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

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

TO: Interested Parties / Applicant

DATE: November 7, 2013

RE: Sagamore Ready Mix, LLC/057-33791-05069

FROM: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Notice of Decision – Approval

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to 326 IAC 2, this approval was effective immediately upon submittal of the application.

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days from the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for considerations at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER-AM.dot 6/13/2013

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Mr. Bill Wiley
Sagamore Ready Mix, LLC
9170 E. 131st Street
Fishers, IN 46038

November 7, 2013

Re: 057-33791-05069
First Administrative Amendment to
S057-6607-05069

Dear Mr. Wiley:

Builder's Concrete & Supply Company, Inc. was issued a Source Specific Operating Agreement (SSOA) No. S057-6607-05069 on November 5, 1996 for a stationary ready-mix concrete batch plant located at 9170 E. 131st Street, Fishers, Indiana 46038. On October 18, 2013, the Office of Air Quality (OAQ) received a request to transfer the following approval from Builder's Concrete & Supply Company, Inc., to Sagamore Ready Mix, LLC 9170 E. 131st Street, Fishers, Indiana 46038. Pursuant to the provisions of 326 IAC 2-9, the permit is hereby revised as follows with the deleted language as ~~strikeouts~~ and new language **bolded**.

The company name has been revised throughout the SSOA as follows:

Company Name: ~~Builder's Concrete & Supply Company, Inc.~~
Sagamore Ready Mix, LLC

IDEM, OAQ has made additional revisions to the permit as described below. The permit has been revised as follows with deleted language as ~~strikeouts~~ and new language **bolded**:

1. The SSOA has been updated from the letter style format to the permit style format, as is now standard IDEM procedure. As part of the new standard format, IDEM branches and sections have been renamed and the IDEM mailing address has been updated. The permit has been revised as follows, with the deleted language as ~~strikeouts~~ and new language **bolded**:

~~Compliance Data Section~~
~~Office of Air Management~~
~~100 North Senate Avenue~~
~~P.O. Box 6015~~
~~Indianapolis, IN 46206-6015~~

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

2. Upon further review, IDEM OAQ determined that the SSOA did not contain the most current rule requirements under 326 IAC 2-9. SSOA No. S057-6607-05069, which was issued on November 5, 1996, contained the requirements of 326 IAC 2-9-1 and 326 IAC 2-9-2 that were promulgated in the Indiana Register on May 1, 1996 (19 IR 1757 through 1762). The 326 IAC 2-9 rule requirements were amended in the Indiana Register on June 1, 1997 (20 IR 2301 through 2316), with 326 IAC 2-9-2 being repealed. Therefore, the SSOA has been amended to include the most current rule requirements under 326 IAC 2-9-1 and 326 IAC 2-9-9 that were readopted in the Indiana Register on December 1, 2004 (28 IR 790 through 815).

3. Pursuant to 326 IAC 2-7-1(39), starting July 1, 2011, greenhouse gases (GHGs) emissions are subject to regulation at a source with a potential to emit (PTE) 100,000 tons per year or more of CO2 equivalent emissions (CO2e). Therefore, CO2e emissions have been calculated for this source. Based on the calculations, the unlimited PTE GHGs from the entire source is less than 100,000 tons of CO2e per year (see Appendix A for detailed calculations). This did not require any changes to the SSOA.

All other conditions of the permit shall remain unchanged and in effect. Attached please find the entire revised permit. 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's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

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 Charles Sullivan of my staff at 317-232-8422 or 1-800-451-6027, and ask for extension 2-8422.

Sincerely,

Jason R. Krawczyk, Section Chief
Permits Branch
Office of Air Quality

Attachments: Updated Permit, Appendix A

JRK/cbs

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

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SOURCE SPECIFIC OPERATING AGREEMENT
OFFICE OF AIR QUALITY

Sagamore Ready Mix, LLC
9170 E. 131st Street
Fishers, Indiana 46038

(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 SSOA.

This SSOA is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-9 and 40 CFR 52.780, with conditions listed on the attached pages.

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this SSOA, are those applicable at the time the SSOA was issued. The issuance or possession of this SSOA shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Source Specific Operating Agreement (SSOA) under 326 IAC 2-9.

Source Specific Operating Agreement No. S057-6607-05069	
Original Signed by / Issued by: Paul Dubenetzky, Chief Permit Branch Office of Air Management	Issuance Date: November 5, 1996

Administrative Amendment No. 057-33791-05069	
Issued by: Jason R. Krawczyk, Section Chief Permits Branch Office of Air Quality	Issuance Date: November 7, 2013

SECTION A SOURCE SUMMARY

This SSOA 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 and A.2 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 pursuant to 326 IAC 2.

A.1 General Information

The Permittee owns and operates a stationary ready-mix concrete batch plant.

Source Address:	9170 E. 131st Street, Fishers, Indiana 46038
General Source Phone Number:	317-570-6242
SIC Code:	3273 (Ready-Mixed Concrete)
County Location:	Hamilton County
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Source Specific Operating Agreement (SSOA) Not 1 of 28 Source Categories

A.2 Source Summary

This stationary source consists of the following:

(a) Ready-Mix Concrete Batch Operation [326 IAC 2-9-9]

(b) 3.46 MMBtu/hr natural gas combustion

(c) 0.15 MMBtu/hr fuel oil combustion

(d) 0.50 MMBtu/hr waste oil combustion

A.3 SSOA Applicability [326 IAC 2-9-1]

(a) This source, otherwise required to have a permit under 326 IAC 2-5.1, 326 IAC 2-5.5, 326 IAC 2-6.1, 326 IAC 2-7, or 326 IAC 2-8, has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) for a Source Specific Operating Agreement (SSOA) under 326 IAC 2-9.

(b) Pursuant to 326 IAC 2-9-1(g), the source may apply for up to four (4) different SSOAs contained in 326 IAC 2-9.

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-1.1-1]

Terms in this SSOA 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 2-1.1-1) shall prevail.

B.2 Enforceability

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.3 Severability

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.4 Property Rights or Exclusive Privilege

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

B.5 Duty to Provide Information

(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.6 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of permits established prior to SSOA No. S057-6607-05069 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised, or

(3) deleted.

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

B.7 Annual Notification [326 IAC 2-9-1(d)]

Pursuant to 326 IAC 2-9-1(d):

(a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this SSOA.

(b) The annual notice shall be submitted in the format attached no later than January 30 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, IN 46204-2251

(c) The notification 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.

B.8 Source Modification Requirement [326 IAC 2-9-1(e)]

Pursuant to 326 IAC 2-9-1(e), before the Permittee modifies its operations in such a way that it will no longer comply with the applicable restrictions and conditions of this SSOA, it shall obtain the appropriate approval from IDEM, OAQ under 326 IAC 2-2, 326 IAC 2-3, 326 IAC 2-4.1, 326 IAC 2-5.1, 326 IAC 2-6.1, 326 IAC 2-7, and 326 IAC 2-8.

B.9 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [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 permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, 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.10 Permit Revocation [326 IAC 2-1.1-9] [326 IAC 2-9-1(j)]

(a) Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit to operate may be revoked for any of the following causes:

(1) Violation of any conditions of this permit.

(2) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.

(3) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.

(4) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.

(5) For any cause which establishes in the judgment of IDEM the fact that continuance of this permit is not consistent with purposes of this article.

(b) Pursuant to 326 IAC 2-9-1(j), noncompliance with any applicable provision 326 IAC 2-9 or any requirement contained in this SSOA may result in the revocation of this SSOA and make this source subject to the applicable requirements of a major source.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

C.1 Compliance with Applicable Requirements [326 IAC 2-9-1(i)]

Pursuant to 326 IAC 2-9-1(i), the owner or operator is hereby notified that this operating agreement does not relieve the Permittee of the responsibility to comply with the provisions of any applicable federal, state, or local rules, or any New Source Performance Standards (NSPS), 40 CFR Part 60, or National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 61 or 40 CFR Part 63.

Record Keeping and Reporting Requirements [326 IAC 2-9]

C.2 General Record Keeping Requirements [326 IAC 2-9-1(f)]

Pursuant to 326 IAC 2-9-1(f), records of all required monitoring data, reports and support information required by this SSOA shall be physically present or electronically accessible at the source location for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

C.3 Reporting Requirements [326 IAC 2-9-1(h)]

Pursuant to 326 IAC 2-9-1(h), any exceedance of any requirement contained in this operating agreement shall be reported, in writing, within one (1) week of its occurrence. Said report shall include information on the actions taken to correct the exceedance, including measures to reduce emissions, in order to comply with the established limits. If an exceedance is the result of a malfunction, then the provisions of 326 IAC 1-6 apply.

SECTION D OPERATION CONDITIONS

Operation Description: Ready-Mix Concrete Batch Operation [326 IAC 2-9-9]

(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 2-9]

D.1 Ready-Mix Concrete Batch Operation Limitation [326 IAC 2-9-9(b)(1)]

Pursuant to 326 IAC 2-9-9(b)(1), the production from the concrete batch operation shall not exceed three hundred thousand (300,000) cubic yards per year.

D.2 Opacity [326 IAC 2-9-9(b)(3)]

Pursuant to 326 IAC 2-9-9(b)(3), fugitive particulate emissions from the cement and aggregate silos shall be controlled by operating dust collectors such that visible emissions do not exceed twenty percent (20%) opacity in twenty-four (24) consecutive readings in a six (6) minute period. Compliance with this limitation shall be determined by 40 CFR 60, Appendix A, Method 9.

D.3 Fugitive Emissions [326 IAC 2-9-9(b)(4)] [326 IAC 2-9-9(b)(8)]

(a) Pursuant to 326 IAC 2-9-9(b)(4), the fugitive particulate matter (PM) emissions from all aggregate storage piles, unpaved roadways, and aggregate transfer processes of this source shall be controlled by applying water on an as needed basis, such that the following visible emission conditions are met:

(1) The visible emissions from any storage pile shall not exceed twenty percent (20%) in twenty-four (24) consecutive readings in a six (6) minute period. This limitation shall not apply during periods when application of control measures are ineffective or unreasonable due to sustained high wind speeds. The opacity shall be determined using 40 CFR 60, Appendix A, Method 9, except that the opacity shall be observed at approximately four (4) feet from the surface at the point of maximum opacity. The observer shall stand at least fifteen (15) feet, but no more than one-fourth (1/4) mile, from the plume and at approximately right angles to the plume.

(2) The visible emissions from unpaved roadways shall not exceed an average instantaneous opacity of twenty percent (20%). Average instantaneous opacity shall be the average of twelve (12) instantaneous opacity readings, taken for four (4) vehicle passes, consisting of three (3) opacity readings for each vehicle pass. The three (3) opacity readings for each vehicle pass shall be taken as follows:

(A) The first reading shall be taken at the time of emission generation.

(B) The second reading shall be taken five (5) seconds after the first.

(C) The third reading shall be taken five (5) seconds after the second reading, or ten (10) seconds after the first reading.

The three (3) readings shall be taken approximately four (4) feet from the surface at the point of maximum opacity. The observer shall stand at least fifteen (15) feet, but no more than one-fourth (1/4) mile, from the plume and at approximately right angles to the plume.

(3) Visible emissions from the aggregate transferring processes shall not exceed an average instantaneous opacity of twenty percent (20%). The average instantaneous opacity shall be the average of three (3) opacity readings taken five (5) seconds, ten (10) seconds, and fifteen (15) seconds after the end of one (1) material loading or unloading operation. The three (3) readings shall be taken at the point of maximum opacity. The observer shall stand at least fifteen (15) feet, but no more than one-fourth (1/4) mile, from the plume and at approximately right angles to the plume.

(b) Pursuant to 326 IAC 2-9-9(b)(8), the fugitive particulate emissions at the ready-mix concrete batch plant shall not escape beyond the property lines or boundaries of the source property, right of way, or easement on which the source is located pursuant to 326 IAC 6-4.

Compliance Determination Requirements [326 IAC 2-9]

D.4 Particulate [326 IAC 2-9-9(b)(5)] [326 IAC 2-9-9(b)(6)]

Pursuant to 326 IAC 2-9-9(b)(5) and 326 IAC 2-9-9(b)(6), the owner or operator shall comply with the following:

(a) All equipment that generate particulate matter (PM) emissions and any associated control devices shall be operated and maintained at all times of plant operation, in such a manner, as to meet all of the requirements of Conditions D.2 and D.3.

(b) All cement transferring processes shall always be enclosed.

Record Keeping and Reporting Requirements [326 IAC 2-9]

D.5 Record Keeping Requirements [326 IAC 2-9-9(b)(2)] [326 IAC 2-9-9(b)(7)]

Pursuant to 326 IAC 2-9-9(b)(2) and 326 IAC 2-9-9(b)(7):

(a) The source shall keep annual production records of the concrete batch operation at the site on a calendar year basis.

(b) The source shall maintain records on the types of air pollution control devices used at the source and the operation and maintenance manuals for those control devices.

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

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

SOURCE SPECIFIC OPERATING AGREEMENT (SSOA)
ANNUAL NOTIFICATION

This form should be used to comply with the notification requirements under 326 IAC 2-9.

Company Name:	Sagamore Ready Mix, LLC
Address:	9170 E. 131st Street
City:	Fishers, Indiana 46038
Phone #:	317-570-6242
SSOA #:	S057-6607-05069

I hereby certify that Sagamore Ready Mix, LLC is:
☐ still in operation.
☐ no longer in operation.

I hereby certify that Sagamore Ready Mix, LLC is:
☐ in compliance with the requirements of SSOA S057-6607-05069.
☐ not in compliance with the requirements of SSOA S057-6607-05069.

Authorized Individual (typed):
Title:
Signature:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

Appendix A: Combustion Emission Summary

Company Name: Sagamore Ready Mix, LLC
Source Address: 9170 E. 131st Street, Fishers, Indiana 46038
Permit Number: 057-33791-05069
Reviewer: Charles Sullivan
Date: 10/29/13

Uncontrolled Emissions

Emission Units	PM	PM_{10}	$PM_{2.5}$	SO_2	VOC	CO	NOx	GHGs	HAPs	Worst Case HAPs
Natural Gas Combustion (3.46 MMBtu/hr)	0.03	0.11	0.11	0.01	0.08	1.25	1.49	1,794	0.03	0.03 Hexane
Fuel Oil Combustion (0.15 MMBtu/hr)	0.01	0.01	0.01	0.33	0.00	0.02	0.09	101	3.22E-05	9.86E-06 Selenium
Waste Oil Combustion (0.50 MMBtu/hr)	1.25	1.08	1.08	1.26	0.02	0.03	0.25	358	0.17	0.17 Lead
Total (tons/year)	1.29	1.20	1.20	1.61	0.10	1.30	1.83	2,254	0.20	0.17 Lead

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: Sagamore Ready Mix, LLC
Address City IN Zip: 9170 E. 131st Street, Fishers, Indiana 46038
Permit Number: 057-33791-05069
Reviewer: Charles Sullivan
Date: 10/29/13

Source	# Unit(s)	BTU/hr
Water Heater	1	2,100,000
Plant Heaters	4	1,000,000
Add-mix Heater	1	300,000
Batch Plant	1	30,000
Driver's Room	1	30,000
	Total	3,460,000

Heat Input Capacity MMBtu/hr	HHV mmBtu / mmscf	Potential Throughput MMCF/yr
3.46	1020	29.7

	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	0.0	0.1	0.1	0.0	1.5	0.1	1.2

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
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	3.120E-05	1.783E-05	1.114E-03	2.674E-02	5.052E-05	**2.796E-02**

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
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	7.429E-06	1.634E-05	2.080E-05	5.646E-06	3.120E-05	**8.142E-05**
					Total HAPs	**2.804E-02**
					Worst HAP	**2.674E-02**

Methodology is the same as above.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Greenhouse Gas Calculations

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	1,783	0.0	0.0
Summed Potential Emissions in tons/yr	1,783		
CO2e Total in tons/yr	1,794		

Methodology
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A: Emissions Calculations
Commercial/Institutional/Residential Combustors (< 100 mmBtu/hr)
#1 and #2 Fuel Oil

Company Name: Sagamore Ready Mix, LLC
Address, City IN Zip: 9170 E. 131st Street, Fishers, Indiana 46038
Permit Number: 057-33791-05069
Reviewer: Charles Sullivan
Date: 10/29/13

Source	# Unit(s)	BTU/hr
Space	1	150,000
	Total	150,000

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	S = Weight % Sulfur
		0.5
0.15	9.39	

	Pollutant						
	PM*	PM10	direct PM2.5	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	2.0	2.4	2.1	71 *(142.0S)*	20.0	0.34	5.0
Potential Emission in tons/yr	0.0	0.0	0.0	0.3	0.1	0.0	0.0

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, and 1.3-3 (SCC 1-03-005-01/02/03) Supplement E 9/98 (see erata file)
*PM emission factor is filterable PM only. Condensable PM emission factor is 1.3 lb/kgal.
Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton

	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	2.63E-06	1.97E-06	1.97E-06	1.97E-06	5.91E-06

	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	1.97E-06	3.94E-06	1.97E-06	9.86E-06	
				TOTAL:	3.22E-05

Methodology
No data was available in AP-42 for organic HAPs.
Potential Emissions (tons/year) = Throughput (mmBtu/hr)*Emission Factor (lb/mmBtu)*8,760 hrs/yr / 2,000 lb/ton

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/kgal	21,500	0.216	0.26
Potential Emission in tons/yr	101	0.0	0.0
Summed Potential Emissions in tons/yr	101		
CO2e Total in tons/yr	101		

Methodology
The CO2 Emission Factor for #1 Fuel Oil is 21500. The CO2 Emission Factor for #2 Fuel Oil is 22300.
Emission Factors are from AP 42, Tables 1.3-3, 1.3-8, and 1.3-12 (SCC 1-03-005-01/02/03) Supplement E 9/99 (see erata file)
Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A: Emissions Calculations
Waste Oil Combustion
Space Heater-Atomizing Burner

Company Name: Sagamore Ready Mix, LLC
Address City IN Zip: 9170 E. 131st Street, Fishers, Indiana 46038
Permit Number: 057-33791-05069
Reviewer: Charles Sullivan
Date: 10/29/13

Source	# Unit(s)	BTU/hr
Waste Oil Heaters	2	250,000
	Total	500,000

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year		
		A = Weight % Ash[(a)] =	1.20
		L = Weight % Lead[(a)] =	0.21
0.50	31.5	S = Weight % Sulfur[(a)] =	0.75

	Pollutant							
	PM*	PM10*	direct PM2.5**	SO2	NOx	TOC	CO	Pb
Emission Factor in lb/kgal	79.2 *(66A)*	68.40 *(57A)*	68.40 *(57A)*	80.3 *(107S)*	16.0	1.0	2.10	10.50 *(50L)*
Potential Emission in tons/yr	1.25	1.08	1.08	1.26	0.25	0.02	0.03	0.17

Notes:

(a) - The highest concentrations from "Emission Factor Documentation for AP-42 Section 1.11 Waste Oil Comubstion" - Office of Air Quality Planning and Standards, Office of Air and Radiation, US Environmental Protection Agency, April 1993, Table 2-1 were used for the weight % ash, lead, and sulfur.

*No information was given in AP-42 regarding whether the PM/PM10 emission factors included filterable and condensable PM.

** No direct PM2.5 emission factor was given. Direct PM2.5 is a subset of PM10. If one assumes all PM10 to be all direct PM2.5, then a worst case assumption of direct PM2.5 can be made, notwithstanding the filterable and condensable issue formentioned.

Methodology

Emission Factor Units are lb/1000 gal

Per Table 2-1 in Reference (b) Typical Average Concentrations of Contaminants: weight % ash = 6500 ug/g of waste oil * 100 ; weight % Sulfur = 5000 ug/g of waste oil

A = weight% ash in fuel, L = weight% lead in fuel, S = weight % sulfur in fuel

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.139 MM Btu

Emission Factors from AP-42, Chapter 1.11 SCC 1-05-001-13 and 1-05-002-13 (Supplement B 10/96)

Emission (tons/yr) = Throughput kgals per year x Emission Factor (lb/kgal)/2,000 lb/ton

	HAPs - Metals				
	Arsenic	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/kgal	6.0E-02	1.2E-02	1.8E-01	5.0E-02	1.6E-01
Potential Emission in tons/yr	9.45E-04	1.89E-04	2.84E-03	7.88E-04	2.52E-03

	HAPs - Organics				
	Phenol	Naphthalene	Phenanthrene/ anthracene	Dibutylphthalate	Pyrene
Emission Factor in lb/kgal	2.8E-05	9.2E-05	1.0E-04	3.4E-05	8.3E-06
Potential Emission in tons/yr	4.41E-07	1.45E-06	1.58E-06	5.36E-07	1.31E-07

Combined Total: 2.52E-03

Methodology is the same as previous page.

The five metal and five organic HAPs with the highest emission factors are presented above.

Additional emission factors for addtional HAPs with smaller emission factors are available in AP-42, 5th edition (Supplement B 10/96).

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in kg/mmBtu from 40 CFR 98	74	0.003	0.0006
Potential Emission in tons/yr	357	0.01	2.90E-03
Summed Potential Emissions in tons/yr	357		
CO2e Total in tons/yr	358		

Methodology

Emission Factor Units are in kg/mmBtu.

Emission Factors from Tables C-1 and 2 of 40 CFR Part 98 Subpart C. Waste oil is called Used oil in 40 CFR 98.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Potential Emission (tons/yr) = Heat Input Capacity mmBtu/hr x Emission Factor (kg/mmBtu) x 2.20462 lb/kg x 8760 hrs/yr /2,000 lb/ton

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

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

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Mr. Bill Wiley
Sagamore Ready Mix, LLC
9170 E 131st Street
Fishers, IN 46038

DATE: November 7, 2013

FROM: Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
First Administrative Amendment to SSOA
057-33791-05069

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
Gus Nuckols, III, Responsible Official
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Mail Code 61-53

IDEM Staff	PWAY 11/7/2013 Sagamore Ready Mix LLC 057-33791-05069 (final)		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		Bill Wiley Sagamore Ready Mix LLC 9170 e 131St Fishers IN 46038 (Source CAATS)									
2		Gus Nuckols III COO Sagamore Ready Mix LLC 9170 e 131St Fishers IN 46038 *(RO CAATS)*									
3		Hamilton County Health Department 18030 Foundation Dr. #A Noblesville IN 46060-5405 *(Health Department)*									
4		Hamilton County Board of Commissioners One Hamilton County Square Noblesville IN 46064 *(Local Official)*									
5		Glidden Fence Co. 17804 Spring Mill Rd Westfield IN 46074 *(Affected Party)*									
6		Environmental Field Services, Inc. 40 SR 32 W Westfield IN 46074 *(Affected Party)*									
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