baghouses EP-29, EP-31, and EP-32)	0.12, combined
Plaster storage bin (Unit 7N, Baghouse EP-34)	0.11
Plaster storage bin (Unit 7O, Baghouse EP-35)	0.11
Plaster storage bin (Unit 7P, Baghouse EP-36)	0.11
Plaster mixing and bagging system (Unit 7M, Baghouse EP-33)	0.54
Stucco storage silo (Unit 7H, Baghouse EP-19)	0.53
Stucco storage silo (Unit 7I, Baghouse EP-20)	0.53
Coaxial mixing/pulping system (Unit 8D, Baghouse EP-24)	1.87
Board sawing system **and BET dunnage sawing** (Unit 1A **and Unit 1B**, Baghouse EP-25~~)*~~**)**	0.~~38~~**75**
~~BET dunnage sawing (Unit 1B, Baghouse EP-25)*~~	~~0.38~~
BET grindstone system (Unit 1D, Baghouse EP-38~~)*~~**)**	0.38
BMA land plaster bin and Starch bin (Unit 8A and 8B, Baghouse EP-21)	0.05
BMA ball mill (Unit 8C, Baghouse EP-23)	0.05
Dunnage Storage Bin (Unit 1C, Baghouse EP-26)	0.04
~~Underground, totally enclosed mining, primary crushing and conveying~~**Stucco cooler (Baghouse)**	0.~~30~~**39**

~~* Wallboard board sawing system capacity (tons/yr) assumes a 1/2 in. board thickness, 4 ft board width, and weight of lb/100 ft^2.~~

~~**~~****** Exhausting through a common stack EP-40.

Compliance with these limits, combined with the potential to emit PM from all other emission units at this source, shall limit the source-wide ~~total~~ potential to emit of PM to less than **two hundred fifty (**250**)** tons per **twelve (**12**)** consecutive month period and shall render **the requirements of** 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.1.2 FESOP Limits [326 IAC 2-8-4][326 IAC 2-2]

Pursuant to 326 IAC 2-8-4, the Permittee shall comply with the following:

(a) The PM10 and PM2.5 emissions from the gypsum wallboard manufacturing operations shall not exceed the emission limits listed in the table below:

Emission Unit	PM10 Emission Limit (lbs/hr)	PM2.5 Emission Limit (lbs/hr)
~~Secondary crushing and screening (Unit 6, Baghouse EP-1)~~	~~5.14~~	~~5.14~~
Raymond gypsum mill (Unit 3A, Baghouse EP-2)	0.09	0.09
Raymond gypsum mill (Unit 3B, Baghouse EP-3)	0.09	0.09
IMP Mill Flash Calcining System (Unit 9, Cyclone EP-40a and Baghouse EP-40b~~)~~ ~~**~~**)***	0.34	0.34
Flash calcidyne unit (Unit 4A, Baghouse EP-4)	1.82	1.82
Flash calcidyne unit (Unit 4B, Baghouse EP-5)	1.82	1.82
Flash calcidyne unit (Unit 4C, Baghouse EP-6)	1.82	1.82
Flash calcidyne unit (Unit 4D, Baghouse EP-7)	1.82	1.82
Flash calcidyne unit (Unit 4E, Baghouse EP-8)	1.82	1.82
Stucco conveyor (Unit 7A, Baghouse EP-9)	0.01	0.01
Stucco conveyor (Unit 7B, Baghouses EP-13 and EP-14)	0.01, combined	0.01, combined
Stucco conveyor (Unit 7C, Baghouse EP-10)	0.01	0.01
Stucco conveyor (Unit 7D, Baghouses EP-15 and EP-16)	0.01, combined	0.01, combined
Stucco conveyor (Unit 7F, Baghouse EP-17)	0.01	0.01
Stucco conveyor (Unit 7G, Baghouse EP-18)	0.01	0.01
Stucco conveyor (Unit 7R, Baghouse EP-39)	0.01	0.01
Plaster conveyors (Units 7J, 7K, and 7L; Baghouses EP-29, EP-31, and EP-32)	0.08, combined	0.08, combined
Plaster storage bin (Unit 7N, Baghouse EP-34)	0.08	0.08
Plaster storage bin (Unit 7O, Baghouse EP-35)	0.08	0.08
Plaster storage bin (Unit 7P, Baghouse EP-36)	0.08	0.08
Plaster mixing and bagging system (Unit 7M, Baghouse EP-33)	0.37	0.37
Stucco storage silo (Unit 7H, Baghouse EP-19)	0.36	0.36
Stucco storage silo (Unit 7I, Baghouse EP-20)	0.36	0.36
Coaxial mixing/pulping system (Unit 8D, Baghouse EP-24)	1.29	1.29
Board sawing system **and BET dunnage sawing** (Unit 1A **and Unit 1B**, Baghouse EP-25~~)*~~**)**	0.~~22~~**44**	0.~~22~~**44**
~~BET dunnage sawing (Unit 1B, Baghouse EP-25)*~~	~~0.22~~	~~0.22~~
BET grindstone system (Unit 1D, Baghouse EP-38~~)*~~**)**	0.22	0.22
BMA land plaster bin and Starch bin (Unit 8A and 8B, Baghouse EP-21)	0.03	0.03
BMA ball mill (Unit 8C, Baghouse EP-23)	0.03	0.03
Dunnage Storage Bin (Unit 1C, Baghouse EP-26)	0.03	0.03
~~Underground, totally enclosed mining, primary crushing and conveying~~**Stucco cooler (Baghouse)**	0.~~08~~**27**	0.~~08~~**27**

~~* Wallboard board sawing system capacity (tons/yr) assumes a 1/2 in. board thickness, 4 ft board width, and weight of lb/100 ft^2.~~

~~**~~***** Exhausting through a common stack EP-40.

(b) The Raymond grinding mill operation, which is equipped with a Raymond mill burner heating unit shall burn only natural gas.

~~(c) The combined CO2e emissions from combusting natural gas, No. 2 fuel oil, and diesel fuel in the natural gas-fired, fuel oil-fired, and diesel-fired combustion units shall be limited to less than 100,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.~~

Compliance with these limits, combined with the potential to emit PM10~~,~~ **and** PM2.5~~, and GHGs~~ from all other emission units at this source, shall limit the source-wide total potential to emit of PM10 and PM2.5 to less than **one hundred (**100**)** tons per **twelve (**12**)** consecutive month period, each~~, greenhouse gases (GHGs) to less than 100,000 tons of CO_2 equivalent emissions (CO_2e) per 12 consecutive month period~~, and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.1.3 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 the PM from the ~~secondary crushing, screening, grinding, calcining, stucco conveying, plaster manufacturing, and~~**gypsum** wallboard manufacturing **operations** shall not exceed the pound per hour emission rate established as E in the following formulas:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

The emission units shall be limited as follows:

Emission Unit	Max. Throughput Rate (tons/hr)	Particulate Emission Limit (lbs/hr)
~~Secondary crushing and screening (Unit 6, Stack EP-1)~~	~~350~~	~~64.8~~
Raymond gypsum mill (Unit 3A, Stack EP-2)	28.0	38.2
Raymond gypsum mill (Unit 3B, Stack EP-3)	28.0	38.2
Flash calcidyne unit (Unit 4A, Stack EP-4)	10.0	19.2
Flash calcidyne unit (Unit 4B, Stack EP-5)	10.0	19.2
Flash calcidyne unit (Unit 4C, Stack EP-6)	10.0	19.2
Flash calcidyne unit (Unit 4D, Stack EP-7)	10.0	19.2
Flash calcidyne unit (Unit 4E, Stack EP-8)	10.0	19.2
Stucco conveyor (Unit 7A, Stack EP-9)	4.44	11.1
Stucco conveyor (Unit 7B, Stack EP-13)	4.44	11.1
Stucco conveyor (Unit 7B, Stack EP-14)	4.44	11.1
Stucco conveyor (Unit 7C, Stack EP-10)	4.44	11.1
Stucco conveyor (Unit 7D, Stack EP-15)	4.44	11.1
Stucco conveyor (Unit 7D, Stack EP-16)	4.44	11.1
Stucco conveyor (Unit 7F, Stack EP-17)	4.44	11.1
Stucco conveyor (Unit 7G, Stack EP-18)	4.44	11.1
Stucco conveyor (Unit 7R, Stack EP-39)	4.44	11.1
Plaster conveyor (Unit 7J, Stack EP-29)	~~42.0~~**14**	~~43~~**24**.0
Plaster conveyor (Unit 7K, Stack EP-31)	~~10.5~~**14**	~~19.8~~**24.0**
Plaster conveyor (Unit 7L, Stack EP-32)	~~10.5~~**14**	~~19.8~~**24.0**

Emission Unit	Max. Throughput Rate (tons/hr)	Particulate Emission Limit (lbs/hr)
Plaster storage bin (Unit 7N, Stack EP-34)	4.33	11.0
Plaster storage bin (Unit 7O, Stack EP-35)	4.33	11.0
Plaster storage bin (Unit 7P, Stack EP-36)	4.33	11.0
~~Perlite System (Unit 5)~~	~~0.90~~	~~3.82~~
Plaster mixing and bagging system (Unit 7M, Stack EP-33)	13.0	22.9
Stucco storage silo (Unit 7H, Stack EP-19)	20.0	30.5
Stucco storage silo (Unit 7I, Stack EP-20)	20.0	30.5
Coaxial mixing/pulping system (Unit 8D, Stack EP-24)	45.0	43.6
BET board sawing process (Unit 1A, Stack EP-25)*	**2**	**6.5**
~~Board sawing system and~~ BET dunnage sawing process (Unit ~~1A and~~ 1B, Stack EP-25~~))~~*****	~~0.03~~**2**	~~0.35~~**6.5**
BET grindstone system (Unit 1D, Stack EP-38)	~~0.01~~**2**	~~0.22~~**6.5**
BMA land plaster bin ~~and Starch bin~~ (Unit 8A ~~and 8B~~, Stack EP-21)	1.~~1~~**00**	4.~~37~~**1**
BMA ball mill (Unit 8C, Stack EP-23)	1.~~00~~**10**	4.~~10~~**4**
Chopped dunnage storage bin with conveyor (Unit 1C, Stack EP-26)	1.00	4.~~10~~**1**
~~Underground, totally enclosed mining, primary crushing and conveying~~**Recycled wallboard screener**	~~350~~**10.8**	~~64.8~~**20.2**
Stucco cooler	**45**	**43.6**

Pursuant to 326 IAC 6-3-2(e)(3), when the process weight exceeds 200 tons per hour, the maximum allowable emissions may exceed the emission limits shown in the table above, provided the concentration of particulate matter in the gas discharged to the atmosphere is less than 0.10 pounds per 1,000 pounds of gases.

D.1.4 Sulfur Dioxide (SO2) [326 IAC 7-1.1-2]

In order to render the requirements of 326 IAC 7-1.1-2 not applicable, the Permittee shall comply with the following:

(~~1~~**a**) The No. 2 fuel oil usage in the IMP mill flash calcining system burner shall not exceed 2,502,860.0 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(~~2~~**b**) The sulfur content of No. 2 fuel oil combusted in the IMP mill flash calcining system burner shall not exceed 0.05 percent by weight. Compliance with this limit shall be demonstrated on a calendar month average.

Compliance with these limits shall limit the SO2 emissions from the IMP mill flash calcining system burner to less than twenty-five (25) tons per twelve (12) consecutive month period and shall render 326 IAC 7-1.1-2 (Sulfur Dioxide (SO_2) Emission Limitations) not applicable.

D.1.5 Volatile Organic Compounds (VOC) **BACT** [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6 (VOC BACT), SPR 101-36933-00003, the Permittee shall comply with the following:

(a) The Permittee shall comply with the following when drying regular wallboard in the natural gas-fired dryer (Unit 2):

(1) VOC emissions shall not exceed ~~0.0572~~**0.686**pounds per ton of regular wallboard dried.

(2) The regular wallboard drying rate shall not exceed 400,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The Permittee shall comply with the following when drying **silicone** XP wallboard in the natural gas-fired dryer (Unit 2):

(1) VOC emissions shall not exceed 0.~~19~~**331** pounds per ton of **silicone** XP wallboard dried.

(2) The **silicone** XP wallboard drying rate shall not exceed ~~75~~**345**,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

~~Compliance with these limits shall limit the potential to emit VOC from the wallboard manufacturing operation to less than twenty-five (25) tons per 12 consecutive month period and shall render 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities) not applicable.~~

D.1.6 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventative Maintenance Plan is required for these facilities 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 **[326 IAC 2-8-4(1)]**

D.1.7 Particulate Control [326 IAC 2-8-5]

(a) In order to comply with Conditions D.1.1, D.1.2, and D.1.3, the ~~cyclone, baghouses, integral filter receiver, and integral cyclone and baghouses~~**control devices listed in the table below** for particulate control shall be in operation and control emissions from the ~~crushing, screening, grinding, IMP mill flash calcining system, calcining, conveying, plaster manufacturing, and wallboard manufacturing operations~~**emission units listed in the table below** at all times these facilities are in operation.

Emission Unit	Control Device
Raymond gypsum mill (Unit 3A)	**Baghouse EP-2**
Raymond gypsum mill (Unit 3B)	**Baghouse EP-3**
IMP Mill Flash Calcining System (Unit 9)	**Cyclone EP-40a and Baghouses EP-40b**
Flash calcidyne unit (Unit 4A)	**Baghouse EP-4**
Flash calcidyne unit (Unit 4B)	**Baghouse EP-5**
Flash calcidyne unit (Unit 4C)	**Baghouse EP-6**
Flash calcidyne unit (Unit 4D)	**Baghouse EP-7**
Flash calcidyne unit (Unit 4E)	**Baghouse EP-8**
Stucco conveyor (Unit 7A)	**Baghouse EP-9**
Stucco conveyor (Unit 7B)	**Baghouses EP-13 and EP-14**
Stucco conveyor (Unit 7C)	**Baghouse EP-10**
Stucco conveyor (Unit 7D)	**Baghouses EP-15 and EP-16**
Stucco conveyor (Unit 7F)	**Baghouse EP-17**
Stucco conveyor (Unit 7G)	**Baghouse EP-18**
Stucco conveyor (Unit 7R)	**Baghouse EP-39**
Plaster conveyors (Units 7J, 7K, and 7L)	**Baghouses EP-29, EP-31, and EP-32**
Plaster storage bin (Unit 7N)	**Baghouse EP-34**
Plaster storage bin (Unit 7O)	**Baghouse EP-35**

Plaster storage bin (Unit 7P)	**Baghouse EP-36**
Perlite System (Unit 5)	**Integral air/perlite separator**
Plaster mixing and bagging system (Unit 7M)	**Baghouse EP-33**
Stucco storage silo (Unit 7H)	**Baghouse EP-19**
Stucco storage silo (Unit 7I)	**Baghouse EP-20**
Coaxial mixing/pulping system (Unit 8D)	**Baghouse EP-24**
Board sawing system and BET dunnage sawing process (Unit 1A and Unit 1B)	**Baghouse EP-25**
BET grindstone system (Unit 1D)	**Baghouse EP-38**
BMA land plaster bin and Starch bin (Unit 8A and 8B)	**Baghouse EP-21**
BMA ball mill (Unit 8C)	**Baghouse EP-23**
Dunnage Storage Bin (Unit 1C)	**Baghouse EP-26**
Stucco cooler	**Baghouse**

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected dated the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.1.8 Testing Requirements [326 IAC 2-8-5(a)(1), (4)][326 IAC 2-1.1-11]

(a) ~~Pursuant to Air-014-NPD and in order to verify compliance with 326 IAC 2-8-4 and Condition D.1.5(b)(1),~~ **Not later than 180 days after** the ~~source~~**issuance date of this permit, Permit No 101-36933-00003, the Permittee** shall perform ~~a one-time performance test to verify the~~ VOC ~~emission factor~~**testing** when drying ~~XP~~**regular** wallboard in the natural gas-fired ~~kiln~~ dryer (Unit 2~~) not later than 180 days after initial use of any silicone based additive material in the production of XP wallboard,~~**),** utilizing methods ~~as~~ approved by the commissioner~~.~~ **at least once every five (5) years from the date of the most recent valid compliance demonstration.** Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C ~~–~~ Performance Testing contains the ~~Permittee's~~**Permittee's** obligation with regard to the performance testing required by this condition.

~~(b~~**(b) In order to demonstrate compliance with Condition D.1.5(b), the Permittee shall perform VOC testing when drying silicone XP wallboard in the natural gas-fired dryer (Unit 2) utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.**

(c) In order to demonstrate compliance with Conditions D.1.1(a) and D.1.2(a), the Permittee shall perform PM, PM10, and PM2.5 testing of the IMP mill flash calcining system integral baghouses no later than sixty (60) days after achieving maximum capacity, but not later than one hundred and eighty (180) days after initial startup. This testing shall be conducted utilizing methods approved by the Commissioner and shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM10 and PM2.5 includes filterable and condensable PM.

~~D.1.9 CO2e Emissions~~

~~In order to comply with Condition D.1.2(c), the Permittee shall use the following equations to determine the tons of CO2e emitted per twelve (12) consecutive month period:~~

~~(a) Carbon Dioxide Equivalent (CO2e) emissions shall be determined using the following equations:~~

$$\text{~~}CO_2 = \frac{G(EG_{CO2}) + F(EF_{CO2}) + D(ED_{CO2})}{2{,}000 \text{ lbs/ton}}\text{~~}$$

$$\text{~~}CH_4 = \frac{G(EG_{CH4}) + F(EF_{CH4}) + D(ED_{CH4})}{2{,}000 \text{ lbs/ton}}\text{~~}$$

$$\text{~~}N_2O = \frac{G(EG_{N2O}) + F(EF_{N2O}) + D(ED_{N2O})}{2{,}000 \text{ lbs/ton}}\text{~~}$$

$$\text{~~}CO_2e = \sum[(CO_2 \text{ x } CO_2 \text{ GWP}) + (CH_4 \text{ x } CH_4 \text{ GWP}) + (N_2O \text{ x } N_2O \text{ GWP})]\text{~~}$$

~~Where:~~
~~CO_2 = tons of CO_2 emissions for previous 12 consecutive month period~~
~~CH_4 = tons of CH_4 emissions for previous 12 consecutive month period~~
~~N_2O = tons of N_2O emissions for previous 12 consecutive month period~~
~~CO_2e = tons of CO_2e equivalent emissions for previous 12 consecutive month period~~
~~G = million cubic feet of natural gas used in previous 12 months~~
~~F = gallons of No. 2 fuel oil used in previous 12 months~~
~~D = gallons of diesel fuel used in previous 12 months~~
~~EG_{CO2} = 120,000 pounds per million cubic feet of natural gas~~
~~EF_{CO2} = 22,300 pounds per 1,000 gallons of No. 2 fuel oil~~
~~ED_{CO2} = 22,512.07 pounds per 1,000 gallons of diesel fuel~~
~~EG_{CH4} = 2.3 pounds per million cubic feet of natural gas~~
~~EF_{CH4} = 0.22 pounds per 1,000 gallons of No. 2 fuel oil~~
~~ED_{CH4} = 0.91 pounds per 1,000 gallons of diesel fuel~~
~~EG_{N2O} = 2.2 pounds per million cubic feet of natural gas~~
~~EF_{N2O} = 0.26 pounds per 1,000 gallons of No. 2 fuel oil~~
~~ED_{N2O} = 0.18 pounds per 1,000 gallons of diesel fuel~~

~~Global Warming Potentials (GWP)~~
~~Carbon dioxide (CO2) = 1~~
~~Methane (CH4) = 21~~
~~Nitrous oxide (N2O) = 310~~

~~D.1.10~~ Sulfur Dioxide Emissions and Sulfur Content

(a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate compliance with Condition D.1.4(b) utilizing one of the following options

(1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or

(2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.

(A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and

(B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.

(b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the dryer/mixer, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to any of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

Compliance Monitoring Requirements [326 IAC 2-8-4~~]~~**(1)][**326 IAC 2-8-5(a)(1)]

D.1.~~11~~**10** Visible Emissions Notations

(a) Daily visible emission notations of the stack exhausts listed in this section of this permit shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.1.~~12~~ Parametric Monitoring

~~The Permittee shall record the pressure drop across the baghouses and integral cyclone used in conjunction with the gypsum wallboard manufacturing process, at least once per day when the process is in operation. When for any one reading, the pressure drop across the baghouse and integral cyclone is outside the normal range listed in the table below , the Permittee shall take reasonable response. The normal range for these units is provided in the table below unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.~~

~~Control Device ID~~	~~Pressure Drop Range (in of water)~~
~~EP-1, EP-4, EP-5, EP-6, EP-7, EP-8, EP-9, EP-15, EP-16, EP-17, EP-18, EP-39, EP-31, EP-32, EP-34, EP-35, EP-36, EP-29, EP-33, EP-25, EP-26, EP-27, EP-38~~	~~1 to 7~~
~~EP-2, EP-3~~	~~3 to 12~~
~~EP-10, EP-13, EP-14, EP-19, EP-20, EP-23, EP-24, EP-21~~	~~1 to 6~~
~~EP-37a, EP-37b~~	~~1 to 6~~
~~EP-40a~~	~~1 to 6~~
~~EP-40b~~	~~1 to 6~~

~~The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated~~

~~or replaced at least once every six (6) months.~~

~~D.1.13~~**11** Broken or Failed Bag Detection

(a) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse=s pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

D.1.~~14~~**12** Cyclone Failure Detection

In the event that cyclone failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3~~)][326 IAC 2-8-16]~~**)]**

D.1.~~15~~**13** Record Keeping Requirements

~~(a) To document the compliance status with Condition D.1.2(c), the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the CO2e emission limit established in Condition D.1.2(c).~~

~~(1) Calendar dates covered in the compliance determination period;~~

~~(2) Actual fuel oil usage each month;~~

~~(3) Actual natural gas usage each month;~~

~~(4) Actual diesel fuel usage each month; and~~

~~(5) Equivalent carbon dioxide equivalent emission rates for each fuel used at the source per month.~~

~~(b~~**(a)** To document the compliance status with Condition D.1.4, the Permittee shall maintain records in accordance with (1) through (7) below. Records maintained for (1) through (7) shall be taken monthly and shall be complete and sufficient to establish compliance with the fuel usage sulfur content limit established in Condition D.1.4.

(1) Calendar dates covered in the compliance determination period;

(2) Actual fuel oil usage each month;

(3) Average sulfur content of fuel oil used;

(4) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and

If the fuel supplier certification is used to demonstrate compliance, the following, as a minimum, shall be maintained:

(5) Fuel supplier certifications;

(6) The name of the fuel supplier; and

(7) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.

(~~c~~**b**) To document the compliance status with Condition D.1.5, the Permittee shall keep records of the amount of regular and **silicone** XP wallboard dried in the natural gas-fired kiln dryer (Unit 2). Records necessary to demonstrate compliance shall be available no later than thirty (30) days of the end of each compliance period.

(~~d~~**c**) To document the compliance status with Conditions D.1.~~11~~**10**, the Permittee shall maintain records of daily visible emission notations of the stack exhaust listed in this section of this permit. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

~~(e) To document the compliance status with Condition D.1.12, the Permittee shall maintain records once per day of the pressure drop during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).~~

(~~f~~**d**) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

D.1.~~16~~**14** Reporting Requirements

A quarterly summary of the information to document compliance status with Conditions D.1.~~2(c), D.1.4~~(a~~),~~**)** and D.1.5 shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meet the requirements of 326 IAC 2-8-5(a)(1) by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

~~**SECTION D.2 FACILITY OPERATION CONDITIONS**~~

~~**Facility Description [326 IAC 2-8-4(10)]**~~

~~(j) One (1) wallboard grinder, approved for construction in 2012, with a maximum capacity of 20 tons of wallboard per hour, utilizing no control, with emissions exhausting outdoors.~~

~~Under 40 CFR 60, Subpart OOO, the wallboard grinder is considered an affected facility.~~

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

~~**Emission Limitations and Standards [326 IAC 2-8-4(1)]**~~

~~D.2.1 Particulate [326 IAC 6-3-2]~~

~~Pursuant to 326 IAC 6-3-2, the particulate emission rate from the uncontrolled wallboard grinder shall not exceed 30.5 pounds per hour when operating at a process weight rate of 20 tons per hour. This limit was calculated using the following equation:~~

~~The pounds per hour limitation was calculated with the following equation:~~

~~Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:~~

~~$E = 4.10 P^{0.67}$ where E = rate of emission in pounds per hour; and~~
~~P = process weight rate in tons per hour~~

~~D.2.2 Preventive Maintenance Plan [326 IAC 2-8-4(9)]~~

~~A Preventative Maintenance Plan is required for this facility. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.~~

SECTION D.~~3~~ ~~FACILITY~~**2** **EMISSIONS UNIT**
OPERATION CONDITIONS

~~**Facility Description [326 IAC 2-8-4(10)]**~~

~~(a) Degreasing operations that do not exceed 145 gallons per 12 months, and not subject to 326 IAC 20-6, including four (4) Safety Kleen parts cleaning operations.~~

~~(b) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons, including two (2) kerosene storage tanks.~~

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

Emissions Unit Description:

Insignificant Activity:

(a) Degreasing operations that do not exceed 145 gallons per 12 months, and not subject to 326 IAC 20-6, including four (4) Safety Kleen parts cleaning operations.

(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 2-8-4(1)]

D.~~3~~.1 ~~Volatile Organic Compounds (VOC)~~**2.1 Cold Cleaner Degreaser Control Equipment and Operating Requirements** [326 IAC 8-3-2]

Pursuant to 326 IAC 8~~--~~3~~--~~2 (Cold Cleaner ~~Operations), for cold cleaning operations constructed after January 1, 1980,~~**Degreaser Control Equipment and Operating Requirements),** the Permittee shall:

(a) **Ensure the following control equipment and operating requirements are met:**

(1) Equip the ~~cleaner~~**degreaser** with a cover~~;~~**.**

(~~b~~**2**) Equip the ~~cleaner~~**degreaser** with a ~~facility~~**device** for draining cleaned parts~~;~~**.**

(~~c~~**3**) Close the degreaser cover whenever parts are not being handled in the ~~cleaner;~~**degreaser.**

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

(~~e~~**5**) Provide a permanent, conspicuous label ~~summarizing~~**that lists** the ~~operation~~**operating** requirements~~;~~ **in subdivisions (3), (4), (6), and (7).**

(~~f~~**6**) Store waste solvent only in ~~covered~~**closed** containers ~~and not dispose~~ **.**

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

~~D.3.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]~~

~~(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs constructed after July 1, 1990, the Permittee shall ensure that~~**(b) Ensure** the following **additional** control equipment ~~requirements are met:~~

~~(1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:~~

~~(A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));~~

~~(B) The solvent is agitated; or~~

~~(C) The solvent is~~ **and** ~~2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.~~

~~(3) Provide a permanent, conspicuous label which lists the~~ operating requirements ~~outlined in subsection (b).~~**are met:**

~~(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.~~

~~(5)~~**(1)** Equip the degreaser with one (1) of the following control devices if the solvent ~~volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent~~ is heated to a temperature **of** greater than forty-eight and nine-tenths **(48.9)** degrees Celsius (~~48.9°C) (~~one hundred twenty **(120)** degrees Fahrenheit ~~(120°F)):~~**):**

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths

(0.75) or greater.

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

(C) ~~Other systems~~**A refrigerated chiller.**

(D) Carbon adsorption.

(E) An alternative system of demonstrated equivalent **or better** control ~~such~~ as ~~a refrigerated chiller of carbon adsorption. Such systems~~**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.

(~~(b)~~ **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.2.2 Material Requirements for Cold Cleaner Degreasers [326 IAC 8-3-8]

Pursuant to 326 IAC 8-3-~~5(b) (Cold Cleaner Degreaser Operation and Control), for cold cleaning facility construction of which commenced after July 1, 1990,~~**8 (Material Requirements for Cold Cleaner Degreasers),** the Permittee shall ~~ensure that~~ **not operate a cold cleaning 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.2.3 Preventive Maintenance Plan[326 IAC 2-8-4(9)]

A Preventive Maintenance Plan is required for these facilities and their associated control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)]

D.2.4 Record Keeping Requirements

(a) To document the compliance status with Condition D.2.2, the Permittee shall maintain the following ~~operating requirements are met:~~**records for each purchase of solvent used in the cold cleaner degreasing operations. These records shall be retained on-site or accessible electronically for the most recent three (3) year period and shall be reasonably accessible for an additional two (2) year period.**

~~(1) Close the cover whenever articles are not being handled in the degreaser.~~

~~(2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.~~

(1) The name and address of the solvent supplier.

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

(3) ~~Store waste solvent only in covered containers and prohibit the disposal or transfer of waste~~**The type of** solvent ~~in any manner in which greater than~~ **purchased.**

(4) The total volume of the solvent purchased.

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

(b) **Section C - General Record Keeping Requirements contains** the ~~waste solvent~~ **Permittee's obligations with regard to the records required** by ~~weight could evaporate~~**this condition**.

SECTION E.1 ~~FACILITY OPERATION CONDITIONS~~**NSPS**

~~**Facility Description [326 IAC 2-8-4(10)]**~~

~~(c~~**Emissions Unit Description:**

(b) One (1) IMP mill flash calcining system, consisting of one (1) natural gas-fired Raymond mill burner, with a maximum heat input capacity of forty (40) million British thermal units per hour, using ultra low sulfur No. 2 fuel oil as a back up fuel, and one (1) impact mill, identified as Unit 9, approved for construction in 2012, with a maximum capacity 40 tons of flue-gas-desulfurization (FGD, i.e. synthetic) gypsum per hour, with particulate matter emissions controlled by one (1) integral cyclone, identified as EP-40a and two (2) integral baghouses, identified as EP-40b, and exhausting to stack EP-40.

Under 40 CFR 60, Subpart OOO, this is considered an affected facility.

~~(j~~**(g) One (1) synthetic gypsum storage and conveying operation with fugitive emissions.**

Under 40 CFR 60, Subpart OOO, this is considered an affected facility.

(h) One (1) wallboard grinder, approved for construction in 2012, with a maximum capacity of 20 tons of wallboard per hour, utilizing no control, with emissions exhausting outdoors.

Under 40 CFR 60, Subpart OOO, ~~the wallboard grinder~~**this** is considered an affected facility.

(i) One (1) diesel fueled recycled wallboard grinder, approved in 2016 for construction, with a maximum capacity of 10.8 tons of wallboard per hour, powered by a 590 Horsepower nonroad engine, utilizing no control, with emissions exhausting outdoors.

Under 40 CFR 60, Subpart OOO, this is considered an affected facility.

(j) One (1) diesel fueled recycled wallboard screener, approved in 2016 for construction, with a maximum throughput capacity of 10.8 tons of wallboard per hour, powered by a 100 Horsepower nonroad engine, utilizing no control, with emissions exhausting outdoors.

Under 40 CFR 60, Subpart OOO, this is considered an affected facility.

(k) One (1) diesel fueled recycled wallboard stacker, approved in 2016 for construction, with a maximum throughput capacity of 10.8 tons of wallboard per hour, powered by a 21.6 Horsepower nonroad engine, utilizing no control, with emissions exhausting outdoors.

Under 40 CFR 60, Subpart OOO, this is considered an affected facility.

ignificant Activities ~~consisting of the following~~**:**

(~~s~~**r**) Emission units with PM and PM10 emissions less than five (5) tons per year, SO2, NOx, and VOC emissions less than ten (10) tons per year, CO emissions less than twenty-five (25) tons per year, and lead emissions less than two tenths (0.2) ton per year:

(1) One (1) storage building, a receiving hopper/feeder, and the associated belt conveyors for the FGD utilization process;

(2) One (1) covered FGD storage pile, with a maximum storage capacity of 5,000 tons per year; and

(3) One (1) FGD belt conveyor system, with a maximum conveying capacity of 250 tons per hour.

Under 40 CFR 60, Subpart OOO, ~~this is~~**these units are** considered ~~an~~ affected ~~facility.~~**facilities.**

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

New Source Performance Standards (NSPS) Requirements [326 IAC ~~12]~~**2-8-4(1)]**

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

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

(b) Pursuant to 40 CFR 60.~~1~~**4**, the Permittee shall submit all required notifications and reports 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
~~Compliance Branch, Office of Air Quality~~
~~100 North Senate Avenue~~
~~MC 61-53 IGCN 1003~~
~~Indianapolis, Indiana 46204-2251~~

E.1.2 Standards of Performance for Nonmetallic Mineral Processing Plants
~~[~~ **NSPS [326 IAC 12][**40 CFR Part 60, Subpart OOO~~]~~~~[326 IAC 12~~]

~~(a) Pursuant to 40 CFR Part 60, Subpart OOO,~~ The Permittee shall comply with the **following** provisions of ~~Standards of Performance for Nonmetallic Mineral Processing Plants~~**40 CFR Part 60, Subpart OOO** (included as Attachment B ~~of this~~**to the operating** permit), which are incorporated by reference as 326 IAC 12~~ for the~~**.**

(a) The recycled wallboard stacker, one (1) synthetic gypsum storage and conveying operation, one (1) storage building, one (1) covered FGD storage pile, and one (1) FGD belt conveyor system:
(1) 40 CFR 60.670(a)(1), (e), (f)

(2) 40 CFR 60.671
(3) 40 CFR 60.672(b), (d), (e)
(4) 40 CFR 60.673
(5) 40 CFR 60.675(c)(1), (c)(3), (d), (e), (i)
(6) 40 CFR 60.676(f), (h), (i), (j), (k)
(7) Table 1 to Subpart OOO of Part 60
(8) Table 3 to Subpart OOO of Part 60

(b) The wallboard grinder, recycled wallboard grinder, and recycled wallboard screener:

(1) 40 CFR 60.670(a)(1), (~~d), (~~e), ~~and~~ (f)
(2) 40 CFR 60.671
(3) 40 CFR 60.672(b**), (d**)
(4) 40 CFR 60.673
(5) 40 CFR 60.675(~~a), (~~c)(1~~) and~~**),** (c)(3**), (e), (i**)
(6) 40 CFR 60.676(f), (h~~)~~**(), (**i~~)(1~~), (j), ~~and~~ (k)
(7) ~~Tables~~**Table** 1~~ and 3~~

~~(b) Pursuant~~ to ~~40 CFR Part 60,~~ Subpart OOO~~, the Permittee shall comply with the provisions~~ of ~~Standards of Performance for Nonmetallic Mineral Processing Plants (included as Attachment B of this permit), which are incorporated by reference as 326 IAC 12 for the IMP mill flash calcining system and FGD belt conveyor system as specified as follows:~~**Part 60**

(8) Table 3 to Subpart OOO of Part 60

(c) The one (1) IMP mill flash calcining system:

(1) 40 CFR 60.670**(a)(1), (e), (f)**
(2) 40 CFR 60.671
(3) 40 CFR 60.672(a), (b~~), and (e~~)
(4) 40 CFR 60.673
(5) 40 CFR 60.674(c~~) and~~**),** (d)
(6) 40 CFR 60.675**(a), (b), (c)(1), (c)(3), (e), (g), (i)**
(7) 40 CFR 60.676(b**)(1), (b)(2**), (f), (h), (i), (j), ~~and~~ (k)
(8) ~~Tables~~**Table** 1~~,~~ **to Subpart OOO of Part 60**
(9) Table 2~~, and~~ **to Subpart OOO of Part 60**
(10) Table 3 **to Subpart OOO of Part 60**

~~E.1.3 Testing Requirements [40 CFR Part 60, Subpart OOO][326 IAC 12-1][326 IAC 2-8-5(a)(1),(4)][326 IAC 2-1.1-11]~~

~~(a) In order to demonstrate compliance with Condition E.1.2(a), the Permittee shall perform testing for fugitive emissions from affected facilities without water sprays, as required under NSPS 40 CFR 60, Subpart OOO, no later than sixty (60) days after achieving maximum capacity, but not later than one hundred and eighty (180) days after initial startup, utilizing methods approved by the Commissioner. Testing shall only be performed if the company has not previously performed testing for the same crusher at one of their other Indiana facilities. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.~~

~~Note: Pursuant to §60.674(b)(1), affected facilities controlled by water carryover from upstream water sprays that are inspected according to the requirements in §60.674(b) and §60.676(b) are exempt from this 5-year repeat testing requirement.~~

~~(b) In order to demonstrate compliance with Condition E.1.2(b), the Permittee shall perform the~~

~~testing required under NSPS 40 CFR 60, Subpart OOO, no later than sixty (60) days after achieving maximum capacity, but not later than one hundred and eighty (180) days after initial startup. This testing shall be conducted utilizing methods approved by the Commissioner and shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.~~

SECTION E.2 **~~EMISSIONS UNIT OPERATION CONDITIONS~~NESHAP**

Emissions Unit Description:

ignificant Activities ~~consisting of the following~~**:**

(~~q~~**p**) Emergency generators, constructed in 1974, including:

(1) One (1) diesel fired emergency generator, with a maximum power output rate of 130 horsepower.

(2) One (1) diesel fired emergency flood pump, with a maximum power output rate of 375 horsepower.

Under 40 CFR 63, Subpart ZZZZ, these units are considered affected sources.

(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 (NESHAP) Requirements [326 IAC **~~20~~]2-8-4(1)]**

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

(a) Pursuant to 40 CFR 63~~,~~**.1** the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1, **for the emission unit(s) listed above,** except as otherwise specified in 40 CFR **Part** 63, Subpart ~~ZZZZ~~**ZZZ**.

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

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

The ~~one (1) diesel fired emergency generator and the one (1) emergency flood pump are subject to~~ **Permittee shall comply with** the ~~requirements of the 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engine (RICE), which are incorporated by reference as 326 IAC 20-82, except as otherwise specified in~~**following provisions of** 40 CFR Part 63, Subpart ZZZZ (included as

Attachment C ~~of this~~**to the operating** permit~~):~~**), which are incorporated by reference as 326 IAC 20-82, for the emission unit(s) listed above:**

(~~a~~**1**) 40 CFR 63.6580
(~~b~~**2**) 40 CFR 63.6585
(~~c~~**3**) 40 CFR 63.6590(a)(1)(iii)
(~~d~~**4**) 40 CFR 63.6595(a)(1), (b), and (c)
(~~e~~**5**) 40 CFR 63.6603**(a)**
(~~f~~**6**) 40 CFR 63.6605
(~~g~~**7**) 40 CFR 63.6625(e)(3), (f), (h), and (i)
(~~h~~**8**) 40 CFR 63.6635
(~~i~~**9**) 40 CFR 63.6640**(a), (b), (e), and (f)**
(~~j~~**10**) 40 CFR 63.6645(a)(5)
(~~k~~**11**) 40 CFR 63.6650
(~~l~~**12**) 40 CFR 63.6655
(~~m~~**13**) 40 CFR 63.6660
(~~n~~**14**) 40 CFR 63.6665
(~~o~~**15**) 40 CFR 63.6670
(~~p~~**16**) 40 CFR 63.6675
(~~q~~**17**) Table 2d (item 4)
(~~r~~**18**) Table 6 (item 9)
(~~s~~**19**) Table 8

~~**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**~~
~~**OFFICE OF AIR QUALITY**~~
~~**COMPLIANCE AND ENFORCEMENT BRANCH**~~

~~**FESOP Quarterly Report**~~

~~Source Name: New NGC, Inc. dba National Gypsum Company~~
~~Source Address: 9720 US Highway 50 East, Shoals, Indiana 47581~~
~~FESOP No.: F101-22910-00003~~
~~Facility: Source wide Natural Gas, No. 2 Fuel Oil, and Diesel Fuel Combustion Units~~
~~Parameter: CO2e emissions~~
~~Limit: The combined CO2e emissions shall be limited to less than 100,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month, using the equation found in Condition D.1.9(a).~~

~~QUARTER:_____ YEAR:_____~~

~~Month~~	~~Fuel Types (units)~~	~~Column 1~~	~~Column 2~~	~~Column 1 + Column 2~~	~~Total CO2e Emissions From All Fuels Used (tons per 12 month consecutive period)~~
		~~Usage This Month~~	~~Usage Previous 11 Months~~	~~Usage 12 Month Total~~	
~~Month 1~~	~~Natural gas (mmcf)~~				
	~~No. 2 fuel oil (gallons)~~				
	~~Diesel Fuel (gallons)~~				
~~Month 2~~	~~Natural gas (mmcf)~~				

	~~No. 2 fuel oil (gallons)~~				
	~~Diesel Fuel (gallons)~~				
~~Month 3~~	~~Natural gas (mmcf)~~				
	~~No. 2 fuel oil (gallons)~~				
	~~Diesel Fuel (gallons)~~				

~~☐ No deviation occurred in this quarter.~~ ~~☐ Deviation/s occurred in this quarter.~~

~~Deviation has been reported on:~~ _____

~~Submitted by:~~ _____
~~Title / Position:~~ _____
~~Signature:~~ _____
~~Date:~~ _____
~~Phone:~~ _____

***

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

FESOP Quarterly Report

Source Name: New NGC, Inc. dba National Gypsum Company
Source Address: 9720 US Highway 50 East, Shoals, Indiana 47581
FESOP No.: F101-22910-00003
Facility: IMP mill flash calcining system burner
Parameter: No. 2 Fuel Usage
Limit: The No. 2 fuel oil usage in the IMP mill flash calcining system burner shall not exceed 2,502,860.0 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

QUARTER: _____ ~~Year:~~ _____ **YEAR:** _____

Month	Column 1	Column 2	Column 1 + Column 2
	No. 2 Fuel Oil Usage This Month (Gallons)	No. 2 Fuel Oil Usage Previous 11 Months (Gallons)	No. 2 Fuel Oil Usage 12 Month Total (Gallons)
~~Month 1~~			
~~Month 2~~			
~~Month 3~~			

***

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

FESOP Quarterly Report

Source Name: New NGC, Inc. dba National Gypsum Company
Source Address: 9720 U.S. Highway 50 East, Shoals, Indiana 47581
FESOP Permit No.: F101-22910-00003
Facility: Natural Gas-Fired Kiln Dryer (Unit 2)
Parameter: Regular and **silicone** XP Wallboard Drying Rate
Limit: The regular wallboard drying rate shall not exceed 400,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month and the **silicone** XP wallboard drying rate shall not exceed ~~75~~**345**,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER: _____ YEAR~~:~~ _____**:** _____

Month	Wallboard Type	Column 1	Column 2	Column 1 + Column 2
		This Month	Previous 11 Months	12 Month Total
~~Month 1~~	Regular			
	XP			
~~Month 2~~	Regular			
	XP			
~~Month 3~~	Regular			
	XP			

***

Conclusion and Recommendation

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 March 10, 2016. Additional information was received on Wednesday, March 30, 2016.

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed FESOP Significant Permit Revision No. 101-36933-00003. The staff recommends to the Commissioner that this FESOP Significant Permit Revision be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Thomas Olmstead 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) 233-9664 or toll free at 1-800-451-6027 extension 3-9664.

(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: Emission Calculations
Emissions Summary

Company Name: New NGC, Inc. dba National Gypsum Company
Address City IN Zip: 9720 US Highway 50 East, Shoals, Indiana 47581
Permit Number: 101-36933-00003
Reviewer: Thomas Olmstead/Heath Hartley
Date: July, 2016

Uncontrolled Potential to Emit (tons/yr)									
Emission Unit		**PM**	**PM10**	**PM2.5 ***	**SO_2**	**NOx**	**VOC**	**CO**	**Total HAPs**
Raymond Grinding Mill Operation		63.85	64.10	64.10	0.03	4.29	0.24	3.61	0.08
IMP Mill Flash Calcining System - Process**		1.75	1.49	1.49	8.89	25.03	0.94	14.43	0.32
Calcining Operation		8103.31	3067.22	3067.22	0.10	16.10	0.89	13.53	0.30
Stucco Conveying Operation		26.28	26.28	26.28	--	--	--	--	--
Plaster manufacturing operation	Plaster Conveyor (identified as Units 7J, 7K, and 7L)	27.59	27.59	27.59	--	--	--	--	--
	Plaster Storage Bins (identified as Unit 7N, 7O, and 7P)	79.72	79.72	79.72	--	--	--	--	--
	New Perlite System (identified as Unit 5)***	0.79	0.79	0.79	--	--	--	--	--
	Plaster Mixing and Bagging (identified as Unit 7M)	125.27	125.27	125.27	--	--	--	--	--
Wallboard Manufacturing Operation	Stucco Storage Silos (identified as Units 7H and 7I)	245.28	245.28	245.28	--	--	--	--	--
	Coaxial Mixing and Pulping (identified as Unit 8D)	434	434	433.62	--	--	--	--	--
	Kiln Drying (Unit 2)	0.78	3.10	3.10	0.24	40.79	73.91	34.27	3.44
	BET Board Sawing (identified as Unit 1A)	87.60	74.46	74.46	--	--	--	--	--
	BET Dunnage Sawing (identified as Unit 1B)	87.60	74.46	74.46	--	--	--	--	--
	BET Grindstone System (identified as Unit 1D)	87.60	74.46	74.46	--	--	--	--	--
	BMA Land Plaster Bin (identified as Unit 8A)	9.64	9.64	9.64	--	--	--	--	--
	Starch Bin (identified as Unit 8B)	0.96	0.96	0.96	--	--	--	--	--
	BMA Ball Mill (identified as Unit	10.60	10.60	10.60	--	--	--	--	--
	Dunnage Storage Bin (identified as Unit 1C)	9.64	9.64	9.64	--	--	--	--	--
Wallboard Grinder		0.47	0.21	0.21	--	--	--	--	--
Degreasing		--	--	--	--	--	0.49	--	9.72E-04
Natural Gas Combustion Units		0.09	0.36	0.36	0.03	4.68	0.26	3.93	0.09
Insignificant Activity-Fuel oil-fired combustion		0.13	0.15	0.13	4.44	1.25	0.02	0.31	4.29E-04
Diesel Fired Emergency Generators		0.28	0.28	0.28	0.26	3.91	0.32	0.84	3.42E-03
Recycled Wallboard Grinder		1.84	0.71	0.71	--	--	--	--	--
Stacker		0.14	0.05	0.05	--	--	--	--	--
Screener		14.19	3.41	3.41	--	--	--	--	--
Stucco Cooler		1191.36	1191.36	1191.36	--	--	--	--	--
Total		**10,610.37**	**5,525.19**	**5,525.18**	**13.98**	**96.06**	**77.05**	**70.91**	**4.24**

** PM2.5 listed is direct PM2.5*

***Processing emissions PM10=PM2.5. Combustion emissions PM10 does not equal PM2.5 emissions. IMP Mill Flash Calcining System - Combustion (Worst Case Fuel)*

****Perlite System potential to emit determined after integral air/perlite separator.*

Appendix A: Emission Calculations
Emissions Summary

Company Name: New NGC, Inc. dba National Gypsum Company
Address City IN Zip: 9720 US Highway 50 East, Shoals, Indiana 47581
Permit Number: 101-36933-00003
Reviewer: Thomas Olmstead/Heath Hartley
Date: July, 2016

Potential to Emit after Control (tons/yr)									
Emission Unit		**PM**	**PM10**	**PM2.5 ***	**SO_2**	**NOx**	**VOC**	**CO**	**Total HAPs**
Raymond Grinding Mill Operation		0.91	1.16	1.16	0.03	4.29	0.24	3.61	0.08
IMP Mill Flash Calcining System - Process		1.75	1.49	1.49	8.89	25.03	0.94	14.43	0.32
Calcining Operation		105.64	41.08	41.08	0.10	16.10	0.89	13.53	0.30
Stucco Conveying Operation		0.34	0.34	0.34	--	--	--	--	--
Plaster manufacturing operation	Plaster Conveyor (identified as Units 7J, 7K, and 7L)	0.36	0.36	0.36	--	--	--	--	--
	Plaster Storage Bins (identified as Unit 7N, 7O, and 7P)	1.04	1.04	1.04	--	--	--	--	--
	New Perlite System (identified as Unit 5)	0.79	0.79	0.79	--	--	--	--	--
	Plaster Mixing and Bagging (identified as Unit 7M)	1.63	1.63	1.63	--	--	--	--	--
Wallboard Manufacturing Operation	Stucco Storage Silos (identified as Units 7H and 7I)	3.19	3.19	3.19	--	--	--	--	--
	Coaxial Mixing and Pulping (identified as Unit 8D)	5.64	5.64	5.64	--	--	--	--	--
	Kiln Drying (Unit 2)	0.78	3.10	3.10	0.24	40.79	73.91	34.27	3.44
	BET Board Sawing (identified as Unit 1A)	1.14	0.97	0.97	--	--	--	--	--
	BET Dunnage Sawing (identified as Unit 1B)	1.14	0.97	0.97	--	--	--	--	--
	BET Grindstone System (identified as Unit 1D)	1.14	0.97	0.97	--	--	--	--	--
	BMA Land Plaster Bin (identified as Unit 8A)	0.13	0.13	0.13	--	--	--	--	--
	Starch Bin (identified as Unit 8B)	0.01	0.01	0.01	--	--	--	--	--
	BMA Ball Mill (identified as Unit	0.14	0.14	0.14	--	--	--	--	--
	Dunnage Storage Bin (identified as Unit 1C)	0.13	0.13	0.13	--	--	--	--	--
Wallboard Grinder		0.47	0.21	0.21	--	--	--	--	--
Degreasing		--	--	--	--	--	0.49	--	9.72E-04
Natural Gas Combustion Units		0.09	0.36	0.36	0.03	4.68	0.26	3.93	0.09
Insignificant Activity-Fuel oil-fired combustion		0.13	0.15	0.13	4.44	1.25	0.02	0.31	4.29E-04
Diesel Fired Emergency Generators		0.28	0.28	0.28	0.26	3.91	0.32	0.84	3.42E-03
Recycled Wallboard Grinder		1.84	0.71	0.71	--	--	--	--	--
Stacker		0.14	0.05	0.05	--	--	--	--	--
Screener		14.19	3.41	3.41	--	--	--	--	--
Stucco Cooler		1.19	1.19	1.19	--	--	--	--	--
Total		**144.21**	**69.46**	**69.45**	**13.98**	**96.06**	**77.05**	**70.91**	**4.24**

** PM2.5 listed is direct PM2.5*

Appendix A: Emission Calculations
Emissions Summary

Company Name: New NGC, Inc. dba National Gypsum Company
Address City IN Zip: 9720 US Highway 50 East, Shoals, Indiana 47581
Permit Number: 101-36933-00003
Reviewer: Thomas Olmstead/Heath Hartley
Date: July, 2016

Potential to Emit after Issuance (tons/yr)									
Emission Unit		**PM**	**PM10**	**PM2.5 ***	**SO_2**	**NOx**	**VOC**	**CO**	**Total HAPs**
Raymond Grinding Mill Operation		1.20	0.83	0.83	0.03	4.29	0.24	3.61	0.08
IMP Mill Flash Calcining System - Process		1.75	1.49	1.49	8.89	25.03	0.94	14.43	0.32
Calcining Operation		152.74	39.86	39.86	0.10	16.10	0.89	13.53	0.30
Stucco Conveying Operation		0.50	0.34	0.34	--	--	--	--	--
Plaster manufacturing operation	Plaster Conveyor (identified as Units 7J, 7K, and 7L)	0.52	0.36	0.36	--	--	--	--	--
	Plaster Storage Bins (identified as Unit 7N, 7O, and 7P)	1.50	1.04	1.04	--	--	--	--	--
	New Perlite System (identified as Unit 5)	0.79	0.79	0.79	--	--	--	--	--
	Plaster Mixing and Bagging (identified as Unit 7M)	2.36	1.63	1.63	--	--	--	--	--
Wallboard Manufacturing Operation	Stucco Storage Silos (identified as Units 7H and 7I)	4.62	3.19	3.19	--	--	--	--	--
	Coaxial Mixing and Pulping (identified as Unit 8D)	8.17	5.64	5.64	--	--	--	--	--
	Kiln Drying (Unit 2)	0.78	3.10	3.10	0.24	40.79	62.36	34.27	0.77
	BET Board Sawing and BET Dunnage Sawing (identified as Unit 1A and Unit 1B)	3.30	1.94	1.94	--	--	--	--	--
	BET Grindstone System (identified as Unit 1D)	1.65	0.97	0.97	--	--	--	--	--
	BMA Land Plaster Bin (identified as Unit 8A) & Starch Bin (identified as Unit 8B)	0.20	0.14	0.14	--	--	--	--	--
	BMA Ball Mill (identified as Unit	0.20	0.14	0.14	--	--	--	--	--
	Dunnage Storage Bin (identified as Unit 1C)	0.18	0.13	0.13	--	--	--	--	--
Wallboard Grinder		0.47	0.21	0.21	--	--	--	--	--
Degreasing		--	--	--	--	--	0.49	--	9.72E-04
Natural Gas Combustion Units		0.09	0.36	0.36	0.03	4.68	0.26	3.93	0.09
Insignificant Activity-Fuel oil-fired combustion		0.13	0.15	0.13	4.44	1.25	0.02	0.31	4.29E-04
Diesel Fired Emergency Generators		0.28	0.28	0.28	0.26	3.91	0.32	0.84	3.42E-03
Recycled Wallboard Grinder		1.84	0.71	0.71	--	--	--	--	--
Stacker		0.14	0.05	0.05	--	--	--	--	--
Screener		14.19	3.41	3.41	--	--	--	--	--
Stucco Cooler		1.73	1.19	1.19	--	--	--	--	--
Total		**199.34**	**67.91**	**67.90**	**13.98**	**96.06**	**65.51**	**70.91**	**1.57**

** PM2.5 listed is direct PM2.5*

Note: The shaded cells indicate where limits are included.

Appendix A: Emission Calculations
Potential to Emit of Revision

Company Name: New NGC, Inc. dba National Gypsum Company
Address City IN Zip: 9720 US Highway 50 East, Shoals, Indiana 47581
Permit Number: 101-36933-00003
Reviewer: Thomas Olmstead/Heath Hartley
Date: July, 2016

Uncontrolled Potential to Emit (tons/yr) - Existing Units Before Modification

Emission Unit	PM*	PM10*	PM2.5*	SO2	NOx	VOC	CO	Total HAPs	Worst Single HAP
Natural gas-fired kiln dryer (Unit 2)	0.78	3.10	3.10	0.24	40.79	43.45	34.27	3.44	2.70
Total	**0.78**	**3.10**	**3.10**	**0.24**	**40.79**	**43.45**	**34.27**	**3.44**	**2.70**

[1]Values are taken from permit number 101-31832-00003 appendix A calculations.

Uncontrolled Potential to Emit (tons/yr) - Existing Units After Modification

Emission Unit	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Worst Single HAP
Natural gas-fired kiln dryer (Unit 2)	0.78	3.10	3.10	0.24	40.79	73.91	34.27	3.44	2.70
Total	**0.78**	**3.10**	**3.10**	**0.24**	**40.79**	**73.91**	**34.27**	**3.44**	**2.70**

Permit Level Determination - Emissions Increase for Modified Units

Emission Unit	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Worst Single HAP
Natural gas-fired kiln dryer (Unit 2)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	30.46	0.00E+00	0.00E+00	0.00E+00
Total	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**30.46**	**0.00E+00**	**0.00E+00**	**0.00E+00**

Uncontrolled Potential to Emit (tons/yr) - New Units

Emission Unit	PM*	PM10*	PM2.5*	SO2	NOx	VOC	CO	Total HAPs	Worst Single HAP
Recycled Wallboard Grinder	1.84	0.71	0.71	--	--	--	--	--	--
Stacker	0.14	0.05	0.05	--	--	--	--	--	--
Screener	14.19	3.41	3.41	--	--	--	--	--	--
Stucco Cooler	1191.36	1191.36	1191.36	--	--	--	--	--	--
Total	**1207.54**	**1195.53**	**1195.53**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Worst Single HAP
Total Proposed Revision	**1207.54**	**1195.53**	**1195.53**	**0.00E+00**	**0.00E+00**	**30.46**	**0.00E+00**	**0.00E+00**	**0.00E+00**

Appendix A: Emission Calculations
Limited Potential to Emit PM, PM10, and PM2.5

Company Name: New NGC, Inc. dba National Gypsum Company
Address City IN Zip: 9720 US Highway 50 East, Shoals, Indiana 47581
Permit Number: 101-36933-00003
Reviewer: Thomas Olmstead/Heath Hartley
Date: July, 2016

Emission Unit	PM Limit* (lbs/hr)	PM Limit* (tons/yr)	PM10/PM2.5 Limit (lbs/hr)	PM10/PM2.5 Limit (tons/yr)
Raymond gypsum mill (Unit 3A, Baghouse EP-2)	0.14	0.60	0.09	0.41
Raymond gypsum mill (Unit 3B, Baghouse EP-3)	0.14	0.60	0.09	0.41
IMP Mill Flash Calcining System (Unit 9, Baghouse EP-40)	0.40	1.75	0.34	1.49
Flash calcidyne unit (Unit 4A, Baghouse EP-4)	6.97	30.5	1.82	8.0
Flash calcidyne unit (Unit 4B, Baghouse EP-5)	6.97	30.5	1.82	8.0
Flash calcidyne unit (Unit 4C, Baghouse EP-6)	6.97	30.5	1.82	8.0
Flash calcidyne unit (Unit 4D, Baghouse EP-7)	6.97	30.5	1.82	8.0
Flash calcidyne unit (Unit 4E, Baghouse EP-8)	6.97	30.5	1.82	8.0
Stucco conveyor (Unit 7A, Baghouse EP-9)	0.02	0.07	0.01	0.05
Stucco conveyor (Unit 7B, Baghouses EP-13 and EP-14)	0.02	0.07	0.01	0.05
Stucco conveyor (Unit 7C, Baghouse EP-10)	0.02	0.07	0.01	0.05
Stucco conveyor (Unit 7D, Baghouses EP-15 and EP-16)	0.02	0.07	0.01	0.05
Stucco conveyor (Unit 7F, Baghouse EP-17)	0.02	0.07	0.01	0.05
Stucco conveyor (Unit 7G, Baghouse EP-18)	0.02	0.07	0.01	0.05
Stucco conveyor (Unit 7R, Baghouse EP-39)	0.02	0.07	0.01	0.05
Plaster conveyors (Units 7J, 7K, and 7L; Baghouses EP-29, EP-31, and EP-32)	0.12	0.52	0.08	0.36
Plaster storage bin (Unit 7N, Baghouse EP-34)	0.11	0.50	0.08	0.35
Plaster storage bin (Unit 7O, Baghouse EP-35)	0.11	0.50	0.08	0.35
Plaster storage bin (Unit 7P, Baghouse EP-36)	0.11	0.50	0.08	0.35
Plaster mixing and bagging system (Unit 7M, Baghouse EP-33)	0.54	2.36	0.37	1.63
Stucco storage silo (Unit 7H, Baghouse EP-19)	0.53	2.31	0.36	1.59
Stucco storage silo (Unit 7I, Baghouse EP-20)	0.53	2.31	0.36	1.59
Coaxial mixing/pulping system (Unit 8D, Baghouse EP-24)	1.87	8.17	1.29	5.64
Board sawing system and BET dunnage sawing process(Unit 1A and Unit 1B, Baghouse EP-25)	0.75	3.30	0.44	1.94
BET grindstone system (Unit 1D, Baghouse EP-38)	0.38	1.65	0.22	0.97
BMA land plaster bin and Starch bin (Unit 8A and 8B, Baghouse EP-21)	0.05	0.20	0.03	0.14
BMA ball mill (Unit 8C, Baghouse EP-23)	0.05	0.20	0.03	0.14
Dunnage Storage Bin (Unit 1C, Baghouse EP-26)	0.04	0.18	0.03	0.13
Stucco cooler (Baghouse)	0.39	1.73	0.27	1.19
		180.63		**58.86**

Methodology
PM limited emissions use a source specified 45% safety factor that is higher than the controlled emissions.

Appendix A: Emission Calculations
326 IAC 6-3-2 (Particulate) Applicability

Company Name: New NGC, Inc. dba National Gypsum Company
Address City IN Zip: 9720 US Highway 50 East, Shoals, Indiana 47581
Permit Number: 101-36933-00003
Reviewer: Thomas Olmstead/Heath Hartley
Date: July, 2016

Emission Unit	Max. Throughput Rate (tons/hr) P	Max. Throughput Rate (lbs/hr)	Particulate Emission Limit (lbs/hr) E	PTE before Controls (lb/hr)	PTE after Controls (lb/hr)
Raymond gypsum mill (Unit 3A, Stack EP-2)	28	56,000	38.2	7.28	0.09
Raymond gypsum mill (Unit 3B, Stack EP-3)	28	56,000	38.2	7.28	0.09
Flash calcidyne unit (Unit 4A, Stack EP-4)	10	20,000	19.2	370.00	4.81
Flash calcidyne unit (Unit 4B, Stack EP-5)	10	20,000	19.2	370.00	4.81
Flash calcidyne unit (Unit 4C, Stack EP-6)	10	20,000	19.2	370.00	4.81
Flash calcidyne unit (Unit 4D, Stack EP-7)	10	20,000	19.2	370.00	4.81
Flash calcidyne unit (Unit 4E, Stack EP-8)	10	20,000	19.2	370.00	4.81
Stucco conveyor (Unit 7A, Stack EP-9)	4.44	8,889	11.1	0.67	0.01
Stucco conveyor (Unit 7B, Stack EP-13)	4.44	8,889	11.1	0.67	0.01
Stucco conveyor (Unit 7B, Stack EP-14)	4.44	8,889	11.1	0.67	0.01
Stucco conveyor (Unit 7C, Stack EP-10)	4.44	8,889	11.1	0.67	0.01
Stucco conveyor (Unit 7D, Stack EP-15)	4.44	8,889	11.1	0.67	0.01
Stucco conveyor (Unit 7D, Stack EP-16)	4.44	8,889	11.1	0.67	0.01
Stucco conveyor (Unit 7F, Stack EP-17)	4.44	8,889	11.1	0.67	0.01
Stucco conveyor (Unit 7G, Stack EP-18)	4.44	8,889	11.1	0.67	0.01
Stucco conveyor (Unit 7R, Stack EP-39)	4.44	8,889	11.1	0.67	0.01
Plaster conveyor (Unit 7J, Stack EP-29)	14	28,000	24.0	6.30	0.08
Plaster conveyor (Unit 7K, Stack EP-31)	14	28,000	24.0	6.30	0.08
Plaster conveyor (Unit 7L, Stack EP-32)	14	28,000	24.0	6.30	0.08
Plaster storage bin (Unit 7N, Stack EP-34)	4.33	8,667	11.0	6.07	0.08
Plaster storage bin (Unit 7O, Stack EP-35)	4.33	8,667	11.0	6.07	0.08
Plaster storage bin (Unit 7P, Stack EP-36)	4.33	8,667	11.0	6.07	0.08
Plaster mixing and bagging system (Unit 7M, Stack EP-33)	13	26,000	22.9	28.60	0.37
Stucco storage silo (Unit 7H, Stack EP-19)	20	40,000	30.5	28.00	0.36
Stucco storage silo (Unit 7I, Stack EP-20)	20	40,000	30.5	28.00	0.36
Coaxial mixing/pulping system (Unit 8D, Stack EP-24)	45	90,000	43.6	99.00	1.29
BET board sawing process (Unit 1A, Stack EP-25)*	2	4,000	6.5	20.00	0.26
BET dunnage sawing process (Unit 1B, Stack EP-25)*	2	4,000	6.5	20.00	0.26
BET grindstone system (Unit 1D, Stack EP-38)*	2	4,000	6.5	20.00	0.26
BMA land plaster bin (Unit 8A, Stack EP-21)	1.00	2,000	4.1	2.20	0.03
BMA ball mill (Unit 8C, Stack EP-23)	1.10	2,200	4.4	2.42	0.03
Chopped dunnage storage bin with conveyor (Unit 1C, Stack EP-26)	1.00	2,000	4.1	2.20	0.03
Recycled wallboard screener	10.8	21,600	20.2	3.24	--
Stucco cooler	45	90,000	43.6	306.00	0.31

*Wallboard board sawing system capacity (tons/yr) assumes a 1/2-in. wallboard thickness and weight of 1.6 lb/ft^2.
Max. Throughput Rate (tons/hr) = Max. Rate (ft2/hr) * 1.6 lb/ft^2 * 1 ton/2000 lbs

Pursuant to 326 IAC 6-3-2, the PM from the units above shall not exceed the pound per hour emission rate established as E in the following formulas:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$

E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Appendix A: Emission Calculations
Gypsum Material Handling and Product Processing

Company Name: New NGC, Inc. dba National Gypsum Company
Address City IN Zip: 9720 US Highway 50 East, Shoals, Indiana 47581
Permit Number: 101-36933-00003
Reviewer: Thomas Olmstead/Heath Hartley
Date: July, 2016

A. Raymond Grinding Mill Operation (identified as Units 3A and 3B) Controlled by Baghouses (identified as EP-2 and EP-3)

1. Processing and Transport

Pollutant	Max. Rate (tons/hr)	Emission Factor (lbs/ton)	PTE Uncontrolled (lbs/hr)	PTE Uncontrolled (tons/yr)	Control Efficiency (%)	PTE Controlled (lbs/hr)	PTE Controlled (tons/yr)
PM	56.0	0.26	14.56	63.8	98.7%	0.19	0.83
PM10	56.0	0.26	14.56	63.8	98.7%	0.19	0.83

PM and PM10 emission factor from FIRE, SCC#3-05-015-05 (Gypsum Manufacture, Primary Crushing: Gypsum Ore)

2. Combustion

see combustion calculations

B. IMP Mill Flash Calcining System

1. Processing

Pollutant	Max. Rate (tons/hr)	Emission Factor (lbs/ton)	PTE Uncontrolled (lbs/hr)	PTE Uncontrolled (tons/yr)	Control Efficiency (%)	PTE After Cyclone (tons/yr)*	Control Efficiency (%)	PTE After Dust Collector (lbs/hr)*	PTE After Dust Collector (tons/yr)*	NSPS Subpart OOO Equivalent Emissions (lb/hr)
PM	40.0	100	4000	17,520	90.0%	1,752.00	99.9%	0.40	1.75	1.91
PM10	40.0	85	3400	14,892	90.0%	1,489.20	99.9%	0.34	1.49	NA

Emission factors from FIRE, SCC#3-05-015-13 (Impact Mill - Uncontrolled)

* The cyclone and dust collector have been determined to be integral to the process. Therefore, the unlimited potential to emit will be determined after the cyclone and dust collector.

Fugitive emissions from this process are not included in determining PTE because this source is not one of the 28 listed source categories and no NSPS or NESHAPs apply that were in effect for this source category on August 7, 1980.

NSPS OOO Emission Rate in lbs/hr (after controls) = 0.014 Grain Loading (grains/cu. Ft.)/7,000 (grains/lb) x 25,000 acfm x 528/(460 + 325)
x (1 - 5.5% Moisture) x 60 (min/hr)

2. Combustion

see combustion calculations

C. Calcining Operation

1. Flash calcidyne units (identified as Units 4A, 4B, 4C, 4D, and 4E) controlled by a baghouse (identified as EP-4, EP-5, EP-6, EP-7, and EP-8):

Processing and Transport:

Pollutant	Max. Rate (tons/hr)	Emission Factor (lbs/ton)	PTE Uncontrolled (lbs/hr)	PTE Uncontrolled (tons/yr)	Control Efficiency (%)	PTE Controlled (lbs/hr)	PTE Controlled (tons/yr)
PM	50.0	37	1850	8,103	98.7%	24.05	105.3
PM10	50.0	14	700	3,066	98.7%	9.10	39.9

Emission factors from FIRE, SCC#3-05-015-12 (Flash Calciner - Uncontrolled)

2. Combustion

see combustion calcs

Appendix A: Emission Calculations
Gypsum Material Handling and Product Processing

Company Name: New NGC, Inc. dba National Gypsum Company
Address City IN Zip: 9720 US Highway 50 East, Shoals, Indiana 47581
Permit Number: 101-36933-00003
Reviewer: Thomas Olmstead/Heath Hartley
Date: July, 2016

D. Stucco Conveying Operation (identified as Units 7A, 7B, 7C, 7D, 7F, 7G, and 7R) Controlled by a Baghouse (identified as EP-9, EP-13, EP-14, EP-10, EP-15, EP-16, EP-17, EP-18, and EP-39):

Pollutant	Max. Rate (tons/hr)	Emission Factor (lbs/ton)	PTE Uncontrolled (lbs/hr)	PTE Uncontrolled (tons/yr)	Control Efficiency (%)	PTE Controlled (lbs/hr)	PTE Controlled (tons/yr)
PM	40.0	0.15	6	26.3	98.7%	0.08	0.34
PM10	40.0	0.15	6	26.3	98.7%	0.08	0.34

Emission factors from FIRE, SCC#3-05-015-04 (Gypsum Manufacture, Conveying)

E. Plaster Manufacturing Operation

1. Plaster Conveyor (identified as Units 7J, 7K, and 7L) controlled by a baghouse (identified as EP-29, EP-31, and EP-32):

Pollutant	Max. Rate (tons/hr)	Emission Factor (lbs/ton)	PTE Uncontrolled (lbs/hr)	PTE Uncontrolled (tons/yr)	Control Efficiency (%)	PTE Controlled (lbs/hr)	PTE Controlled (tons/yr)
PM	42.0	0.15	6.3	27.6	98.7%	0.08	0.36
PM10	42.0	0.15	6.3	27.6	98.7%	0.08	0.36

Emission factors from FIRE, SCC#3-05-015-04 (Gypsum Manufacture, Conveying)

2. Plaster Storage Bins (identified as Unit 7N, 7O, and 7P) controlled by a baghouse (identified as EP-34, EP-35, and EP-36):

Pollutant	Max. Rate (ton/hr)	Emission Factor (lb/ton)	PTE Uncontrolled (lbs/hr)	PTE Uncontrolled (tons/yr)	Control Efficiency (%)	PTE Controlled (lbs/hr)	PTE Controlled (tons/yr)
PM	13.0	1.4	18.2	79.7	98.7%	0.24	1.04
PM10	13.0	1.4	18.2	79.7	98.7%	0.24	1.04

Emission factors from FIRE, SCC#3-05-016-10 (Lime Manufacture, Raw Material Storage Piles)
No emission factors are available for product storage bins. Using the factor for lime storage piles is a worst case assumption.

3. New Perlite System (identified as Unit 5) controlled by an integral air/perlite separator (identified as filter receiver).

Pollutant	Max. Emissions Rate (ton/hr)	Control Efficiency (%)	PTE Uncontrolled (lbs/hr)	PTE Uncontrolled (tons/yr)	PTE Controlled (lbs/hr)*	PTE Controlled (tons/yr)*
PM	0.90	99.99%	1800	7884	0.18	0.79
PM10**	0.90	99.99%	1800	7884	0.18	0.79

*Perlite System potential to emit determined after integral air/perlite separator.

4. Plaster Mixing and Bagging (identified as Unit 7M) controlled by a baghouse (identified as EP-33):

Pollutant	Max. Rate (ton/hr)	Emission Factor (lb/ton)	PTE Uncontrolled (lbs/hr)	PTE Uncontrolled (tons/yr)	Control Efficiency (%)	PTE Controlled (lbs/hr)	PTE Controlled (tons/yr)
PM	13.0	2.2	28.6	125	98.7%	0.37	1.63
PM10	13.0	2.2	28.6	125	98.7%	0.37	1.63

Emission factors from AP-42, Chapter 11.17 (Lime Manufacturing), Table 11.17-4, SCC #3-05-016-15

Appendix A: Emission Calculations
Gypsum Material Handling and Product Processing

Company Name: New NGC, Inc. dba National Gypsum Company
Address City IN Zip: 9720 US Highway 50 East, Shoals, Indiana 47581
Permit Number: 101-36933-00003
Reviewer: Thomas Olmstead/Heath Hartley
Date: July, 2016

F. Wallboard Manufacturing Operation

1. Stucco Storage Silos (identified as Units 7H and 7I) controlled by a baghouse (identified as EP-19 and EP-20):

Pollutant	Max. Rate (ton/hr)	Emission Factor (lb/ton)	PTE Uncontrolled (lbs/hr)	PTE Uncontrolled (tons/yr)	Control Efficiency (%)	PTE Controlled (lbs/hr)	PTE Controlled (tons/yr)
PM	40.0	1.4	56	245	98.7%	0.73	3.19
PM10	40.0	1.4	56	245	98.7%	0.73	3.19

Emission factors from FIRE, SCC#3-05-016-10 (Lime Manufacture, Raw Material Storage Piles)

2. Coaxial Mixing and Pulping (identified as Unit 8D) controlled by a baghouse (identified as EP-24):

Pollutant	Max. Rate (ton/hr)	Emission Factor (lb/ton)	PTE Uncontrolled (lbs/hr)	PTE Uncontrolled (tons/yr)	Control Efficiency (%)	PTE Controlled (lbs/hr)	PTE Controlled (tons/yr)
PM	45.0	2.2	99	434	98.7%	1.29	5.64
PM10	45.0	2.2	99	434	98.7%	1.29	5.64

Emission factors from AP-42, Chapter 11.17 (Lime Manufacturing), Table 11.17-4, SCC #3-05-016-15

3. Kiln Drying
see Natural gas-fired kiln dryer (Unit 2) sheet

4. BET Board Sawing (identified as Unit 1A) controlled by a baghouse (identified as EP-25):

Pollutant	Max. Rate (ft2/hr)	Emission Factor (lb/ft2)	PTE Uncontrolled (lbs/hr)	PTE Uncontrolled (tons/yr)	Control Efficiency (%)	PTE Controlled (lbs/hr)	PTE Controlled (tons/yr)
PM	2,500	0.008	20	87.6	98.7%	0.26	1.14
PM10	2,500	0.0068	17	74.5	98.7%	0.22	0.97

Emission factors from FIRE, SCC#3-05-015-21 (Gypsum Manufacture, End Sawing 8 ft.)

5. BET Dunnage Sawing (identified as Unit 1B) controlled by a baghouse (identified as EP-25):

Pollutant	Max. Rate (ft2/hr)	Emission Factor (lb/ft2)	PTE Uncontrolled (lbs/hr)	PTE Uncontrolled (tons/yr)	Control Efficiency (%)	PTE Controlled (lbs/hr)	PTE Controlled (tons/yr)
PM	2,500	0.008	20	87.6	98.7%	0.26	1.14
PM10	2,500	0.0068	17	74.5	98.7%	0.22	0.97

Emission factors from FIRE, SCC#3-05-015-21 (Gypsum Manufacture, End Sawing 8 ft.)

6. BET Grindstone System (identified as Unit 1D) controlled by a baghouse (identified as EP-38):

Pollutant	Max. Rate (ft2/hr)	Emission Factor (lb/ft2)	PTE Uncontrolled (lbs/hr)	PTE Uncontrolled (tons/yr)	Control Efficiency (%)	PTE Controlled (lbs/hr)	PTE Controlled (tons/yr)
PM	2,500	0.008	20	87.6	98.7%	0.26	1.14
PM10	2,500	0.0068	17	74.5	98.7%	0.22	0.97

Emission factors from FIRE, SCC#3-05-015-21 (Gypsum Manufacture, End Sawing 8 ft.)

7. BMA Land Plaster Bin (identified as Unit 8A) controlled by a baghouse (identified as EP-21):

Pollutant	Max. Rate (ton/hr)	Emission Factor (lb/ton)	PTE Uncontrolled (lbs/hr)	PTE Uncontrolled (tons/yr)	Control Efficiency (%)	PTE Controlled (lbs/hr)	PTE Controlled (tons/yr)
PM	1.00	2.2	2.2	9.64	98.7%	0.03	0.13
PM10	1.00	2.2	2.2	9.64	98.7%	0.03	0.13

Emission factors from AP-42, Chapter 11.17 (Lime Manufacturing), Table 11.17-4, SCC #3-05-016-15

8. Starch Bin (identified as Unit 8B) controlled by a baghouse (identified as EP-21):

Pollutant	Max. Rate (ton/hr)	Emission Factor (lb/ton)	PTE Uncontrolled (lbs/hr)	PTE Uncontrolled (tons/yr)	Control Efficiency (%)	PTE Controlled (lbs/hr)	PTE Controlled (tons/yr)
PM	0.10	2.2	0.22	0.96	98.7%	2.86E-03	0.01
PM10	0.10	2.2	0.22	0.96	98.7%	2.86E-03	0.01

Emission factors from AP-42, Chapter 11.17 (Lime Manufacturing), Table 11.17-4, SCC #3-05-016-15

9. BMA Ball Mill (identified as Unit 8C) controlled by a baghouse (identified as EP-23):

Pollutant	Max. Rate (ton/hr)	Emission Factor (lb/ton)	PTE Uncontrolled (lbs/hr)	PTE Uncontrolled (tons/yr)	Control Efficiency (%)	PTE Controlled (lbs/hr)	PTE Controlled (tons/yr)
PM	1.10	2.2	2.42	10.6	98.7%	0.03	0.14
PM10	1.10	2.2	2.42	10.6	98.7%	0.03	0.14

Emission factors from AP-42, Chapter 11.17 (Lime Manufacturing), Table 11.17-4, SCC #3-05-016-15

10. Dunnage Storage Bin (identified as Unit 1C) controlled by a baghouse (identified as EP-26):

Pollutant	Max. Rate (ton/hr)	Emission Factor (lb/ton)	PTE Uncontrolled (lbs/hr)	PTE Uncontrolled (tons/yr)	Control Efficiency (%)	PTE Controlled (lbs/hr)	PTE Controlled (tons/yr)
PM	1.00	2.2	2.2	9.64	98.7%	0.03	0.13
PM10	1.00	2.2	2.2	9.64	98.7%	0.03	0.13

Emission factors from AP-42, Chapter 11.17 (Lime Manufacturing), Table 11.17-4, SCC #3-05-016-15

Appendix A: Emission Calculations
Gypsum Material Handling and Product Processing

Company Name: New NGC, Inc. dba National Gypsum Company
Address City IN Zip: 9720 US Highway 50 East, Shoals, Indiana 47581
Permit Number: 101-36933-00003
Reviewer: Thomas Olmstead/Heath Hartley
Date: July, 2016

G. Wallboard Grinder

Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/ton)	PTE Uncontrolled (lbs/hr)	PTE Uncontrolled (tons/yr)
PM	20	0.0054	0.108	0.47
PM10	20	0.0024	0.048	0.21

Emission factors from AP-42 11.16 Gypsum Manufacturing

H. Rock Storage and Conveying

Fugitive emissions from this process are not included in determining PTE because this source is not one of the 28 listed source categories and no NSPS or NESHAPs apply that were in effect for this source category on August 7, 1980.

Methodology

PTE Controlled (lbs/hr) = Max. Rate (tons/hr) * Emission Factor (lbs/ton) * (1-control efficiency)
PTE Uncontrolled (lbs/hr) = Max. Rate (tons/hr) * Emission Factor (lbs/ton)
PTE Controlled (tons/yr) = Max. Rate (tons/hr) * Emission Factor (lbs/ton) * 8760 hours/yr * 1/2000 ton/lbs * (1-control efficiency)
PTE Uncontrolled (tons/yr) = Max. Rate (tons/hr) * Emission Factor (lbs/ton) * 8760 hours/yr * 1/2000 ton/lbs

Appendix A: Emissions Calculations
Natural Gas Combustion Only - Raymond mill burner
MM BTU/HR <100

Company Name: New NGC, Inc. dba National Gypsum Company
Address City IN Zip: 9720 US Highway 50 East, Shoals, Indiana 47581
Permit Number: 101-36933-00003
Reviewer: Thomas Olmstead/Heath Hartley
Date: July, 2016

A. Raymond Grinding Mill Operation

Heat Input Capacity	HHV	Potential Throughput
MMBtu/hr	mmBtu / mmscf	MMCF/yr
10	1020	85.9

Unit Descriptions	# of Units	Capacity MMBtu/hr	Total MMBtu/hr
Raymond mill burner	1	10	10

	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	0.1	0.3	0.3	0.0	4.3	0.2	3.6

*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

	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	9.018E-05	5.153E-05	3.221E-03	7.729E-02	1.460E-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	2.147E-05	4.724E-05	6.012E-05	1.632E-05	9.018E-05

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

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

Appendix A: Emission Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: **New NGC, Inc. dba National Gypsum Company**
Address City IN Zip: **9720 US Highway 50 East, Shoals, Indiana 47581**
Permit Number: **101-36933-00003**
Reviewer: **Thomas Olmstead/Heath Hartley**
Date: **July, 2016**

IMP mill flash calcining system-Raymond Mill Burner-Natural Gas

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
40.00	343.5

	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	0.33	1.31	1.31	0.10	17.18	0.94	14.43
Controlled Potential Emissions in tons/yr***	0.00003	0.00013	0.00013	0.10	17.18	0.94	14.43

*PM emission factor is filterable PM only. PM10 and PM2.5 emission factors are filterable and condensable PM10 and PM2.5 combined, respectively.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

*** The cyclone and dust collector have been determined to be integral to the process. Therefore, the unlimited potential to emit particulate matter will be determined after the cyclone and dust collector.

	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	3.607E-04	2.061E-04	1.288E-02	3.092E-01	5.840E-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	8.588E-05	1.889E-04	2.405E-04	6.527E-05	3.607E-04

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
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
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: Emissions Calculations
Industrial Combustors (< 100 mmBtu/hr)
#2 Fuel Oil

Company Name: New NGC, Inc. dba National Gypsum Company
Address City IN Zip: 9720 US Highway 50 East, Shoals, Indiana 47581
Permit Number: 101-36933-00003
Reviewer: Thomas Olmstead/Heath Hartley
Date: July, 2016

IMP mill flash calcining system-Raymond Mill Burner-No. 2 fuel oil

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	S = Weight % Sulfur***
40	2,502.86	0.05

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2***	NOx	VOC	CO
Emission Factor in lb/kgal	2.00	2.30	1.55	7.10 *(142.0S)*	20.00	0.34	5.00
Potential Emission in tons/yr	2.50	2.88	1.94	8.89	25.03	0.43	6.26
Controlled Potential Emissions in tons/yr**	0.00025	0.00029	0.00019	8.89	25.03	0.43	6.26

	HAPs - Metals				
	Arsenic	Beryllium	Cadmium	Chromium	Lead
Emission Factor in lb/mmBtu	4.0E-06	3.0E-06	3.0E-06	3.0E-06	9.0E-06
Potential Emission in tons/yr	7.01E-04	5.26E-04	5.26E-04	5.26E-04	1.58E-03

	HAPs - Metals (continued)			
	Mercury	Manganese	Nickel	Selenium
Emission Factor in lb/mmBtu	3.0E-06	6.0E-06	3.0E-06	1.5E-05
Potential Emission in tons/yr	5.26E-04	1.05E-03	5.26E-04	2.63E-03

Methodology

1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.140 MM Btu

Emission Factors are from AP 42, Tables 1.3-1, 1.3-2, 1.3-3, 1.3-7, 1.3-8, 1.3-9, and 1.3-12 (SCC 1-03-005-01/02/03) Supplement E 09/1999 (see erata file). Corrected on 05/2010.

*PM emission factor is filterable PM only. Condensable PM emission factor is 1.3 lb/kgal. PM10 and PM2.5 emission factors are filterable and condensable PM10 and PM2.5 combined.

** The cyclone and dust collector have been determined to be integral to the process. Therefore, the unlimited potential to emit particulate matter will be determined after the cyclone and dust collector.

*** Initially the source proposed to use No. 2 fuel oil with a sulfur content of 0.5% by weight. This equated to potential SO2 emissions of 88.85 tons per year. As a result, this unit would have been subject to the requirements of 326 IAC 7-1.1 (Sulfur Dioxide (SO2) Emission Limitations). However, in order to render the requirements of 326 IAC 7-1.1 not applicable the source has agreed to limit the sulfur content of the No. 2 fuel oil to 0.05% by weight and No. 2 fuel oil usage to 2,502.86 kgals/year.
Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton
No data was available in AP-42 for organic HAPs.

Appendix A: Emissions Calculations
Natural Gas Combustion Only - Flash calcidyne units
MM BTU/HR <100

Company Name: New NGC, Inc. dba National Gypsum Company
Address City IN Zip: 9720 US Highway 50 East, Shoals, Indiana 47581
Permit Number: 101-36933-00003
Reviewer: Thomas Olmstead/Heath Hartley
Date: July, 2016

Heat Input Capacity	HHV	Potential Throughput
MMBtu/hr	mmBtu / mmscf	MMCF/yr
38	1020	322.1

Unit Descriptions	# of Units	Capacity MMBtu/hr	Total MMBtu/hr
Flash calcidyne units	5	7.5	37.5

	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	0.3	1.2	1.2	0.1	16.1	0.9	13.5

*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

	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	3.382E-04	1.932E-04	1.208E-02	2.899E-01	5.475E-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	8.051E-05	1.771E-04	2.254E-04	6.119E-05	3.382E-04

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

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

Appendix A: Emission Calculations
Natural gas-fired kiln dryer (Unit 2)

Company Name: New NGC, Inc. dba National Gypsum Company
Address City IN Zip: 9720 US Highway 50 East, Shoals, Indiana 47581
Permit Number: 101-36933-00003
Reviewer: Thomas Olmstead/Heath Hartley
Date: July, 2016

Natural gas-fired kiln dryer (Unit 2): Unlimited

Process	Maximum Throughput (tons/yr)[3]	VOC Emission Factor (lb/ton)[1]	PTE VOC (tons/yr)	Formaldehyde Emission Factor (lb/ton)[1]	PTE Formaldehyde (tons/yr)
Regular Wallboard	433,000	0.07	14.85	3.84E-03	0.83
Silicone XP Wallboard2	433,000	0.33	71.66	1.23E-02	2.67
		Worst Case =	**71.66**		**2.67**

Natural gas-fired kiln dryer (Unit 2): Limited

Process	Limited Throughput (tons/yr)	VOC Emission Factor (lb/ton)[1]	PTE VOC (tons/yr)	Formaldehyde Emission Factor (lb/ton)[1]	PTE Formaldehyde (tons/yr)
Regular Wallboard	400,000	6.86E-02	13.72	3.84E-03	0.77
Silicone XP Wallboard2	345,000	3.31E-01	57.10	1.23E-02	2.13

Annual Limited Worst Case

Regular Wallboard	88,000	6.860E-02	3.02	3.84E-03	0.17
Silicone XP Wallboard2	345,000	3.310E-01	57.10	1.23E-02	2.13
		Total =	**60.1**		**2.3**

Stack Test Results:

[1] VOC/HAP emission factors for Regular Wallboard and HAP emission factor for silicone XP Wallboard provided by full-scale wallboard production stack testing at Wilimington, NC facility, on September 23-25, 2008 by Pace Analytical Services, Inc. silicone XP Wallboard VOC Emission Factor provided by stack testing on April 28, 2015 by Pace Analytical Services, Inc. at National Gypsum Company.
Tested values where adjusted by 1.2 to account for variability in production.

[2]Source has proposed to utilize a new raw material of silicone SILRES@ BS94 in the existing production of silicone XP Wallboard.

[3]Maximum Throughput (tons/yr) = Line Speed (ft/min) * Wallboard Width (ft) * Wallboard weight (lbs/1000 ft2) * 60 (min/hr) / 2,000 (lbs/ton) * 8,760 (hr/yr)
Regular wallboard stack test VOC emission factor = 2.83 lb VOC/hr
Regular wallboard stack test HAPs emission factor = 0.19 lb Formaldehyde/hr
Silicone XP Wallboard stack test VOC emission factor = 13.47 lb VOC/hr
Silicone XP Wallboard stack test HAPs emission factor = 0.61 lb Formaldehyde/hr

Methodology

Emission Factor (lb/ton) = Emission Factor (lb/hr) / (Line Speed (ft/min) * Wallboard Width (ft) * Wallboard weight (lbs/1000 ft^2) * 60 (min/hr) / 2,000 (lbs/ton))
PTE (tons/yr) = Emission Factor (lb/ton) * Throughput (tons/yr) * 1/2000 (ton/lbs)
VOC/HAP emission factors have been scaled to reflect differences in maximum production capacities at the Shoals, IN and Wilmington, NC facilities.
Line speed (ft/min) = 182
Wallboard width (ft) = 4
Wallboard weight (lbs/1000 ft^2) 2263.8
Line speed, wallboard weight and width, and maximum production capacity provided by NGC Shoals, IN.

Appendix A: Emission Calculations
Natural gas-fired kiln dryer (Unit 2)

Company Name: New NGC, Inc. dba National Gypsum Company
Address City IN Zip: 9720 US Highway 50 East, Shoals, Indiana 47581
Permit Number: 101-36933-00003
Reviewer: Thomas Olmstead/Heath Hartley
Date: July, 2016

Natural gas-fired kiln dryer (Unit 2) Combustion

Heat Input Capacity	HHV	Potential Throughput
MMBtu/hr	mmBtu / mmscf	MMCF/yr
95	1020	815.9

Unit Descriptions	# of Units	Capacity MMBtu/hr	Total MMBtu/hr
kiln dryer, Unit 2	1	95	95

	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	0.8	3.1	3.1	0.2	40.8	2.2	34.3

*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

	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	8.567E-04	4.895E-04	3.060E-02	7.343E-01	1.387E-03

	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	2.040E-04	4.487E-04	5.711E-04	1.550E-04	8.567E-04

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

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

Appendix A: Emission Calculations
Wallboard Recycling and Stucco Cooler

Company Name: New NGC, Inc. dba National Gypsum Company
Address City IN Zip: 9720 US Highway 50 East, Shoals, Indiana 47581
Permit Number: 101-36933-00003
Reviewer: Thomas Olmstead/Heath Hartley
Date: July, 2016

1. Wallboard Grinder

Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/ton)	PTE Uncontrolled (lbs/hr)	PTE Uncontrolled (tons/yr)
PM	10.8	0.039	0.4212	1.84
PM10	10.8	0.015	0.162	0.71

Emission factors from AP-42, Chapter 11.19.2 (Crushed Stone Processing), Table 11.19.2-2, SCC #3-05-020-05 Fines Crushing

2. Stacker:

Pollutant	Max. Rate (tons/hr)	Emission Factor (lbs/ton)	PTE Uncontrolled (lbs/hr)	PTE Uncontrolled (tons/yr)
PM	10.8	0.003	0.0324	0.1
PM10	10.8	0.0011	0.01188	0.1

Emission factors from AP-42, Chapter 11.19.2 (Crushed Stone Processing), Table 11.19.2-2, SCC 3-05-020-06 Conveyor Transfer Point

3. Screener:

Pollutant	Max. Rate (tons/hr)	Emission Factor (lbs/ton)	PTE Uncontrolled (lbs/hr)	PTE Uncontrolled (tons/yr)
PM	10.8	0.3	3.24	14.2
PM10	10.8	0.072	0.7776	3.4

Emission factors from AP-42, Chapter 11.19.2 (Crushed Stone Processing), Table 11.19.2-2, SCC #3-05-020-021 Fines Screening

4. Stucco Cooler:

Pollutant	Max. Rate (tons/hr)	Emission Factor (lbs/ton)	PTE Uncontrolled (lbs/hr)	PTE Uncontrolled (tons/yr)	Control Efficiency (%)	PTE Controlled (lbs/hr)	PTE Controlled (tons/yr)
PM	45.0	6.8	306	1340.3	99.9%	0.31	1.34
PM10	45.0	6.8	306	1340.3	99.9%	0.31	1.34
Bottlenecked by conveyor							
PM	40.0	6.8	272	1191.4	99.9%	0.27	1.19
PM10	40.0	6.8	272	1191.4	99.9%	0.27	1.19

Emission factors from AP-42, Chapter 11.17 (Lime Manufacturing), Table 11.17-2, SCC #3-05-016-11
Existing conveyors take into account emissions to and from stucco cooler

Methodology

Pursuant to 326 IAC 1-2-73 "Source" defined, IDEM does not regulate nonroad engines. Therefore, only processing emissions have been included in the PTE for the wallboard grinder, screener, and stacker.
PTE Uncontrolled (lbs/hr) = Max. Rate (tons/hr) * Emission Factor (lbs/ton)
PTE Uncontrolled (tons/yr) = Max. Rate (tons/hr) * Emission Factor (lbs/ton) * 8760 hours/yr * 1/2000 ton/lbs
PTE Controlled (tons/yr) = Max. Rate (tons/hr) * Emission Factor (lbs/ton) * 8760 hours/yr * 1/2000 ton/lbs * (1-control efficiency)

Appendix A: Emissions Calculations
Insignificant Degreasers

Company Name: **New NGC, Inc. dba National Gypsum Company**
Address City IN Zip: **9720 US Highway 50 East, Shoals, Indiana 47581**
Permit Number: **101-36933-00003**
Reviewer: **Thomas Olmstead/Heath Hartley**
Date: **July, 2016**

In order for the degreaser to qualify as an insignificant activity under the listing in 326 IAC 2-7-1(21)(J)(vi)(DD), the source shall use solvents "the use of which, for all cleaners and solvents combined, does not exceed one hundred forty-five (145) gallons per twelve (12) months".

Based on a review of the solvents most widely supplied for the industry by Crystal Clean and Safety-Kleen, the following PTE is based on the following conservative estimates:

The solvent has a maximum density of 6.7 lb/gal.
The solvent used in the degreaser contains 100% VOC and up to 0.2% HAP (tetrachloroethylene).
Utilized MSDS for Safety-Kleen 105 Recycled Solvent as worse case HAP content: http://www.safety-kleen.com/msds/82310rev8-21-09.pdf

Uncontrolled Potential Emissions (per each degreaser)

6.7	lb/gal x	100	% VOC x	145	gal/yr ÷	2000	lb/ton =	0.49	tons VOC per year
				0.49	tpy VOC x	0.2	% HAP =	0.001	tons HAP per year

Appendix A: Emission Calculations
NG Units Summary

Company Name: New NGC, Inc. dba National Gypsum Company
Address City IN Zip: 9720 US Highway 50 East, Shoals, Indiana 47581
Permit Number: 101-36933-00003
Reviewer: Thomas Olmstead/Heath Hartley
Date: July, 2016

Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, including fifty (50) natural gas-fired space heaters.

Unit Description	Location	Fuel	BTU
Back Edge Burner	Wet End Mezzanine North Side	N/G	29,000
Back Edge Burner	Wet End Mezzanine South Side	N/G	29,000
Face Edge Burner	Wet End North Side	N/G	29,000
Face Edge Burner	Wet End South Side	N/G	29,000
Furnace	Main Office	N/G	80,000
Furnace	Main Office	N/G	80,000
Furnace	Mine Rescue	N/G	80,000
Furnace	Mine office	N/G	100,000
Furnace	Bd Plant Rest Room	N/G	80,000
Furnace	Main maintenance shop	N/G	500,000
Hanging Heater	Holiflite oil room	N/G	134,000
Hanging Heater	Packer east side	N/G	134,000
Hanging Heater	Packer west side	N/G	134,000
Hanging Heater	Pallitiser south	N/G	150,000
Hanging Heater	Pallitiser north west	N/G	150,000
Hanging Heater	Plaster mixer floor	N/G	90,000
Hanging Heater	Fork truck shop	N/G	250,000
Hanging Heater	Fork truck shop	N/G	60,000
Hanging Heater	Top of Hydraslusher	N/G	120,000
Hanging Heater	Hydraslusher water supply tank	N/G	134,000
Hanging Heater	Behind Hydraslusher	N/G	250,000
Hanging Heater	Daxad usag tank room	N/G	225,000
Hanging Heater	Daxad /Soap Room	N/G	250,000
Hanging Heater	Daxad/Soap Room	N/G	125,000
Hanging Heater	Wet-End	N/G	225,000
Hanging Heater	Wet-End	N/G	225,000
Hanging Heater	Wet-End	N/G	225,000
Hanging Heater	Wax Room	N/G	250,000
Hanging Heater	Above Knife	N/G	132,000
Hanging Heater	Knife Reject	N/G	134,000
Hanging Heater	Knife Reject	N/G	134,000
Hanging Heater	Kiln Pull Out	N/G	90,000
Hanging Heater	Take off Inspector	N/G	90,000
Hanging Heater	Bundler Zone 4	N/G	225,000
Hanging Heater	Bundler Zone 4	N/G	225,000
Hanging Heater	Bundler Zone 5	N/G	225,000
Hanging Heater	Bundler Zone 5	N/G	225,000
Hanging Heater	Bundler Stacker 2	N/G	90,000
Hanging Heater	Bundler Stacker 2	N/G	90,000
Hanging Heater	Bundler Stacker 1	N/G	90,000
Hanging Heater	Bundler Stacker 1	N/G	90,000
Hanging Heater	Dunnage Cutter	N/G	110,000
Hanging Heater	Dunnage Cutter	N/G	134,000
Hanging Heater	Dunnage Cutter	N/G	134,000
Hanging Heater	Dunnage Cutter	N/G	134,000
Hanging Heater	East end truck loading	N/G	90,000
Hanging Heater	East end truck loading	N/G	90,000
Hanging Heater	West end truck loading	N/G	134,000
Hanging Heater	West end truck loading	N/G	90,000
Hanging Heater	West end truck loading	N/G	134,000
Hanging Heater	Laminating	N/G	250,000
Hanging Heater	Laminating	N/G	200,000
Hanging Heater	Laminating	N/G	250,000
Hanging Heater	Laminating	N/G	225,000
Hanging Heater	Laminating	N/G	225,000
Hanging Heater	Laminating	N/G	200,000
Hanging Heater	Laminating	N/G	200,000
Hanging Heater	Laminating	N/G	200,000
Hanging Heater	Laminating	N/G	200,000
Hanging Heater	Laminating	N/G	200,000
Hanging Heater	Laminating	N/G	200,000
Hanging Heater	West water tower	N/G	250,000
Hanging Heater	Main maintenance shop	N/G	100,500
Hanging Heater	Main maintenance shop	N/G	100,500
Hanging Heater	Main maintenance shop	N/G	225,000
Hanging Heater	Main maintenance shop	N/G	250,000
Hanging Heater	Main maintenance shop	N/G	225,000
Hanging Heater	Main maintenance shop	N/G	225,000
Hot Water	Mine office	N/G	40,000
Water Heater	Bd Plant Rest Room	N/G	36,000
Water Heater	Main maintenance shop	N/G	36,000
		Total Btu	**10,895,000**
		Total (MMBtu)	**10.90**

Appendix A: Emission Calculations
NG Units Summary

Company Name: New NGC, Inc. dba National Gypsum Company
Address City IN Zip: 9720 US Highway 50 East, Shoals, Indiana 47581
Permit Number: 101-36933-00003
Reviewer: Thomas Olmstead/Heath Hartley
Date: July, 2016

Heat Input Capacity MMBtu/hr	HHV mmBtu / mmscf	Potential Throughput MMCF/yr
10.9	1020	93.6

	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	0.1	0.4	0.4	0.0	4.7	0.3	3.9

*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

	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	9.825E-05	5.614E-05	3.509E-03	8.421E-02	1.591E-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	2.339E-05	5.146E-05	6.550E-05	1.778E-05	9.825E-05

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

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
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emissions Calculations
Commercial/Institutional/Residential Combustors (< 100 mmBtu/hr)
#2 Fuel Oil

Company Name: New NGC, Inc. dba National Gypsum Company
Address City IN Zip: 9720 US Highway 50 East, Shoals, Indiana 47581
Permit Number: 101-36933-00003
Reviewer: Thomas Olmstead/Heath Hartley
Date: July, 2016

Insignificant Activity-Fuel oil-fired combustion sources

Unit	Capacity MMBtu/hr
Fuel-oil combustion facilities	2

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	S = Weight % Sulfur
2	125.1428571	0.5

	Pollutant						
	PM*	PM10	direct PM2.5	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	2.0	2.38	2.13	71 *(142.0S)*	20.0	0.34	5.0
Potential Emission in tons/yr	0.13	0.15	0.13	4.44	1.25	0.02	0.31

	HAPs - Metals				
	Arsenic	Beryllium	Cadmium	Chromium	Lead
Emission Factor in lb/mmBtu	4.0E-06	3.0E-06	3.0E-06	3.0E-06	9.0E-06
Potential Emission in tons/yr	3.50E-05	2.63E-05	2.63E-05	2.63E-05	7.88E-05

	HAPs - Metals (continued)			
	Mercury	Manganese	Nickel	Selenium
Emission Factor in lb/mmBtu	3.0E-06	6.0E-06	3.0E-06	1.5E-05
Potential Emission in tons/yr	2.63E-05	5.26E-05	2.63E-05	1.31E-04

Methodology
1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu
Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.140 MM Btu
Emission Factors are from AP 42, Tables 1.3-1, 1.3-2, 1.3-3, 1.3-7, 1.3-8, 1.3-9, and 1.3-12 (SCC 1-03-005-01/02/03) Supplement E 09/1999 (see erata file). Corrected on 05/2010.
*PM emission factor is filterable PM only. Condensable PM emission factor is 1.3 lb/kgal. PM10 and PM2.5 emission factors are filterable and condensable PM10 and PM2.5 combined.
Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton
No data was available in AP-42 for organic HAPs.
Potential HAPs Emissions (tons/year) = Throughput (mmBtu/hr)*Emission Factor (lb/mmBtu)*8,760 hrs/yr / 2,000 lb/ton

Appendix A: Emissions Calculations
Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (<=600 HP)

Company Name: New NGC, Inc. dba National Gypsum Company
Address City IN Zip: 9720 US Highway 50 East, Shoals, Indiana 47581
Permit Number: 101-36933-00003
Reviewer: Thomas Olmstead/Heath Hartley
Date: July, 2016

Output Horsepower Rating (hp)	505.0
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	252,500
Maximum Diesel Fuel Usage (gal/yr)	12,899

Unit	HP
Generator	130
Flood Pump	375
Total	**505**

	Pollutant						
	PM[2]	PM10[2]	direct PM2.5[2]	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
Emission Factor in lb/kgal[1]	43.07	43.07	43.07	40.13	606.85	49.22	130.77
Potential Emission in tons/yr	0.28	0.28	0.28	0.26	3.91	0.32	0.84

[1] The AP-42 Chapter 3.3-1 emission factors in lb/hp-hr were converted to lb/kgal emission factors using an average brake specific fuel consumption
[1]Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) * 1/7,000 (hp-hr/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)
[2]PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was

Hazardous Air Pollutants (HAPs)

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs[3]
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
Emission Factor in lb/kgal[4]	1.28E-01	5.60E-02	3.91E-02	5.36E-03	1.62E-01	1.05E-01	1.27E-02	2.30E-02
Potential Emission in tons/yr	8.25E-04	3.61E-04	2.52E-04	3.46E-05	1.04E-03	6.78E-04	8.17E-05	1.48E-04

[3]PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)
[4]The AP-42 Chapter 3.3-1 emission factors in lb/MMBtu were converted to lb/kgal emission factors using an average diesel heating value of 19,300 Btu / lb and
[4]Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Potential Emission of Total HAPs (tons/yr)	**3.42E-03**
Potential Emission of Worst Case HAPs (tons/yr)	**1.04E-03**

Methodology

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Maximum Diesel Fuel Usage (gal/yr) = Potential Throughput (hp-hr/yr) * 7000 (Btu/hp-hr) * 1/19300 (lb/Btu) * 1/7.1 (gal/lb)
Emission Factors are from AP42 (Supplement B 10/96), Tables 3.3-1 and 3.3-2 and have been converted to lb/kgal
Potential Emissions (tons/yr) = [Maximum Diesel Fuel Usage (gal/yr) x Emission Factor (lb/kgal)] / (1,000 ga/kgal) / (2,000 lb/ton)

Indiana Department of Environmental Management
Office of Air Quality

Appendix B
Best Available Control Technology (BACT) Determination

Source Description and Location

Source Name:	**New NGC, Inc. dba National Gypsum Company**
Source Location:	**9720 US Highway 50 East, Shoals, Indiana 47581**
County:	**Martin**
SIC Code:	**3275 (Gypsum Products)**
Operation Permit No.:	**F 101-22910-00003**
Operation Permit Issuance Date:	**December 26, 2007**
Significant Permit Revision No.:	**101-36933-00003**
Permit Reviewer:	**Thomas Olmstead/Heath Hartley**

Introduction

On March 10, 2016, New NGC, Inc. dba National Gypsum Company submitted an application to the OAQ because the source can no longer comply with the 326 IAC 8-1-6 avoidance limit of 0.19 pounds of VOC per ton of silicone XP wallboard emission limit in operating permit 101-22910-00003 for the natural gas-fired kiln dryer (Unit 2). The source is requesting the increase in the VOC emission limit for silicone XP wallboard to 0.2758 pounds of VOC per ton of silicone XP wallboard and increasing drying silicone XP wallboard in the natural gas-fired kiln dryer (Unit 2) from 75,000 tons per twelve (12) consecutive month period to 345,000 tons per twelve (12) consecutive month period. These changes will increase the potential to emit VOC to 59 tons per year. Therefore, natural gas-fired kiln dryer (Unit 2) is subject to the requirements of 326 IAC 8-1-6 (BACT).

Description of Process

326 IAC 8-1-6 requires a Best Available Control Technology (BACT) review to be performed on the one (1) natural gas-fired kiln dryer (Unit 2) because the potential to emit Volatile Organic Compound (VOC) emissions is equal to or greater than twenty-five (25) tons per year. Therefore, a Best Available Control Technology analysis for VOCs was performed for the following emissions unit:

(a) One (1) natural gas-fired kiln dryer, identified as Unit 2, constructed in 1990 and modified in 2002, with a maximum drying capacity of 433,000 tons/yr of wallboard, with a maximum capacity of ninety-five (95) million British thermal units per hour and venting through stack Z3.

Summary of the Best Available Control Technology (BACT) Process

BACT is an emissions limitation based on the maximum degree of pollution reduction of emissions, which is achievable on a case-by-case basis. BACT analysis takes into account the energy, environmental, and economic impacts on the source. These reductions may be determined through the application of available control techniques, process design, work practices, and operational limitations. Such reductions are necessary to demonstrate that the emissions remaining after application of BACT will not cause or contribute significantly to air pollution, thereby protecting public health and the environment.

Federal guidance on BACT requires an evaluation that follows a “top down” process. In this approach, the applicant identifies the best-controlled similar source on the basis of controls required by regulation or permit, or controls achieved in practice. The highest level of control is then evaluated for technical feasibility.

The five (5) basic steps of a top-down BACT analysis are listed below:

Step 1: Identify Potential Control Technologies

The first step is to identify potentially "available" control options for each emission unit and for each pollutant under review. Available options should consist of a comprehensive list of those technologies with a potentially practical application to the emissions unit in question. The list should include lowest achievable emission rate (LAER) technologies, innovative technologies, and controls applied to similar source categories.

Step 2: Eliminate Technically Infeasible Options

The second step is to eliminate technically infeasible options from further consideration. To be considered feasible, a technology must be both available and applicable. It is important in this step that any presentation of a technical argument for eliminating a technology from further consideration be clearly documented based on physical, chemical, engineering, and source-specific factors related to safe and successful use of the controls. Innovative control means a control that has not been demonstrated in a commercial application on similar units. Innovative controls are normally given a waiver from the BACT requirements due to the uncertainty of actual control efficiency. A control technology is considered available when there are sufficient data indicating that the technology results in a reduction in emissions of regulated pollutants.

Step 3: Rank the Remaining Control Technologies by Control Effectiveness

The third step is to rank the technologies not eliminated in Step 2 in order of descending control effectiveness for each pollutant of concern. The ranked alternatives are reviewed in terms of environmental, energy, and economic impacts specific to the proposed modification. If the analysis determines that the evaluated alternative is not appropriate as BACT due to any of the impacts, then the next most effective is evaluated. This process is repeated until a control alternative is chosen as BACT. If the highest ranked technology is proposed as BACT, it is not necessary to perform any further technical or economic evaluation, except for the environmental analyses.

Step 4: Evaluate the Most Effective Controls and Document the Results

The fourth step entails an evaluation of energy, environmental, and economic impacts for determining a final level of control. The evaluation begins with the most stringent control option and continues until a technology under consideration cannot be eliminated based on adverse energy, environmental, or economic impacts.

For the technologies determined to be feasible, there may be several different limits that have been set as BACT for the same control technology. The permitting agency has to choose the most stringent limit as BACT unless the applicant demonstrates in a convincing manner why that limit is not feasible. BACT must, at a minimum, be no less stringent than the level of control required by any applicable New Source Performance Standard (NSPS) and National Emissions Standard for Hazardous Air Pollutants (NESHAP) or state regulatory standards applicable to the emission units included in the permits.

Step 5: Select BACT

The Office of Air Quality (OAQ) makes final BACT determinations by following the five steps identified above.

Volatile Organic Compounds (VOC) BACT – Kiln Dryer (Unit 2)

Step 1 – Identify Potential Control Options

The volatile organic compound (VOC) emissions can be controlled by the following emission control systems:

(1) Destruction Processes;

(2) Reclamation Processes;

(3) Combination of Reclamation and Destruction Technologies; and/or

(4) Biofiltration Technology.

Destruction technologies reduce VOC concentration by high temperature oxidation into carbon dioxide and water vapor. Reclamation is the capture of VOCs for reuse or disposal. Biofiltration is a technology where a VOC-laden exhaust stream is directed through a biologically-active media. A further description of these types of control technologies follows:

Destruction Control Methods

The destruction of organic compounds usually requires temperatures ranging from 1,200^{o}F to 2,000^{o}F for direct thermal incinerators or 600^{o}F to 1,200^{o}F for catalytic systems. Combustion temperature depends on the chemical composition and the desired destruction efficiency. Carbon dioxide and water vapor are the typical products of complete combustion. Turbulent mixing and combustion chamber retention times of 0.5 to 1.0 seconds are needed to obtain high destruction efficiencies.

Control technologies include direct incineration, recuperative thermal oxidation, regenerative thermal oxidation, recuperative catalytic incineration, regenerative catalytic incineration, and flares.

(a) *Direct Incineration*: Direct incineration is the most simple and direct form of incineration. It involves burning the VOC-laden fumes directly in a combustion chamber without reheating or post-combustion heat recover. Direct incineration typically requires supplemental fuel. Concentrated VOC streams with high heat contents obviously require less supplementary fuel than more dilute streams. VOC streams sometimes have a heat content high enough to be self-sustaining, but a supplemental fuel firing rate equal to about 5% of the total incinerator heat input is usually needed to stabilize the burner flame. Natural gas is the most common fuel for VOC incinerators, but fuel oil is an option in some circumstances.

(b) *Recuperative Thermal Oxidation*: Recuperative thermal incinerators are add-on control devices used to control VOC emissions by introducing solvent-laden fumes to the oxidizer. The stream is pre-heated by exiting flue gas from the same system in a heat exchanger or recuperator, a burner then heats the air to the required temperature. The air is then passed through an oxidation chamber where the solvent-laden air is converted to carbon dioxide and water. These are then passed through the heat exchanger where incoming fume is preheated by the heat of the exiting flue gas. Finally the clean flue gas is discharged to the atmosphere. The recuperative thermal oxidizer is appropriate for waste streams with a relatively high solvent content and/or consistent pollutant loading. Variation in pollutant loading will require a longer retention time in the oxidizer in order to properly destroy VOC emissions.

(c) *Regenerative Thermal Oxidation*: Regenerative thermal oxidizers (RTOs) are add-on control devices used to control VOC emissions by simple reaction of the harmful air pollutants with oxygen and heat. An RTO uses a direct contact heat exchanger. These direct contact heat exchangers consist of a bed of porous ceramic packing or other

structured, high heat capacity media. These systems can handle variable and low concentration VOC waste streams.

The inlet gas first passes through a hot ceramic bed thereby heating the stream (and cooling the bed) to its ignition temperature. The hot gases then react (releasing energy) in the combustion chamber and while passing through another ceramic bed, thereby heating it to the combustion chamber outlet temperature. The process flows are then switched, now feeding the inlet stream to the hot bed. This cyclic process affords very high energy recovery (up to 95%). The higher capital costs associated with these high performance heat exchangers and combustion chambers may be offset by the increased auxiliary fuel savings to make such a system economical.

(d) *Recuperative and Regenerative Catalytic Oxidation*: Catalytic incinerators are add-on control devices used to control VOC emissions by using a bed of catalyst that facilitates the oxidation of the combustible gases. The catalyst increases the reaction rate and allows the conversion of VOC at lower temperatures than thermal incinerators. Catalytic oxidation can be used for low-concentration VOC waste streams; however, certain compounds present in waste stream gas may foul the catalyst. It may also be necessary to remove particulate prior to catalytic oxidation as well.

(e) *Flares*: Flaring is used to control VOC emissions by piping VOCs to a remote, usually elevated location and burning them in an open flame in the open air using a specially designed burner tip, auxiliary fuel, and steam or air to promote mixing for nearly complete (> 98%) VOC destruction. While flares are designed to eliminate waste gas streams, they can cause safety and operational problems and the exhaust stream concentration must be high enough to sustain combustion.

Reclamation Control Methods

Organic compounds may be reclaimed by one of three possible methods; adsorption, absorption (scrubbing) or condensation. In general, the organic compounds are separated from the emission stream and reclaimed for reuse or disposal. Depending on the nature of the contaminant and the inlet concentration of the emission stream, recovery technologies can reach efficiencies of 98%.

Control technologies include scrubbers, adsorption, absorption, and condensation.

(a) *Scrubbers*: There are several types of wet scrubbers that use a variety of techniques to control VOC emissions. The type of scrubber used in a particular application is dependent on the characteristics of the waste gas stream and the pollutants of concern. VOC control scrubbers are designed primarily for creating intimate contact to promote absorption of soluble compounds.

(b) *Adsorption*: Adsorption is a surface phenomenon where attraction between the carbon and VOC molecules binds the pollutants to the carbon surface. Both carbon and VOC are chemically intact after adsorption. The VOCs may be removed, or desorbed, from the carbon bed reclaimed and destroyed. Adsorption can be used for relatively low VOC exhaust streams. Pollutants present in the gas streams can reduce adsorber efficiency, increase pressure drop and eventually plug the bed. Adsorption processes can be used to capture VOCs in low concentration exhaust; however, it is typically only used for exhaust that is not loaded with other pollutants which can plug the bed.

(c) *Absorption*: Absorption is a unit operation where components of a gas phase mixture (pollutants) are selectively transferred to a relatively nonvolatile liquid, usually water. Sometimes, organic liquids, such as mineral oil or nonvolatile hydrocarbons, are suitable absorption solvents. The choice of solvent depends on cost and solubility of the pollutant in the solvent. Absorption is commonly used to recover products or purify gas streams

that have high concentrations of organic compounds. Absorption processes are typically used to recover products or purify gas streams with high concentrations of organic compounds such as in the ethanol production and soybean oil refinery industries.

(d) *Condensation*: Condensation is the separation of VOCs from an emission stream through a phase change, by increasing the system pressure or, more commonly, lowering the system temperature below the dew point of the VOC vapor. When condensers are used for air pollution control, they usually operate at the pressure of the emission stream, and typically require a refrigeration unit to obtain the temperature necessary to condense the VOCs from the emission stream. These systems are frequently used prior to other control devices (e.g., oxidizers or absorbers) to remove components that may be corrosive or damaging to other parts of the system.

Combinations of Reclamation and Destruction Control Methods

In some cases, a combination of control technologies offers the most efficient and cost effective VOC control.

The combination of carbon adsorption with recuperative thermal incineration is available commercially. This system concentrates the VOC stream by using carbon adsorption to remove low concentration VOCs in an emission stream and then uses a lower volume of hot air, commonly one-tenth the original flow, to desorb the pollutants. A recuperative incinerator for destroying pollutants in the concentrated stream is much smaller and has lower supplemental fuel requirement than an incinerator sized for the full emission stream volume.

Absorption systems can also be used to concentrate emission streams to reduce the size of destruction equipment. The concentration effect is not as extreme as with carbon adsorption, a concentrated exhaust stream one quarter the volume of the inlet stream seems to be the practical limit. Absorption concentrators are typically suited for batch processes or to equalize pollutant concentrations in a variable stream. The physical characteristics that drive the absorption of pollutants into a liquid also limit the opportunity to remove those pollutants from the liquid stream. Fume incinerators typically need supplemental fuel. Concentrated VOC streams with high heat contents obviously require less supplementary fuel than more dilute streams. VOC streams sometimes have a heat content high enough to be self-sustaining, but a supplemental fuel firing rate equal to about 5% of the total incinerator heat input is usually needed to stabilize the burner flame. Natural gas is the most common fuel for VOC incinerators, but fuel oil is an option in some circumstances.

Biofiltration Technology

Biofiltration is a technology where a VOC-laden exhaust stream is directed through a biologically-active media. Biofiltration uses microorganisms to break down organic compounds into carbon dioxide, water, and salts. When the biofilter is built, the microorganisms are already on the material that is used as a filter bed. The filter material normally used is peat, soil, or compost, but granulated activated carbon and polystyrene can also be used. The choice of filter material is very important because it has to supply the nutrients for the microorganisms, support biological growth, and have good sorption capacity.

The biological process is an oxidation by microorganisms, and can be written as follows:

$$\text{Organic pollutant} + \text{Oxygen} \rightarrow CO_2 + H_2O + \text{Heat} + \text{Biomass}$$

The microorganisms live in a thin layer of moisture, the biofilm, which is built around the particles of the filter material. The contaminated gas is diffused into the biofilter and adsorbed onto the biofilm. Oxidation takes place at this point, and the contaminant is not permanently transferred to the filter material. Parameters of temperature, oxygen level, and pH affect the level of control.

Microorganisms work best when the temperature is between 85 and 105 degrees Fahrenheit (°F). Gas stream temperatures well above 105°F will kill the microorganisms contained in the filter media, and thereby negate its effectiveness. Because most of the biological degradations are aerobic in nature, the oxygen level is very important in a biofiltration process. Oxygen is not used directly in the gaseous form, but the microorganisms use the oxygen present in the dissolved form present in the biofilm. The microorganisms are most effective when the pH is neutral, or around 7. Thus, the pH of the contaminated gas stream must be maintained near this value.

This control technology has the capability to remove 50 to over 90% of the VOCs emitted in a gas stream when used under favorable operating conditions.

Step 2 – Eliminate Technically Infeasible Control Options

The test for technical feasibility of any control option is whether it is both available and applicable to reducing VOC emissions from the natural gas-fired kiln dryer (Unit 2). The control technologies listed in the previous section are discussed and evaluated below for their technical feasibility.

Destruction Control Methods

(a) *Direct Incineration*: Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of direct incineration is not a technically feasible option for the natural gas-fired kiln dryer (Unit 2) at this source. Direct incineration typically needs VOC inlet concentrations of at least 1500 to 3000 ppmv to perform acceptably without requiring significant quantities of supplemental fuel to sustain temperatures. Stack testing on April 28, 2015 by Pace Analytical Services, Inc. at National Gypsum Company showed that the VOC concentration from the wallboard dryer is 52.9 ppmv, which is well below the 1500 to 3000 ppmv minimum range for direct thermal incineration.

(b) *Recuperative Thermal Oxidation*: Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of Recuperative Thermal Oxidation is not a technically feasible option for the natural gas-fired kiln dryer (Unit 2) at this source. Recuperative Thermal Oxidation typically needs VOC inlet concentrations of at least 1500 to 3000 ppmv to perform acceptably without requiring significant quantities of supplemental fuel to sustain temperatures. Stack testing on April 28, 2015 by Pace Analytical Services, Inc. at National Gypsum Company showed that the VOC concentration from the wallboard dryer is 52.9 ppmv, which is well below the 1500 to 3000 ppmv minimum range for recuperative thermal oxidation.

(c) *Regenerative Thermal Oxidation*: Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of Regenerative Thermal Oxidation is a technically feasible option for the natural gas-fired kiln dryer (Unit 2) at this source. Regenerative Thermal Oxidation typically needs VOC inlet concentrations less than 1000 ppmv and needs gas flow rates of 5,000 to 500,000 scfm. Stack testing on April 28, 2015 by Pace Analytical Services, Inc. at National Gypsum Company showed that the VOC concentration from the wallboard dryer is 52.9 ppmv and a gas flow rate of 54,830 scfm, which are both in the range for Regenerative Thermal Oxidation operation.

(d) *Recuperative and Regenerative Catalytic Oxidation*: Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of Recuperative Catalytic Oxidation or Regenerative Catalytic Oxidation is a technically feasible option for the natural gas-fired kiln dryer (Unit 2) at this source. These systems can handle low concentration VOC waste streams and gas flow rates 700 to 75,000 scfm, which are the types of streams from the natural gas-fired kiln dryer (Unit 2). Stack testing on April 28, 2015 by Pace Analytical Services, Inc. at National Gypsum Company showed that the VOC concentration from the wallboard dryer is 52.9 ppmv and a gas flow rate of 54,830

scfm, which are both in the range for Recuperative Catalytic Oxidation or Regenerative Catalytic Oxidation operation.

(e) *Flares*: Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that flaring is not a technically feasible option for the natural gas-fired kiln dryer (Unit 2) at this source. While flares are designed to eliminate waste gas streams, they can cause safety and operational problems and the exhaust stream concentration must be high enough to sustain combustion. The VOC concentration of the natural gas-fired kiln dryer (Unit 2) exhaust is too low to sustain usage of a flare.

Reclamation Control Methods

(a) *Adsorption*: Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that carbon adsorption is not a technically feasible option for the natural gas-fired kiln dryer (Unit 2) at this source. Carbon adsorption is not well-suited for exhaust streams such as those from the wallboard dryer. The high temperature, high volumetric flow rate, and appreciable moisture content contained in the exhaust stream all pose potential problems for carbon adsorption.

(b) *Condensation*: Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of condensation is not a technically feasible option for the natural gas-fired kiln dryer (Unit 2) at this source. Condensation is only technically feasible for VOC concentrations greater than 1,000 ppmv and low gas flow rates less than 3,000 scfm. Stack testing on April 28, 2015 by Pace Analytical Services, Inc. at National Gypsum Company showed VOC concentrations at 52.9 ppmv and a gas flow rate of 54,830 (scfm). The low concentration of VOC in the dryer exhaust and high gas flow rate leads to lower removal efficiencies.

(c) *Absorption*: Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of absorption is not a technically feasible option for the natural gas-fired kiln dryer (Unit 2) at this source. The VOC waste stream has to be soluble in the absorbing solvent and the waste stream from the natural gas-fired kiln dryer (Unit 2) does not contain high concentrations of organics that are readily soluble.

Biofiltration Technology

(a) Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of Biofiltration is not a technically feasible option for the natural gas-fired kiln dryer (Unit 2) at this source. Biofiltration systems include complex feeding and neutralizing systems and the handling of toxic chemicals to control biomass growth. Most bioreactors have large footprints, are maintenance intensive, operate in narrow bands of temperature and pressure requiring expensive gas conditioning, and have primarily been used for odor control in clearly speciated air streams. Because of the size of a biofiltration system, existing space at the plant would not be available to support this type of system. It is expected that a particulate matter control device would be required upstream of the biofilter to prevent killing the microorganisms.

Step 3 – Rank Remaining Control Technologies by Control Effectiveness

The remaining technically feasible control options for controlling VOC emissions from the natural gas-fired kiln dryer (Unit 2) are ranked below by control efficiency:

(a) Regenerative Thermal Oxidation - 98%

(b) Recuperative or Regenerative Catalytic Oxidation- 98%

Step 4 – Evaluate the Most Effective Controls and Document Results

RBLC

Board, kiln, and dryer were used as search criteria in the RBLC providing seven (7), sixty-six (66), and seventy (70) processes, respectively, over the last ten (10) years. Most of the results from these search criteria provided results for the wood and grain industries. Relevant entries from the search criteria are provided in Table 4-1.

Table 4-1. RBLC Data on Existing BACT Determinations for Kiln Dryer

Company	RBLC ID	Source	Permit Issuance Date	Technology	VOC Limit(s)
New NGC, Inc. dba National Gypsum Company	PROPOSED	WALLBOARD KILN DRYER	PENDING	NONE	0.0686 lbs VOC per ton of regular wallboard dried. Regular wallboard drying rate 400,000 tons per yr. 0.331 lbs VOC per ton of silicone XP wallboard dried. silicone XP wallboard drying rate 345,000 tons per yr.
Existing BACT Determinations					
GEORGIA-PACIFIC GYPSUM LLC	IN	WALLBOARD DRYER	6/25/2009	NONE	Non-Specialty Performance wallboard 0.19 lbs VOC per 1000-ft^2 board. Specialty Performance wallboard 168,000 MSF per yr and 0.72 lbs VOC per 1000-ft^2 board.
UNITED STATES GYPSUM COMPANY	VA-0299	KILN BOARD DRYING	06/19/2006	NONE	5.8 lb VOC / hr
METAL TECHNOLOGIES AUBURN, LLC	IN-0227	NATURAL GAS-FIRED THERMAL CHIP DRYER	08/19/2015	THERMAL OXIDIZER	98.0000 % OVERALL CONTROL 3 HOURS AND 0.1600 LB/T OF METAL CHIP 3 HOURS
BEAVER WOOD ENERGY FAIR HAVEN, LLC	VT-0037	PELLET PLANT - BURNER & ROTARY DRYER	02/10/2012	NONE	0.6900 LB/OVEN DRY TON OF WOOD HOURLY AVERAGE
BOISE CASCADE WOOD PRODUCTS, LLC	LA-0259	VENEER DRYER NO. 1-4 HEATED ZONES	01/31/2012	RTO	276.9200 LB/H HOURLY MAXIMUM 44.4400 T/YR ANNUAL MAXIMUM 3.2400 LB/M FT2 EXCLUDING NAT. GAS COMBUSTION
HUBER ENGINEERED WOODS, LLC	GA-0143	DRYER SYSTEM	11/10/2011	TWO RTOS	0.8580 LB/ODT LENGTH OF TIME TO CONDUCT TEST 42.8900 LB/H LENGTH OF TIME TO CONDUCT TEST
UNION COUNTY LUMBER COMPANY	AR-0124	LUMBER DRYING KILN	09/23/2011	NONE	3.8 lb/MBF PROPER MAINTENANCE AND OPERATION
LOUISIANA PACIFIC	AL-0221	BARK BURNER/DRYER	06/14/2006	RTO	23.5000 LB/H 0.5500 LB/ODT

Company	RBLC ID	Source	Permit Issuance Date	Technology	VOC Limit(s)
CORPORATION					
FLAKEBOARD AMERICA LIMITED	SC-0111	FACE PRIMARY DRYER	12/22/2009	NONE	GOOD COMBUSTION PRACTICES AND NATURAL GAS AS FUEL
GP CLARENDON LP	SC-0115	ROTARY FLAKE DRYER	02/10/2009	RTO	116.3900 LB/H and 399.0400 T/YR
GP ALLENDALE LP	SC-0114	ROTARY FLAKE DRYER	11/25/2008	RTO	116.3900 LB/H and 399.0400 T/YR
LOUISIANA-PACIFIC CORPORATION	MI-0387	FLAKE DRYERS	01/31/2008	RTO	57.4000 T/YR 0.2900 LB/T FINISHED PROD HARDWOOD. 0.3700 LB/T FINISHED PROD SOFTWOOD

Based on a review of the RBLC, there are no control technologies that have been used to control VOC emissions from natural gas-fired kiln dryer waste streams. All of the entries into the RBLC except for United States Gypsum Company, National Gypsum Company, and Georgia-Pacific Gypsum, LLC are in the wood products manufacturing industry. These wood products sources were used in comparison only for similar dryer types. The manufacturing processes and resulting emissions stream from the wood product sources are significantly different from that of New NGC, Inc. dba National Gypsum Company. Particulate from wood dryers is typically combustible, reducing the likelihood of plugging. Gypsum particulate emitted leads to a higher plugging probability for control technologies and affects the combustion ability of the destructive controls. The emissions stream from the gypsum wallboard is very low in VOC concentration compared to the glues and additives used in the pressboard and veneer industries that result in a higher VOC concentration in the emissions stream. Therefore, the BACT requirements for the wood products sources do not represent BACT for New NGC, Inc. dba National Gypsum Company.

Pursuant to Appendix A to SPM No.: 073-27314-00031, further investigation into the BACT requirements for the United States Gypsum Company source in Virginia revealed that the source does not have BACT requirements for VOC from the board drying kiln as is stated in the RBLC. The source does have PM/PM_{10} BACT limits for that particular facility, but not VOC limits. Confirmation was made with the assistance of the Virginia Department of Environmental Quality.

Georgia Pacific Gypsum, LLC in Indiana has 0.19 lbs of VOC per 1000-ft^2 board for non-specialty performance wallboard. For Georgia Pacific Gypsum, LLC specialty performance wallboard, the source has limits of 168,000 MSF (1000 ft^2) per twelve (12) consecutive month period and 0.72 lbs VOC per 1000-ft^2 board for BACT. Pound per hour emissions from this type of operation can vary greatly between facilities based on production capacity and additives used in the wallboard manufacturing process. Also, the limits from the New NGC, Inc. dba National Gypsum Company current operating permit were converted to the BACT limits for Georgia Pacific Gypsum, LLC. Based on the comparison of limits, the BACT for Georgia Pacific Gypsum, LLC wallboard dryer VOC emissions is higher than and would not reduce VOC emissions from the New NGC, Inc. dba National Gypsum Company natural gas-fired kiln dryer (Unit 2). Therefore, the pound per hour limits are not comparable between the Georgia Pacific Gypsum, LLC facility and New NGC, Inc. dba National Gypsum Company as BACT.

Economic Impact of VOC Control Alternatives

In determining the economic feasibility of VOC control alternatives, guidance provided by the US EPA was utilized. The economic feasibility of a specific control alternative is generally expressed in terms of annualized dollars per ton of VOC removed. By definition, cost effectiveness is the ratio of the total annualized cost of any control alternative to the annual quantity of pollutant the

alternative removes from the process. Note: The baseline VOC emissions rate for control or removal by an add-on control technology was based upon a realistic scenario of upper bound uncontrolled emissions from the operation.

The total capital and annualized costs for the identified control alternatives were developed based on vendor quotes for similar operations and the cost estimating structure and guidance provided in the USEPA reference, "OAQPS Control Cost Manual", Sixth Edition, EPA 452/B-02-001 (January, 2002), other relevant information provided by the respective equipment vendors, inputs from plant personnel and engineering judgment. The various cost factors are based on guidance provided under OAQPS Manual Section 3 – VOC Controls.

Capital Recovery Factor was based on the default annual interest rate of 7% mandated by the Office of Management and Budget (OMB).

TABLE 4-2 NEW REGENERATIVE THERMAL OXIDATION SYSTEM (w/ 98% Control)

CAPITAL COSTS		
	Gas Flow (scfm):	54,830
	Gas Flow (acfm):	71,980
DIRECT CAPITAL COSTS (DC)		
	Purchased Equipment Costs (PE)	
	Regenerative Thermal Oxidation System with 95% regenerative heat exchanger, housing and frame, inlet and exhaust ductwork. Eq 2.33	$854,783
	Instrumentation (10% of Equipment, OAQPS Manual)	$ 85,478.31
	Sales Tax (7% of Equipment Indiana)	$ 59,834.82
	Freight (5% of Equipment, OAQPS Manual)	$ 42,739.16
	PE Total	$1,042,835
	Direct Installation Costs (DI)	
	Foundations and supports (8% of PE, OAQPS Manual)	$ 83,426.83
	Handling and erection (14% of PE, OAQPS Manual)	$ 145,996.95
	Electrical (4% of PE, OAQPS Manual)	$ 41,713.42
	Piping (2% of PE, OAQPS Manual)	$ 20,856.71
	Insulation + Painting (2% of PE, OAQPS Manual)	$ 20,856.71
	Site preparation etc. (Engr. Estimate)	$ 500,000.00
	DI Total	$ 812,850.61
	(PE+DI) DC Total	$ 1,855,686.00
INDIRECT CAPITAL COSTS (IC)		
	Engineering and Supervision (10% of PE, OAQPS Manual)	$ 104,283.54
	Construction and Field Expenses (5% of PE, OAQPS Manual)	$ 52,141.77
	Contractor Fees (10% of PE, OAQPS Manual)	$ 104,283.54
	Start-up + Performance (3% of PE, OAQPS Manual)	$ 31,285.06
	Over-all Contingencies (3% of PE, OAQPS Manual)	$ 31,285.06
	IC Total	$ 323,278.97
	TOTAL CAPITAL INVESTMENT (TCI) = Sum (DC + IC)	$ 2,178,964.97
	Capital Recovery at 7% interest over 10 years (0.1424*TCI)	$ 310,235.59
OPERATION AND MAINTENANCE (O & M)		
DIRECT ANNUAL COSTS (DA)		
	Operating Labor:	
	Operator (1 hr/day, 365 days/yr, $20.06/hr) + Supervisor (15% of Operator)	$ 8,420.19
	Maintenance:	
	Labor (1 hr/day, 365 days/yr, $22.07/hr) + Materials (100% of Labor)	$ 16,111.10
	Natural Gas Requirement = [83.59 Auxiliary Fuel Requirement (scfm)]*[60 (min/hr)]*[8760 (hrs/yr)]*[$6.035/1000 scf]	$ 265,133.71

	Electricity Eq 2.42 (Q=71,980 scfm, efficiency=0.6, change in pressure drop=19 in, @ $0.065/kWh)	$ 138,676.67
	DA Total	$ 428,341.66
INDIRECT ANNUAL COSTS (IA)		
	Overhead (60% of maintenance parts & labor costs, OAQPS Manual)	$ 14,718.77
	Admin., Property Tax, Insurance (4% of TCI, OAQPS Manual)	$ 87,158.60
	IA Total	$ 101,877.37
	(DA+IA) O & M Total	$ 530,219.03
TOTAL ANNUAL CAPITAL AND O & M COSTS (including Capital Recovery)		$ 840,454.62
	Baseline VOC Emissions from Wallboard Dryer (tons/yr)	57.09
	Annual VOC removal assuming 98% Removal Efficiency (tons)	55.95
	Annual cost effectiveness, $/ton of VOC removed*	**$ 15,021.53**

* The kilns can dry Regular Wall Board or Silcon XP Wallboard. Since the emissions are higher (tpy) when drying Silcon XP Wallboard, the above analysis is conducted when producing Silcon XP Wallboard. This analysis represents the lowest cost savings ($/ton of VOC removed) of the two (2) operating situations.

TABLE 4-3 NEW CATALYTIC OXIDATION SYSTEM (w/ 98% Control)

CAPITAL COSTS		
	Gas Flow (scfm):	54,830
	Gas Flow (acfm):	71,980
DIRECT CAPITAL COSTS (DC)		
	Purchased Equipment Costs (PE)	
	Catalytic Oxidation System with 70% energy recovery, housing and frame, inlet and exhaust ductwork. Eq 2.37	$ 600,512.03
	Instrumentation (10% of Equipment, OAQPS Manual)	$ 60,051.20
	Sales Tax (7% of Equipment Indiana)	$ 42,035.84
	Freight (5% of Equipment, OAQPS Manual)	$ 30,025.60
	PE Total	$ 732,624.68
	Direct Installation Costs (DI)	
	Foundations and supports (8% of PE, OAQPS Manual)	$ 58,609.97
	Handling and erection (14% of PE, OAQPS Manual)	$ 102,567.46
	Electrical (4% of PE, OAQPS Manual)	$ 29,304.99
	Piping (2% of PE, OAQPS Manual)	$ 14,652.49
	Insulation + Painting (2% of PE, OAQPS Manual)	$ 14,652.49
	Site preparation etc. (Engr. Estimate)	$ 500,000.00
	DI Total	$ 719,787.40
	(PE+DI) DC Total	$ 1,452,412.09
INDIRECT CAPITAL COSTS (IC)		
	Engineering and Supervision (10% of PE, OAQPS Manual)	$ 73,262.47
	Construction and Field Expenses (5% of PE, OAQPS Manual)	$ 36,631.23
	Contractor Fees (10% of PE, OAQPS Manual)	$ 73,262.47
	Start-up + Performance (3% of PE, OAQPS Manual)	$ 21,978.74
	Over-all Contingencies (3% of PE, OAQPS Manual)	$ 21,978.74
	IC Total	$ 227,113.65
	TOTAL CAPITAL INVESTMENT (TCI) = Sum (DC + IC)	$ 1,679,525.74
	Capital Recovery at 7% interest over 10 years (0.1424*TCI)	$ 239,126.68
OPERATION AND MAINTENANCE (O & M)		
DIRECT ANNUAL COSTS (DA)		
	Operating Labor:	
	Operator (1 hr/day, 365 days/yr, $20.06/hr) + Supervisor (15% of Operator)	$ 8,420.19

	Maintenance:	
	Labor (1 hr/day, 365 days/yr, $22.07/hr) + Materials (100% of Labor)	$ 16,111.10
	Catalyst Replacement = [106.8 ft^3 (size of catalyst)]*[$952/ ft^3 (replacement cost)]*[1.08 (freight and sales)]	$ 60,742
	Natural Gas Requirement = [322.15 Auxiliary Fuel Requirement (scfm)]*[60 (min/hr)]*[8760 (hrs/yr)]*[$6.035/1000 scf]	$ 1,021,868.81
	Electricity Eq 2.42 (Q=71,980 scfm, efficiency=0.6, change in pressure drop=23 in, @ $0.065/kWh)	$ 167,871.76
	DA Total	$ 1,275,013.87
INDIRECT ANNUAL COSTS (IA)		
	Overhead (60% of maintenance parts & labor costs, OAQPS Manual)	$ 14,718.77
	Admin., Property Tax, Insurance (4% of TCI, OAQPS Manual)	$ 67,181.03
	IA Total	$ 81,899.80
	(DA+IA) O & M Total	$ 1,356,913.67
TOTAL ANNUAL CAPITAL AND O & M COSTS (including Capital Recovery)		$ 1,596,040.35
	Baseline VOC Emissions from Wallboard Dryer (tons/yr)	57.09
	Annual VOC removal assuming 98% Removal Efficiency (tons)	55.95
	Annual cost effectiveness, $/ton of VOC removed*	$ 28,526.19

* The kilns can dry Regular Wall Board or Silcon XP Wallboard. Since the emissions are higher (tpy) when drying Silcon XP Wallboard, the above analysis is conducted when producing Silcon XP Wallboard. This analysis represents the lowest cost savings ($/ton of VOC removed) of the two (2) operating situations.

As shown above, the cost effectiveness of using a Regenerative Thermal Oxidizer (RTO) or Catalytic Incineration System for controlling VOC emissions from the natural gas-fired kiln dryer (Unit 2) ranges from $15,021.53 to $28,526.19, which is cost prohibitive.

Based on review of the RBLC and the cost analysis of control technologies, there are no control technologies that have been used to control VOC emissions, nor control technologies that are cost effective to reduce VOC emissions, from the natural gas-fired kiln dryer (Unit 2). The top BACT proposed by the source does limit the amount of silicone XP wallboard from the maximum throughput capacity of 433,000 tons/yr to 375,000 tons/yr and limits the amount of Regular wallboard from the maximum throughput capacity of 433,000 tons/yr to 400,000 tons/yr.

Step 5 – Select BACT

The following is the VOC BACT for the natural gas-fired kiln dryer (Unit 2). Pursuant to 326 IAC 8-1-6, the Best Available Control Technology (BACT) for the natural gas-fired kiln dryer (Unit 2) for VOC emissions shall be as follows:

(a) The Permittee shall comply with the following when drying regular wallboard in the natural gas-fired dryer (Unit 2):

(1) VOC emissions shall not exceed 0.0686 pounds per ton of regular wallboard dried.

(2) The regular wallboard drying rate shall not exceed 400,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The Permittee shall comply with the following when drying silicone XP wallboard in the natural gas-fired dryer (Unit 2):

(1) VOC emissions shall not exceed 0.331 pounds per ton of silicone XP wallboard dried.

(2) The silicone XP wallboard drying rate shall not exceed 345,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

TSD Appendix B.1: TABLE 4-2
NEW REGENERATIVE THERMAL OXIDATION SYSTEM (w/ 95% Heat Recovery)
FOR 98% CONTROL OF VOC FROM THE WALLBOARD DRYER

Company Name: New NGC, Inc. dba National Gypsum Company
Address City IN Zip: 9720 US Highway 50 East, Shoals, Indiana 47581
Permit Number: 101-36933-00003
Reviewer: Thomas Olmstead/Heath Hartley
Date: June, 2016

CAPITAL COSTS		
	Gas Flow (scfm):	54,830
	Gas Flow (acfm):	71,980
DIRECT CAPITAL COSTS (DC)		
	Purchased Equipment Costs (PE)	
	Regenerative Thermal Oxidation System with 95% regenerative heat exchanger, housing and frame, inlet and exhaust ductwork. Eq 2.33	$854,783
	Instrumentation (10% of Equipment, OAQPS Manual)	$ 85,478.31
	Sales Tax (7% of Equipment Indiana)	$ 59,834.82
	Freight (5% of Equipment, OAQPS Manual)	$ 42,739.16
	PE Total	$1,042,835
	Direct Installation Costs (DI)	
	Foundations and supports (8% of PE, OAQPS Manual)	$ 83,426.83
	Handling and erection (14% of PE, OAQPS Manual)	$ 145,996.95
	Electrical (4% of PE, OAQPS Manual)	$ 41,713.42
	Piping (2% of PE, OAQPS Manual)	$ 20,856.71
	Insulation + Painting (2% of PE, OAQPS Manual)	$ 20,856.71
	Site preparation etc. (Engr. Estimate)	$ 500,000.00
	DI Total	$ 812,850.61
	(PE+DI) DC Total	$ 1,855,686.00
INDIRECT CAPITAL COSTS (IC)		
	Engineering and Supervision (10% of PE, OAQPS Manual)	$ 104,283.54
	Construction and Field Expenses (5% of PE, OAQPS Manual)	$ 52,141.77
	Contractor Fees (10% of PE, OAQPS Manual)	$ 104,283.54
	Start-up + Performance (3% of PE, OAQPS Manual)	$ 31,285.06
	Over-all Contingencies (3% of PE, OAQPS Manual)	$ 31,285.06
	IC Total	$ 323,278.97
	TOTAL CAPITAL INVESTMENT (TCI) = Sum (DC + IC)	$ 2,178,964.97
	Capital Recovery at 7% interest over 10 years (0.1424*TCI)	$ 310,235.59
OPERATION AND MAINTENANCE (O & M)		
DIRECT ANNUAL COSTS (DA)		
	Operating Labor:	
	Operator (1 hr/day, 365 days/yr, $20.06/hr) + Supervisor (15% of Operator)	$ 8,420.19
	Maintenance:	
	Labor (1 hr/day, 365 days/yr, $22.07/hr) + Materials (100% of Labor)	$ 16,111.10
	Natural Gas Requirement = [83.59 Auxiliary Fuel Requirement (scfm)]*[60 (min/hr)]*[8760 (hrs/yr)]*[$6.035/1000 scf]	$ 265,133.71
	Electricity Eq 2.42 (Q=71,980 scfm, efficiency=0.6, change in pressure drop=19 in, @ $0.065/kWh)	$ 138,676.67
	DA Total	$ 428,341.66
INDIRECT ANNUAL COSTS (IA)		
	Overhead (60% of maintenance parts & labor costs, OAQPS Manual)	$ 14,718.77
	Admin., Property Tax, Insurance (4% of TCI, OAQPS Manual)	$ 87,158.60
	IA Total	$ 101,877.37
	(DA+IA) O & M Total	$ 530,219.03
TOTAL ANNUAL CAPITAL AND O & M COSTS (including Capital Recovery)		$ 840,454.62
	Baseline VOC Emissions from Wallboard Dryer (tons/yr)	47.61
	Annual VOC removal assuming 98% Removal Efficiency (tons)	46.66
	Annual cost effectiveness, $/ton of VOC removed	**$ 18,013.16**

Regenerative Thermal Oxidation System

CRF =	0.1424
r =	7%
n (years) =	10

TSD Appendix B.1: TABLE 4-3
NEW CATALYTIC OXIDATION SYSTEM (w/ 70% Energy Recovery)
FOR 98% CONTROL OF VOC FROM THE WALLBOARD DRYER

Company Name: New NGC, Inc. dba National Gypsum Company
Address City IN Zip: 9720 US Highway 50 East, Shoals, Indiana 47581
Permit Number: 101-36933-00003
Reviewer: Thomas Olmstead/Heath Hartley
Date: June, 2016

CAPITAL COSTS				
	Gas Flow (scfm):	54,830		
	Gas Flow (acfm):	71,980		
DIRECT CAPITAL COSTS (DC)				
Purchased Equipment Costs (PE)				
Catalytic Oxidation System with 70% energy recovery, housing and frame, inlet and exhaust ductwork. Eq 2.37		$ 600,512.03		
Instrumentation (10% of Equipment, OAQPS Manual)		$ 60,051.20		
Sales Tax (7% of Equipment Indiana)		$ 42,035.84		
Freight (5% of Equipment, OAQPS Manual)		$ 30,025.60		
	PE Total	$ 732,624.68		
Direct Installation Costs (DI)				
Foundations and supports (8% of PE, OAQPS Manual)		$ 58,609.97		
Handling and erection (14% of PE, OAQPS Manual)		$ 102,567.46		
Electrical (4% of PE, OAQPS Manual)		$ 29,304.99		
Piping (2% of PE, OAQPS Manual)		$ 14,652.49		
Insulation + Painting (2% of PE, OAQPS Manual)		$ 14,652.49		
Site preparation etc. (Engr. Estimate)		$ 500,000.00		
	DI Total	$ 719,787.40		
	(PE+DI) DC Total	$ 1,452,412.09		
INDIRECT CAPITAL COSTS (IC)				
Engineering and Supervision (10% of PE, OAQPS Manual)		$ 73,262.47		
Construction and Field Expenses (5% of PE, OAQPS Manual)		$ 36,631.23		
Contractor Fees (10% of PE, OAQPS Manual)		$ 73,262.47		
Start-up + Performance (3% of PE, OAQPS Manual)		$ 21,978.74		
Over-all Contingencies (3% of PE, OAQPS Manual)		$ 21,978.74		
	IC Total	$ 227,113.65		
	TOTAL CAPITAL INVESTMENT (TCI) = Sum (DC + IC)	$ 1,679,525.74	**Catalytic Oxidation System**	
	Capital Recovery at 7% interest over 10 years (0.1424*TCI)	$ 239,126.68	**CRF =**	0.1424
OPERATION AND MAINTENANCE (O & M)			**r =**	7%
DIRECT ANNUAL COSTS (DA)			**n (years) =**	10
Operating Labor:				
Operator (1 hr/day, 365 days/yr, $20.06/hr) + Supervisor (15% of Operator)		$ 8,420.19		
Maintenance:				
Labor (1 hr/day, 365 days/yr, $22.07/hr) + Materials (100% of Labor)		$ 16,111.10	**Catalyst**	
Catalyst Replacement = [106.8 ft^3 (size of catalyst)]*[$952/ ft^3 (replacement cost)]*[1.08 (freight and sales)]		$ 60,742.01	**CRF =**	0.5531
Natural Gas Requirement = [322.15 Auxiliary Fuel Requirement (scfm)]*[60 (min/hr)]*[8760 (hrs/yr)]*[$6.035/1000 scf]		$ 1,021,868.81	**r =**	7%
Electricity Eq 2.42 (Q=71,980 scfm, efficiency=0.6, change in pressure drop=23 in, @ $0.065/kWh)		$ 167,871.76	**n (years) =**	2
	DA Total	$ 1,275,013.87		
INDIRECT ANNUAL COSTS (IA)				
Overhead (60% of maintenance parts & labor costs, OAQPS Manual)		$ 14,718.77		
Admin., Property Tax, Insurance (4% of TCI, OAQPS Manual)		$ 67,181.03		
	IA Total	$ 81,899.80		
	(DA+IA) O & M Total	$ 1,356,913.67		
TOTAL ANNUAL CAPITAL AND O & M COSTS (including Capital Recovery)		$ 1,596,040.35		
Baseline VOC Emissions from Wallboard Dryer (tons/yr)		47.61		
Annual VOC removal assuming 98% Removal Efficiency (tons)		46.66		
Annual cost effectiveness, $/ton of VOC removed		**$ 34,207.36**		

Appendix C: Emission Calculations
Wallboard Recycling and Stucco Cooler

Company Name: New NGC, Inc. dba National Gypsum Company
Address City IN Zip: 9720 US Highway 50 East, Shoals, Indiana 47581
Permit Number: 101-36933-00003
Reviewer: Thomas Olmstead
Date: June, 2016

Stucco Cooler PTE:

Pollutant	Max. Rate (tons/hr)	Emission Factor (lbs/ton)	PTE Uncontrolled (lbs/hr)	PTE Uncontrolled (tons/yr)	Control Efficiency (%)	PTE Controlled (tons/yr)
PM	45.0	6.8	306	1340.3	99.9%	1.34
PM10	45.0	6.8	306	1340.3	99.9%	1.34
Bottlenecked by conveyor						
PM	40.0	6.8	272	1191.4	99.9%	1.19
PM10	40.0	6.8	272	1191.4	99.9%	1.19

Emission factors from AP-42, Chapter 11.17 (Lime Manufacturing), Table 11.17-2, SCC #3-05-016-11
Existing conveyors take into account emissions to and from stucco cooler

Source provided

	Costs with Integrated Baghouse	**Costs without Baghouse**	**Cost Basis**
Housekeeping	$ 5,132.63	$ 175,638.00	Housekeeping costs are based on $20.05 per hour labor cost
Waste Disposal	$ -	$ 41,061.00	368.7 tons/year disposed x $30 per ton
Reclaimed Material	$ (27,374.00)	$ -	45 tons/hour x 99.9% Capture Efficiency 1368.7 tons/year captured x $20 per ton = $27,374 savings per year for Stucco Reuse
Baghouse Annual Operating Costs	$ 37,818.00	$ -	Baghouse Annual Operating Costs are based on an average cost of $22/dscfm (https://www3.epa.gov/ttnchie1/mkb/documents/ff-pulse.pdf) and the dscfm of 1719 dscfm
Total Annual Costs	**$ 15,576.63**	**$ 216,699.00**	

Total Annual Cost Savings ***$ 201,122***

IDEM's interpretation

	Costs with Integrated Baghouse	**Costs without Baghouse**	**Cost Basis**
Reclaimed Material	$ (23,803.37)	$ -	40 tons/hour x 99.9% Capture Efficiency 1190.17 tons/year captured x $20 per ton = $23,803 savings per year for Stucco Reuse
Baghouse Annual Operating Costs	$ 37,818.00	$ -	Baghouse Annual Operating Costs are based on an average cost of $22/dscfm (https://www3.epa.gov/ttnchie1/mkb/documents/ff-pulse.pdf) and the dscfm of 1719 dscfm
Total Annual Costs	**$ 14,014.63**	**$ -**	

Total Annual Cost Savings ***$ (14,015)***

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

Carol S. Comer
Commissioner

October 25, 2016

James F. Phipps
New NGC, Inc. dba National Gypsum Company
9720 US Hwy 50 E
Shoals, IN 47581

Re: Public Notice
New NGC, Inc. dba National Gypsum Company
Permit Level: FESOP - Significant Permit Revision
Permit Number: 101 - 36933 - 00003

Dear James F. Phipps:

Enclosed is a copy of your draft FESOP - Significant Permit Revision, 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 Shoals News in Shoals, Indiana publish the abbreviated version of the public notice no later than October 2, 2016. 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 Shoals Public Library, 404 High Street, P. O. Box 909 in Shoals 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 Heath Hartley, 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 2-8217 or dial (317) 232-8217.

Sincerely,
Len Pogost

Len Pogost
Permits Branch
Office of Air Quality

Enclosures
PN Applicant Cover letter 2/17/2016

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

Carol S. Comer
Commissioner

ATTENTION: PUBLIC NOTICES, LEGAL ADVERTISING

October 25, 2016

Shoals News
Attn: Classifieds
PO BOX 240
Shoals, IN 27581

Enclosed, please find one Indiana Department of Environmental Management Notice of Public Comment for New NGC, Inc. dba National Gypsum Company, Martin 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 November 2, 2016.

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: FESOP - Significant Permit Revision
Permit Number: 101 - 36933 - 00003

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

Carol S. Comer
Commissioner

October 25, 2016

To: Shoals Public Library 404 High Street, P. O. Box 909 Shoals 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: New NGC, Inc. dba National Gypsum Company
Permit Number: 101 - 36933 - 00003

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 2/16/2016

Indiana Department of Environmental Management
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Michael R. Pence
Governor

Carol S. Comer
Commissioner

Notice of Public Comment

October 25, 2016
New NGC, Inc. dba National Gypsum Company
101 - 36933 - 00003

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 2/17/2016

Mail Code 61-53

IDEM Staff	LPOGOST 10/25/2016 New NGC Inc. dba National Gypsum Co. 101 - 36933 - 00003 draft/		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
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**

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		James F. Phipps New NGC Inc. dba National Gypsum Co. 9720 US Hwy 50 E Shoals IN 47581 (Source CAATS)									
2		Jeff Hawk Plant Manager New NGC Inc. dba National Gypsum Co. 9720 US Hwy 50 E Shoals IN 47581 *(RO CAATS)*									
3		Martin County Commissioners PO Box 600 129 S Main Street Courthouse Shoals IN 47581 *(Local Official)*									
4		Martin County Health Department P.O. Box 368 Shoals IN 47581-0368 *(Health Department)*									
5		Shoals Town Council P.O. Box 1078 Shoals IN 47581 *(Local Official)*									
6		Marjorie Collins ARCADIS U.S., Inc. 28550 Cabot Drive, Suite 500 Novi MI 48377 *(Consultant)*									
7		John Blair 800 Adams Ave Evansville IN 47713 *(Affected Party)*									
8		Shoals Public Library 404 High Street, P. O. Box 909 Shoals IN 47581 *(Library)*									
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